

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF FLORIDA  
WEST PALM BEACH DIVISION

CASE NO. 9:25-CV-80526-DMM

GOOD SAMARITAN MEDICAL CENTER,  
INC., et al.,

*Plaintiffs,*

v.

THE LEAPFROG GROUP,

*Defendant.*

**DECLARATION OF PROFESSOR SEAN NICHOLSON**

I, Sean Nicholson, hereby declare under penalty of perjury that the following is true and correct:

**I. Introduction**

1. I am a Professor in the Department of Economics and the School of Public Policy at Cornell University with an expertise in health economics. Over the past three decades, I have studied and evaluated health care quality measures, taught students how to measure health care quality, and advised hospital administrators on how to assess and improve hospital quality.

2. I have been retained by counsel for the Plaintiffs in this matter to assess i) the foundational principles that govern a proper methodology for evaluating hospital safety and quality, ii) whether the methodology that Defendant The Leapfrog Group (“TLG”) uses to develop its hospital grades conforms to these principles, and iii) the potential impact that TLG’s hospital grades may have on patient decisions regarding which hospitals to use for their medical care.

3. Based on my review of TLG’s hospital rating methodology, I find that TLG’s methodology departs from guiding principles for how hospital quality or safety should be measured, resulting in hospital grades that are misleading and unreliable predictors of actual patient outcomes, posing risks to patients, hospitals, and the public. First, TLG’s methodology generates hospital grades that are incomparable across hospitals due to non-uniform ways of

capturing various measures. Second, TLG's methodology results in unreliable and systematically biased grades that are inappropriately inflated for the hospitals that choose to participate in TLG's hospital survey and inappropriately deflated for the hundreds of hospitals that choose to not participate. Finally, and perhaps most notably, TLG's hospital grades have been shown to be unreliable predictors of patient outcomes, with multiple studies showing that hospitals better graded by TLG fail to perform any better than lower graded hospitals with respect to important patient outcomes such as mortality and infection rates.

## Table of Contents

|       |                                                                                                                                                                                                                   |    |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| II.   | Relevant Professional Background .....                                                                                                                                                                            | 4  |
| III.  | Scope of Opinions.....                                                                                                                                                                                            | 8  |
| IV.   | Summary of Opinions .....                                                                                                                                                                                         | 9  |
| V.    | Materials Relied Upon .....                                                                                                                                                                                       | 10 |
| VI.   | Independence of Opinions and Compensation .....                                                                                                                                                                   | 10 |
| VII.  | Foundational Principles for Measuring Hospital Quality .....                                                                                                                                                      | 10 |
| VIII. | Hospital Ratings Influence Patient Decisions about Medical Care and Misleading<br>Hospital Grades Can Distort Patient Choices, Causing Substantial Harm .....                                                     | 14 |
| IX.   | Description of TLG’s Methodology for Evaluating Hospital Safety.....                                                                                                                                              | 18 |
| X.    | TLG’s Rating Methodology Is Fundamentally Flawed .....                                                                                                                                                            | 24 |
| A.    | TLG’s Methodology for Generating Hospital Grades Fails to Provide an<br>Appropriate Basis for Comparison of Hospitals.....                                                                                        | 24 |
| B.    | TLG’s Rating System Results in Inappropriately Inflated Grades for Hospitals<br>that Choose to Participate in Its Survey and Inappropriately Deflated Grades<br>for Hospitals that Choose Not to Participate..... | 27 |
| C.    | TLG’s Grades Are Not Reliable Indicators of Actual Patient Health and Safety<br>Outcomes in Hospitals .....                                                                                                       | 34 |

## **II. Relevant Professional Background**

4. I am a Professor in the Department of Economics and the School of Public Policy at Cornell University. I am also a Research Associate at the National Bureau of Economic Research. Prior to joining Cornell, I served as an Assistant Professor in Healthcare Systems at the Wharton School of the University of Pennsylvania. I have a Ph.D. in economics from the University of Wisconsin-Madison and an A.B. in economics from Dartmouth College. This section includes my relevant experience, but not my full professional background. A copy of my curriculum vitae is attached as Appendix A. A list of my testimony in the prior four years is attached as Appendix B.

5. My expertise is health economics. Over the course of my career, I have developed extensive experience in health care quality measurement and improvement through my roles as a management consultant, researcher, teacher, director of a graduate program in health administration, and hospital board member.

6. For four years at a management consulting firm called APM, I helped hospital clients reduce their expenses while maintaining or enhancing the quality of medical care they delivered to patients. I have analyzed hospital expenses, the acuity of the patient needs that hospitals treat, and the scale of teaching and research operations among comparable hospitals to establish cost reduction targets for various hospital functions such as nursing, clinical support services (e.g., radiology), administration, and purchased goods and services. I have also worked with task forces comprised of hospital staff and physicians to identify and assess operational changes that could reduce medical spending while maintaining or enhancing the quality of medical care that patients receive. Working with such task forces, I have quantified the annual cost savings associated with each proposed change and assessed whether and how the proposed change would affect patient care. For example, if a hospital proposed to decrease its ratio of registered nurses to nurse aides, I would analyze the published literature regarding the relationship between nurse staffing and patient outcomes, and I would discuss with task force members managerial actions that would ensure that patients would not be negatively affected at their hospital.

7. In my academic career, I have researched extensively the economics of the health care industry. In this field of study, I have published articles in leading academic journals and presented my research at academic conferences. Many of my peer-reviewed articles examine how to develop novel measures of the quality of medical care delivered by, or influenced by, different health care entities including physicians, hospital-based residency

programs, and health insurance plans. For instance, in 2009, I co-authored an article in the *Journal of the American Medical Association* that developed and implemented a novel method of evaluating the quality of obstetrical residency programs.<sup>1</sup> My co-authors and I found that a woman treated by an obstetrician who trained at a residency program in the top quintile based on the program's risk-standardized maternal complication rate would have a three percentage point lower probability of experiencing a complication relative to being treated by an obstetrician trained by a program in the bottom quintile of the rankings. That is, re-directing patients to higher-quality providers matters for patient outcomes.

8. In subsequent published articles, I have examined the extent to which the quality of medical care delivered by obstetricians, measured as the risk-adjusted maternal complication rate, changed in the United States between 1992 and 2006,<sup>2</sup> and whether and how the quality of care delivered by obstetricians changes over time as they gain experience.<sup>3</sup> In a 2014 article summarizing this body of research, my co-authors and I concluded that the evaluation of medical education programs should be more tightly connected to patient outcomes than the structure or process measures that have typically been used to evaluate such programs due to ease of data collection.<sup>4</sup>

9. In an article forthcoming in the *American Journal of Managed Care*,<sup>5</sup> my co-authors and I develop a novel way of measuring the difference in the quality of medical care received by low- versus high-income people in the United States. Specifically, we calculate a summary measure for the quality of medical care received by enrollees of Medicaid Health Maintenance Organizations ("HMOs") nationally based on 39 process and outcome measures, where the former include measures such as the percentage of children who receive at least six well-child visits in their first 15 months of life and the latter include measures such as the percentage of diabetics whose blood pressure is adequately controlled. As we note in the article, our proposed summary measure for quality of medical care uses readily available, publicly reported data by health plans to the National Committee for Quality Assurance ("NCQA"). Of crucial importance for the reliability of our proposed summary measure, the data underlying

---

<sup>1</sup> David A. Asch et al., "Evaluating Obstetrical Residency Programs Using Patient Outcomes," *Journal of the American Medical Association* 302(12) (2009): pp. 1277-1283.

<sup>2</sup> Sindhu K. Srinivas et al., "Improvements in US Maternal Obstetrical Outcomes From 1992 to 2006," *Medical Care* 48(5) (2010): pp. 487-493.

<sup>3</sup> Andrew J. Epstein et al., "Association Between Physician Experience After Training and Maternal Obstetrical Outcomes: Cohort Study," *BMJ* 346: f1596 (2013): pp. 2-10; Andrew J. Epstein, Sean Nicholson, David A. Asch, "The Production of and Market for New Physicians' Skill," *American Journal of Health Economics* 2(1) (2010): pp. 41-66.

<sup>4</sup> David A. Asch et al., "How Do You Deliver a Good Obstetrician? Outcome-Based Evaluation of Medical Education," *Academic Medicine* 89(1) (2014): pp. 24-26.

<sup>5</sup> Joseph Stankaitis, Samyukta Singh, and Sean Nicholson, "Addressing Health Care Disparities Using a Health Plan Quality Measures Index," *American Journal of Managed Care* 31(9) (2025): pp. 1-19 ("Stankaitis, Singh and Nicholson (2025)").

our measure is independently audited by NCQA to ensure the data reporting is consistent across different health plans and compliant with required data specifications.

10. Similar to my research, my teaching has also been focused on the health care industry. I have received several awards for excellence in teaching such as the Weiss Presidential Fellow and SUNY Excellence in Teaching awards at Cornell University, the Helen Kardon Moss Anvil award at The Wharton School at the University of Pennsylvania, and a teaching excellence award at Worcester Academy, a high school in Massachusetts. Between 2006 and 2009 I taught a course on Health Care Information Technology and Quality Improvement to Master of Health Administration (“MHA”) graduate students at Cornell University. The three objectives of this course, as indicated in the syllabus, were (1) to understand the current state of the quality of medical care in the U.S. and salient strategies for improving quality; (2) to examine specific programs and policies for improving the quality of medical care and to analyze why they did or did not work; and (3) to evaluate how information technology can be used to measure and improve the quality of medical care and health outcomes. The course examined the different ways of defining medical care quality, how quality is measured and the challenges associated with developing accurate measures, how quality measures are used by the government and private health insurers to try to improve quality, and the impact of publicized quality measures on patients’ decisions and their health.

11. I currently teach an undergraduate course on the U.S. health care system that examines the objectives of key industry stakeholders, how they interact with one another, and salient policy issues. Each year I give two lectures on the quality of medical care in the United States, including the current state of quality, how it has changed over time, how quality is measured, why quality in the U.S. is worse than one would expect given the level of spending, policies that might improve quality, and whether those policies are working. For instance, I created an assignment that asks students to assess what they can learn about hospital quality as a prospective surgical patient, using both the New Hampshire HealthCost website and the Hospital Quality Initiative (“HQI”) website constructed by the Centers for Medicare and Medicaid Services (“CMS”). On the latter site, I ask students to identify a structure, process, and outcomes measure for two New Hampshire hospitals, compare the performance of those hospitals on those measures, and assess the utility of those measures in their hypothetical decision about where to seek treatment.

12. I also served as the Director of the Sloan Program in Health Administration at Cornell University for 10 years, between 2014 and 2024. This is a two-year graduate program

that trains students to be effective health care managers and offers a Master of Health Administration (“MHA”) degree. Although graduates work in all sectors of health care, a majority work for hospitals or health systems in operations, strategy, finance roles, or other roles. As Director, I was responsible for establishing the curriculum, setting the program’s strategy, overseeing admissions and placement, and interacting with the 1,600 alumni. To run a successful program, an MHA Director must understand what skills health care organizations are seeking and develop coursework and experiences that cultivate those skills. One skill that is highly valued is the ability of graduates to understand how to measure, monitor, and improve the quality of medical care given its critical importance for patients and the organizations that provide products and services to patients and the clinical professionals who treat patients.

13. I currently serve on the board of directors of Robert Packer Hospital in Sayre, Pennsylvania, and Atlantic Health System, a six-hospital health system based in Morristown, New Jersey. I have served on the Robert Packer board since 2009 and am also a member of their Quality Committee; I have served on the Atlantic Health System board since 2018 and am also a member of their Governance and Medical Staff Leadership and Development Committees. Atlantic Health System has a competency-based board; I was recruited because they were searching specifically for a health economist who has a national reputation.

14. A hospital or health system board such as the ones to which I belong has many responsibilities, including ensuring that the organization adheres to its mission, providing advice to senior management regarding the strategic plan and budget, recruiting senior leadership such as the chief executive officer, determining which physicians will have admitting privileges, reviewing the clinical and financial performance of the organization and offering feedback to senior management as needed, and setting the clinical, operational, and financial performance goals for the upcoming fiscal year that influence incentive compensation for senior managers.

15. Before each Quality Committee or full board meeting, board members like myself receive a packet of information highlighting the organization’s performance in the prior month relative to both the forecast and the prior year. This “dashboard” consists of dozens of medical care quality measures, most of which come from the CMS HQI or are broader applications of those measures.<sup>6</sup> The Robert Packer Quality Committee dashboard, for example, includes all ten Medicare quality measures from the Hospital Consumer Assessment

---

<sup>6</sup> “Hospital Quality Initiative,” *CMS.gov*, December 9, 2024, available at <https://www.cms.gov/medicare/quality/initiatives/hospital-quality-initiative> (“CMS Hospital Quality Initiative”); “Quality Measures,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/quality/measures>.

of Healthcare Providers and Systems (“HCAHPS”), a national, standardized, publicly reported survey of patients’ perspectives of hospital care,<sup>7</sup> (e.g., percentage of patients who give the organization a five out of five for nurse communication), three Medicare hospital-acquired infection measures (e.g., percentage of patients who contracted a central line-associated bloodstream infection), eight patient throughput measures (e.g., percentage of emergency room patients who left without being seen), nine mortality measures (e.g., 30-day mortality rate for acute myocardial infarction patients), 15 readmissions-related measures (e.g., all-cause readmission for Medicare patients), and 11 patient-safety indicators (e.g., number of patients who contracted sepsis after a surgical procedure). The large number of these measures and the attention that a board devotes to them highlight the important role they play for an organization focused on providing safe and effective medical care to its patients.

### III. Scope of Opinions

16. I have been retained by Gibson, Dunn & Crutcher LLP, counsel for Good Samaritan Medical Center, Inc. (“Good Samaritan”), Delray Medical Center, Inc., Palm Beach Gardens Community Hospital, Inc. d/b/a Palm Beach Gardens Medical Center, St. Mary’s Medical Center, Inc. (“St. Mary’s”), and West Boca Medical Center, Inc. (“West Boca”) (collectively, “Plaintiffs”). I understand that Plaintiffs have filed a Complaint against TLG, a non-profit organization that collects data from hospitals and publishes hospital grades that purport to measure hospital safety.<sup>8</sup> I understand that the Complaint seeks to preliminarily enjoin TLG from assigning safety grades to Plaintiffs during the pendency of the lawsuit, remove Plaintiffs from the 2025 edition of TLG’s hospital grades, and permanently enjoin TLG from including Plaintiffs in its hospital grades.<sup>9</sup> I have been asked to assess i) the foundational principles that govern a proper methodology for evaluating hospital safety and quality, ii) whether the methodology that TLG uses to develop its hospital grades conforms to these principles, and iii) the potential impact that TLG’s hospital grades may have on patient decisions regarding which hospitals to use for their medical care.

<sup>7</sup> See “Patient Survey Star Rating for Hospitals,” *Medicare.gov*, available at <https://www.medicare.gov/care-compare/resources/hospital/patient-survey-rating>. See also “HCAHPS: Patients’ Perspectives of Care Survey,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/quality/initiatives/hospital-quality-initiative/hcahps-patients-perspectives-care-survey> (“CMS HCAHPS: Patients’ Perspectives of Care Survey”).

<sup>8</sup> Complaint and Demand for Jury Trial, *Good Samaritan Medical Center, Inc., Delray Medical Center, Inc., Palm Beach Gardens Community Hospital, Inc. d/b/a Palm Beach Gardens Medical Center, St. Mary’s Medical Center, Inc., and West Boca Medical Center, Inc. v. The Leapfrog Group*, Case No. 9:25-cv-80526, April 30, 2025 (“Complaint”).

<sup>9</sup> Complaint, p. 53.

#### IV. Summary of Opinions

17. Accurate measurement of medical care quality in general and hospital safety in particular is not only a research area for many health care economists like me, but also an important goal for many health care practitioners. It can also be a valuable informational tool for patients seeking the best medical care if the quality and safety measures reported for a given health care institution are reliable predictors of patient outcomes in that institution. For hospital ratings to be informative and able to guide patients to the appropriate hospitals, those ratings need to be based on a methodology that is applied consistently across all the different hospitals being evaluated and that does not result in ratings for some hospitals being unfairly or inappropriately inflated relative to ratings for other hospitals. Beyond consistency and lack of bias, hospital ratings are only valuable to patients if the ratings are based on measures that have been demonstrated to be predictive of actual health outcomes for hospital patients, i.e., higher rated hospitals should be shown to be associated with better patient outcomes than lower rated hospitals in order for such hospital ratings to be able to direct patients to better hospitals.

18. There is considerable empirical evidence that patients are influenced by hospital ratings in their decisions for where to seek medical care. As such, misleading hospital ratings can distort patient choices and cause harm to patients by inappropriately steering them towards hospitals that may in fact produce worse patient outcomes as compared to other hospitals, or even if no worse, may be located further away from some patients with the increased travel time itself possibly causing patient harm. Misleading hospital ratings can also cause harm to hospitals by tarnishing hospital reputation and adversely impacting critical hospital factors such as access to funds, professional standing, and recruitment of physicians and nurses. The likelihood of such harm is increased if ratings have broad patient reach and are promoted as a reliable and transparent tool for educating patients on hospital choice. This is consistent with how TLG positions its hospital grades, and yet, in reality, TLG's hospital grades are far from reliable or transparent.

19. Based on my review of TLG's hospital rating methodology, I find that TLG's methodology departs from guiding principles for how hospital quality or safety should be measured, resulting in hospital grades that are misleading and unreliable predictors of actual patient outcomes, posing risks to patients, hospitals, and the public. First, TLG's methodology generates hospital grades that are incomparable across hospitals due to non-uniform ways of capturing various measures. Second, TLG's methodology results in unreliable and systematically biased grades that are inappropriately inflated for the hospitals that choose to

participate in TLG's hospital survey and inappropriately deflated for the hundreds of hospitals that choose to not participate. Finally, and perhaps most notably, TLG's hospital grades have been shown to be unreliable predictors of patient outcomes, with multiple studies showing that hospitals better graded by TLG fail to perform any better than lower graded hospitals with respect to important patient outcomes such as mortality and infection rates.

## **V. Materials Relied Upon**

20. A list of the materials I considered in preparing this declaration is attached as Appendix C. Appendix D contains workpapers that support calculations performed throughout this declaration.

## **VI. Independence of Opinions and Compensation**

21. I am being compensated at my standard billing rate of \$1,250 per hour. I have been assisted in this matter by staff of Cornerstone Research, who worked under my direction. I receive compensation from Cornerstone Research based on its collected staff billings for its support of me in this matter. Neither my compensation in this matter, nor my compensation from Cornerstone Research is in any way contingent or based on the content of my opinion or the outcome of this or any other matter.

## **VII. Foundational Principles for Measuring Hospital Quality**

22. The dominant framework for determining how to define and measure the quality of medical care is one developed by Avedis Donabedian, a former University of Michigan public health professor whose 1966 research article laid the foundations for how health care researchers and practitioners have examined this topic in the decades since then.<sup>10</sup> According to this framework, information about the quality of medical care can be drawn from three categories of measures: structure, process, and outcomes.<sup>11</sup> *Outcome* measures include whether a person who has a heart attack survives or the percentage of patients who are admitted to a hospital with a heart attack and survive. Outcome measures are the "ultimate validators" of the effectiveness and quality of medical care.<sup>12</sup> That is, health outcomes are what ultimately matter to patients and people covered by health insurance. By contrast, people do not derive any utility *directly* from structures and processes—rather, only from the outcomes that those structures and processes produce. This is one reason why the hospital quality ratings published

---

<sup>10</sup> Avedis Donabedian, "Evaluating the Quality of Medical Care," *The Milbank Memorial Fund Quarterly* 44(3) (1966): pp. 166–206 ("Donabedian (1966)"). See also Donald Berwick and Daniel M. Fox, "Evaluating the Quality of Medical Care: Donabedian's Classic Article 50 Years Later," *The Milbank Quarterly* 94(2) (2016): pp. 237–241.

<sup>11</sup> Donabedian (1966).

<sup>12</sup> Donabedian (1966).

by CMS are based on a number of outcome measures such as incidence of patients experiencing complications during a variety of hospital procedures, incidence of patients contracting infections while in the hospital, incidence of unplanned patient readmissions to the hospital, or incidence of death across different types of patients treated in the hospital.<sup>13</sup> It is also why other hospital quality rating systems, like Healthgrades, similarly rely on data from Medicare medical claims records and data on patient outcomes produced by states (including for patients whose hospital visits were covered by other payors apart from Medicare) to determine patients' actual clinical outcomes when visiting a given hospital.<sup>14</sup>

23. In addition, accurate outcome measures should be risk-adjusted to account for differences in initial illness severity and factors outside of the health care system, which impact the likelihood of positive health outcomes. For example, some patients who experience a heart attack are relatively old and also have diabetes and congestive heart failure, and thus are less likely to survive relative to a healthier person even if they receive very high quality, evidence-based medical care. Similarly, some patients may choose to follow discharge instructions while others may not, which could also impact health outcomes regardless of the quality of medical care delivered. Therefore, it is important to measure also the *processes* of medical care—i.e., whether the services delivered to a patient adhere to evidence-based medicine based on the health condition or conditions the patient has—in addition to patients' health outcomes.<sup>15</sup>

24. Finally, there are some *structures* (e.g., whether a hospital has implemented an electronic medical record system, or whether a physician is board certified in a specialty) that increase the likelihood that providers will use recommended medical services that produce, on average, superior health outcomes.<sup>16</sup> Thus, although outcomes are what really matter, measuring processes and structures that facilitate and predict good outcomes is also productive and complementary to measuring risk-adjusted outcomes. The ideal medical quality measurement method for hospitals would focus on health outcomes that are important to prospective hospital patients, along with process and structure measures that are predictive of those outcomes.

25. Quality measurements should be collected and reported in an accurate, standardized, and consistent manner across all organizations being evaluated. This instills

---

<sup>13</sup> "Measures and Current Data Collection Periods," *CMS.gov*, available at <https://data.cms.gov/provider-data/topics/hospitals/measures-and-current-data-collection-periods> ("CMS Measures and Current Data Collection Periods").

<sup>14</sup> "Hospital Ratings & Awards Methodologies," *Healthgrades*, available at <https://www.healthgrades.com/quality/ratings-awards/methodology>.

<sup>15</sup> Donabedian (1966).

<sup>16</sup> Donabedian (1966).

confidence that the data are valid and ensures integrity and fairness to all organizations being evaluated. That is, a reliable rating system is one that is based on apples-to-apples comparisons across the organizations. This is especially important because ratings are often determined by an organization's position in the national distribution. If one organization is allowed to define or interpret a measure differently than others in a way that overstates their performance, that organization will "move up" the distribution inappropriately and simultaneously "push" many other organizations down the distribution. If patients make decisions based on ratings that use such a measure or if payers tie financial incentives to this measure, patients and money will be reallocated between health care organizations based on the lack of standardization across organizations in how the data were reported.

26. There are several best practices for ensuring that the quality measures, and the ratings that are generated from those measures, are accurate, standardized, and consistent.<sup>17</sup> Each quality measure should be clearly defined so that it is objective and does not rely on organizations making judgement calls. For example, an all-cause acute myocardial infarction ("AMI") readmission—an often-used measure of medical care quality—is defined as a subsequent hospital admission that occurs within 30 days of a patient's initial AMI admission and where this subsequent admission is not for a previously planned, or staged procedure (e.g., performing an angioplasty on a different blood vessel than was treated during the initial admission).<sup>18</sup>

27. If some subjectivity in a measure is inevitable, ideally a rubric would be provided so that organizations score themselves using the same metrics.<sup>19</sup> For example, Medicare penalizes physicians if they do not demonstrate "meaningful use" of an electronic health records ("EHR") system.<sup>20</sup> Although CMS allows each physician to attest whether or not they are demonstrating meaningful use of EHR, CMS defines the eight objectives that collectively determine meaningful use.<sup>21</sup>

---

<sup>17</sup> For example, as part of the HCAHPS program, CMS conducts "quality oversight activities, including inspection of survey administration procedures, statistical analyses of submitted data, and site visits of HCAHPS survey vendors and self-administering hospitals, to assure that the HCAHPS survey is being administered according to the protocols." Similarly, the NCQA data submitted by health plans that I have used in my research to measure health plan quality is independently audited by NCQA. See CMS HCAHPS: Patients' Perspectives of Care Survey; Stankaitis, Singh and Nicholson (2025).

<sup>18</sup> "2024 Condition-Specific Readmission Measures Updates and Specifications Report," Yale New Haven Health Services Corporation — Center for Outcomes Research and Evaluation, April, 2024, available at [https://qualitynet.cms.gov/files/663548ea2b87360fd3523eff?filename=2024\\_CSR\\_AUS\\_Report\\_v1.0.pdf](https://qualitynet.cms.gov/files/663548ea2b87360fd3523eff?filename=2024_CSR_AUS_Report_v1.0.pdf), pp. 9, 76–77.

<sup>19</sup> Donabedian (1966); See also "Using Rubrics," *Cornell University Center for Teaching Innovation*, available at <https://teaching.cornell.edu/teaching-resources/assessing-student-learning/using-rubrics>.

<sup>20</sup> "Meaningful Use: Electronic Health Record (EHR) incentive programs," *American Medical Association*, available at <https://www.ama-assn.org/practice-management/medicare-medicare/meaningful-use-electronic-health-record-ehr-incentive>.

<sup>21</sup> Reda Chouffani, "Meaningful Use Stage 3," *TechTarget*, September 2016, available at <https://www.techtarget.com/searchhealthit/definition/meaningful-use-stage-3>.

28. Health care quality ratings or measures are often based on where an organization's performance is in the national, all-organization, performance distribution in terms of its percentile (e.g., top-quartile, bottom-quartile).<sup>22</sup> Therefore, collecting a quality measure from *all* health care organizations is an important way to ensure accuracy, standardization, and consistency. If some organizations do not provide a specific quality measure, information on the national distribution is incomplete, which creates statistical challenges. Omitting data from the non-reporting organizations can bias ratings for the organizations that do report because their positions in the observed, truncated distribution may differ from their positions with complete reporting. Furthermore, imputing values for the non-reporting organizations can also bias ratings if the statistical method does not accurately predict the non-reported values.

29. The best way to avoid these statistical challenges is to collect quality measures from all health care organizations so the full national distribution is observed. For example, Medicare mandates that all hospitals provide data to the CMS HQR, and thus avoids a need for imputation of missing data. Alternatively, if the financial incentives to report voluntarily are sufficiently strong, organizations are likely to report.<sup>23</sup> For example, the Joint Commission on Accreditation of Healthcare Organizations ("Joint Commission") is a national body that accredits and evaluates more than 23,000 health care organizations including hospitals in the U.S.<sup>24</sup> In order to be accredited by the Joint Commission and maintain this accreditation, health care organizations must undergo on-site evaluations by a Joint Commission survey team at least every three years.<sup>25</sup> The survey team consists of trained experts who are doctors, nurses, hospital administrators, and other health care professionals. During the on-site evaluation, the expert team selects a random sample of patients at each hospital, examines their medical records to evaluate compliance with medical standards, interviews and conducts observations

---

<sup>22</sup> For example, the CMS Five-Star Quality Rating System for Hospitals "evaluates the overall performance of hospitals in the USA and assigns a rating to hospitals ... [based on] how well that hospital performed as compared with other hospitals in the USA." Nisha Kurian et al., "Predicting Hospital Overall Quality Star Ratings in the USA," *Healthcare* 9(4) (2021): pp. 1–12 p. 1.

<sup>23</sup> CMS value-based programs require mandatory reporting and penalizes hospitals that fail to report with reduced payments and penalties. "Audits and Penalties," *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/OpenPayments/Program-Participants/Reporting-Entities/Audits-and-Penalties> ("CMS Audits and Penalties"); "What Are Value-Based Programs?" *CMS.gov*, September 25, 2024, available at <https://www.cms.gov/medicare/quality/value-based-programs>. See also "CMS Inpatient Value, Incentives, and Quality Reporting Programs Overview," *Quality Reporting Center*, December 2020, available at [https://www.qualityreportingcenter.com/globalassets/2021/06/cms-ivqr-programs-overview\\_fy-2023\\_vfinal508.pdf](https://www.qualityreportingcenter.com/globalassets/2021/06/cms-ivqr-programs-overview_fy-2023_vfinal508.pdf).

<sup>24</sup> "History of the Joint Commission," *The Joint Commission*, available at <https://www.jointcommission.org/who-we-are/facts-about-the-joint-commission/history-of-the-joint-commission/> ("History of the Joint Commission").

<sup>25</sup> History of the Joint Commission.

of hospital staff, and speaks to the patients themselves.<sup>26</sup> Although accreditation by the Joint Commission is voluntary, if a hospital meets accreditation standards, that makes the hospital eligible to receive federal reimbursement from CMS.<sup>27</sup> Many states also include accreditation by the Joint Commission among their hospital licensing requirements.<sup>28</sup> As a result, many hospitals seek accreditation by the Joint Commission,<sup>29</sup> and in my experience as a hospital board member, maintaining accreditation by the Joint Commission is a very valuable signal of hospital quality.<sup>30</sup>

30. Another way to promote accuracy, consistency, and standardization is to allow the entity collecting data to audit the submitting organizations in order to ensure the data have been submitted appropriately. Organizations may be fined based on the results of an audit. CMS follows such a policy with hospital Medicare reimbursement.<sup>31</sup> When Medicare bases incentive payments on quality that is measured in claims data, Medicare performs the initial calculations itself, sends a report to each hospital, and then allows each hospital to submit questions regarding the calculations and to request corrections.

#### **VIII. Hospital Ratings Influence Patient Decisions about Medical Care and Misleading Hospital Grades Can Distort Patient Choices, Causing Substantial Harm**

31. As discussed above in Section VII, when evaluating hospital safety, it is important for the measures to be accurate, consistently recorded across different hospitals, and good predictors of actual patient outcomes. Otherwise, one cannot obtain an accurate understanding of the patient safety levels offered by a given hospital or evaluate that safety accurately relative to the safety levels offered by other hospitals.

<sup>26</sup> “Joint Commission FAQs,” *The Joint Commission*, available at <https://www.jointcommission.org/who-we-are/facts-about-the-joint-commission/joint-commission-faqs/>.

<sup>27</sup> “Federal Deemed Status Fact Sheet,” *The Joint Commission*, available at <https://www.jointcommission.org/resources/news-and-multimedia/fact-sheets/facts-about-federal-deemed-status/> (“Joint Commission Federal Deemed Status”). See also Sarah A. Ibrahim et al., “The Evidence Base for US Joint Commission Hospital Accreditation Standards: Cross Sectional Study,” *BMJ* 377:e063064 (2022) (“Ibrahim et al. (2022)”), p. 1.

<sup>28</sup> Joint Commission Federal Deemed Status; Ibrahim et al. (2022), p. 1.

<sup>29</sup> “Hospital Accreditation Fact Sheet,” *The Joint Commission*, available at <https://www.jointcommission.org/resources/news-and-multimedia/fact-sheets/facts-about-hospital-accreditation/>.

<sup>30</sup> I understand that Plaintiffs have received accreditations from the Joint Commission, as well as a number of other accreditations and certifications, which required a peer-reviewed accreditation process. Declaration of Erik Cazares, May 13, 2025 (“Cazares Declaration”), ¶ 10; Declaration of Heather Havericak, May 14, 2025 (“Havericak Declaration”), ¶ 9; Declaration of Sheri Montgomery, May 14, 2025 (“Montgomery Declaration”), ¶ 10; Declaration of Cynthia McCauley, May 13, 2025 (“McCauley Declaration”), ¶ 11; Declaration of Jerad Hanlon, May 13, 2025 (“Hanlon Declaration”), ¶ 9.

<sup>31</sup> CMS Audits and Penalties. CMS can similarly reduce hospital Medicare reimbursement through payment adjustment programs (e.g., Hospital Value-Based Purchasing (“VBP”) Program, Hospital-Acquired Condition Reduction Program (HACRP), and Hospital Readmissions Reduction Program (“HRRP”)) and retains the right to audit data relevant to these programs. See Section 1886(b)(3)(B)(viii)(XI) of the Social Security Act. See also “Hospital Value-Based Purchasing Program,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/quality/initiatives/hospital-quality-initiative/hospital-value-based-purchasing>; “Hospital-Acquired Condition Reduction Program,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/hospital-acquired-condition-reduction-program-hacrp>; “Hospital Readmissions Reduction Program (HRRP),” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/hospital-readmissions-reduction-program-hrrp>.

32. The health economics literature has demonstrated that patients pay attention to hospital ratings and these ratings affect where patients seek medical care. For example, a 2004 study examined how patients are impacted by publicly available hospital ratings based on the New York State Cardiac Surgery Reporting System, a system that evaluated and reported risk-adjusted mortality rates in New York hospitals for patients who received coronary artery bypass graft surgery.<sup>32</sup> The study showed that hospitals that are publicly identified and flagged by this system as being of low quality (e.g., performing significantly below the state average) experience a significant loss in patient volume during the first 12 months after the hospital ratings come out.<sup>33</sup> Similarly, a 2009 study examined the impact of hospital ratings from the *U.S. News and World Report* on patient volume and hospital revenue.<sup>34</sup> The study found that an improvement in a hospital's publicly available rating within a given specialty led to a significant increase in the number of patients who sought care from and were treated by physicians within that hospital specialty.<sup>35</sup> More recently, a 2016 study demonstrated that hospitals that score higher on quality measures publicly reported by CMS experience higher growth in patient volume (measured relative to patient volume in other hospitals) following the public release of the CMS hospital quality measures.<sup>36</sup> Additionally, the study found that this effect is stronger for hospital admissions where patients have a greater say over the hospital choice (i.e., cases where patients are not brought to the hospital emergency room via an ambulance).<sup>37</sup> The study authors interpret this as additional evidence that publicly reported data on hospital quality can have a substantial effect on patient preferences over hospitals and patient demand for one hospital over another.<sup>38</sup>

33. In addition to this general evidence that patients make hospital choices based on publicly available information regarding relative hospital quality, there is evidence that TLG promotes its hospital safety grades as a reliable tool for patients to use in choosing their hospitals. For example, TLG positions itself as the “nation’s leading independent advocate of health care transparency,”<sup>39</sup> and repeatedly emphasizes the reliability of its hospital data in

---

<sup>32</sup> David M. Cutler et al., “The Role of Information in Medical Markets: An Analysis of Publicly Reported Outcomes in Cardiac Surgery,” *American Economic Review* 94(2) (2004): pp. 342–346 (“Cutler et al. (2004)”).

<sup>33</sup> Cutler et al. (2004), p. 344.

<sup>34</sup> Devin G. Pope, “Reacting to Rankings: Evidence from ‘America’s Best Hospitals,’” *Journal of Health Economics* 28 (2009): pp. 1154–1165 (“Pope (2009)”).

<sup>35</sup> Pope (2009), pp. 1160–1161, 1163.

<sup>36</sup> Amitabh Chandra et al., “Health Care Exceptionalism? Performance and Allocation in the US Health Care Sector,” *American Economic Review* 106(8) (2016): pp. 2110–2144 (“Chandra et al. (2016)”), pp. 2110–2111, 2122, 2139–2140.

<sup>37</sup> Chandra et al. (2016), see abstract.

<sup>38</sup> Chandra et al. (2016), pp. 2139–2140.

<sup>39</sup> “Frequently Asked Questions About the Leapfrog Hospital Safety Grade,” *The Leapfrog Group*, May 1, 2025, available at <https://www.hospitalsafetygrade.org/frequently-asked-questions> (“FAQ About TLG Hospital Safety Grade”).

external communications to potential data users. In describing its safety grades on its website, TLG states that “the Leapfrog Hospital Survey is the nation’s gold standard in evaluating hospital performance.”<sup>40</sup> TLG also indicates that its hospital survey meets “rigorous standards” and that it holds the data “to the highest standards of validity and reliability.”<sup>41</sup> Notably, TLG states that its hospital safety grades are widely used by a variety of health care organizations such as health plans, employers, and transparency vendors to “educate” patients on hospital performance and “aid” them in “choosing a hospital.”<sup>42</sup> TLG emphasizes the importance of its grades in informing patients’ hospital choice by claiming that hospitals receiving poor grades of D or F from TLG “carry nearly twice the risk of mortality as A hospitals” and that “[o]ver 50,000 lives could be saved every year if all hospitals performed at the level of [TLG’s] A graded hospitals.”<sup>43</sup> The basis for these claims appears to consist of a 2019 white paper.<sup>44</sup> The analysis in this white paper, however, appears to use the same fundamentally flawed data inputs and methodology that TLG uses to derive its grades (and that I describe in greater detail in the next sections), thereby rendering this analysis and TLG’s claims based on this analysis as misleading as TLG’s grades themselves.

34. Given TLG’s promotion of its hospital grades as a reliable and transparent tool for educating patients, as well as TLG’s own assessment of the broad patient reach of its grades, TLG’s hospital grades can have a significant impact on which hospitals patients choose.<sup>45</sup> This impact, however, can be harmful rather than beneficial to patient health, given that as discussed below in Section X, TLG’s hospital grades provide misleading information about actual hospital quality. Indeed, as noted in Section X below, a hospital graded higher by TLG may be no better or in fact may be worse in terms of patient infections, readmissions, or mortality rates than a hospital graded lower by TLG.

35. That TLG’s inaccurate and misleading hospital grades can harm rather than improve patient health can be also illustrated by the following. For each of the zip codes where three of the five Plaintiffs are located (except Good Samaritan and St. Mary’s), Plaintiffs are the only hospitals within five miles of the respective zip code, and each of these Plaintiffs has

---

<sup>40</sup> “Our Ratings,” *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/our-ratings>.

<sup>41</sup> “Health Care Ratings and Reports,” *The Leapfrog Group*, available at <https://www.leapfroggroup.org/ratings-reports>.

<sup>42</sup> “Types of Data Users,” *The Leapfrog Group*, available at <https://www.leapfroggroup.org/data-users/types-data-users>.

<sup>43</sup> “Lives Lost and Lives Saved,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/your-hospitals-safety-grade/LivesLost>.

<sup>44</sup> Matt Austin and Jordan Derk, “Lives Lost, Lives Saved: An Updated Comparative Analysis of Avoidable Deaths at Hospitals Graded by The Leapfrog Group,” *Armstrong Institute for Patient Safety and Quality Johns Hopkins Medicine* (2019).

<sup>45</sup> I understand that Plaintiffs have received reports from patients who have made hospital choices based on the hospital grades assigned by TLG. Cazares Declaration, ¶ 24; Havericak Declaration, ¶¶ 26–28; Montgomery Declaration, ¶¶ 27–28; McCauley Declaration, ¶ 37.

received a TLG grade of “F.”<sup>46</sup> For the zip codes within which Good Samaritan and St. Mary’s are located, there is only one hospital with a higher grade by TLG—a grade of “C.”<sup>47</sup> To the extent that these poor grades by TLG lead some patients who live in these zip codes to travel further to reach a hospital that received a better grade from TLG, such action may be not only unnecessary—given the potentially misleading nature of these grades—but actually harmful to patient health. Indeed, a 2014 study that analyzed the relationship between distance to a health care facility and health outcomes for scheduled surgeries showed that patients have worse health outcomes as the distance to their chosen health care facilities increases.<sup>48</sup> More specifically, another study found that longer travel distance to hospitals during medical emergencies is associated with an increase in patient mortality.<sup>49</sup>

36. I understand that some state laws recognize the potential negative impact of travel distance on patient outcomes. For example, Florida state law requires that “all medically necessary transfers shall be made to the geographically closest hospital with the service capability.”<sup>50</sup> Further, guidelines set forth by the American College of Emergency Physicians (“ACEP”) state that for emergency care in a pre-hospital setting, patients should be transported to the nearest appropriate emergency department, in accordance with applicable laws, regulations, and guidelines.<sup>51</sup> These state laws and physician guidelines, however, only apply to patients who are transported with ambulances; for patients who transport themselves or

<sup>46</sup> These grades are the last available grades released by TLG in Spring 2025. Leapfrog Hospital Safety Grade, “How Safe is Your Hospital: Hospital Matches – Within 5 miles from the Center of 33484,” *Leapfrog Hospital Safety Grade*, available at [https://www.hospitalsafetygrade.org/search?findBy=zip&zip\\_code=33484&radius=5&city=&state\\_prov=&hospital=](https://www.hospitalsafetygrade.org/search?findBy=zip&zip_code=33484&radius=5&city=&state_prov=&hospital=); “How Safe is Your Hospital: Hospital Matches – Within 5 miles from the Center of 33410,” *Leapfrog Hospital Safety Grade*, available at

[https://www.hospitalsafetygrade.org/search?findBy=zip&zip\\_code=33410&radius=5&city=&state\\_prov=&hospital=](https://www.hospitalsafetygrade.org/search?findBy=zip&zip_code=33410&radius=5&city=&state_prov=&hospital=); “How Safe is Your Hospital: Hospital Matches – Within 5 miles from the Center of 33428,” *Leapfrog Hospital Safety Grade*, available at

[https://www.hospitalsafetygrade.org/search?findBy=zip&zip\\_code=33428&radius=5&city=&state\\_prov=&hospital=](https://www.hospitalsafetygrade.org/search?findBy=zip&zip_code=33428&radius=5&city=&state_prov=&hospital=).

<sup>47</sup> “How Safe is Your Hospital: Hospital Matches – Within 5 miles from the Center of 33401,” *Leapfrog Hospital Safety Grade*, available at

[https://www.hospitalsafetygrade.org/search?findBy=zip&zip\\_code=33401&radius=5&city=&state\\_prov=&hospital=](https://www.hospitalsafetygrade.org/search?findBy=zip&zip_code=33401&radius=5&city=&state_prov=&hospital=);

“How Safe is Your Hospital: Hospital Matches – Within 5 miles from the Center of 33407,” *Leapfrog Hospital Safety Grade*, available at

[https://www.hospitalsafetygrade.org/search?findBy=zip&zip\\_code=33407&radius=5&city=&state\\_prov=&hospital=](https://www.hospitalsafetygrade.org/search?findBy=zip&zip_code=33407&radius=5&city=&state_prov=&hospital=).

<sup>48</sup> ShinYi Chou, Mary E. Deily and Sihui Li, “Travel Distance and Health Outcomes for Scheduled Surgery,” *Medical Care* 52(3) (2014): pp. 250–257, p. 250. Additionally, a 2016 study conducting a systematic review of literature found that patients have worse health outcomes as distance to health care facilities increased. See Charlotte Kelly et al., “Are Differences in Travel Time or Distance to Healthcare for Adults in Global North Countries Associated with an Impact on Health Outcomes? A Systematic Review,” *BMJ Open* (2016), p. 1.

<sup>49</sup> Thomas C. Buchmueller, Mireille Jacobson and Cheryl Wold, “How Far To The Hospital?: The Effect Of Hospital Closures on Access to Care,” *Journal of Health Economics* 25(4) (2006): pp. 740–761, p. 740. See also Jon Nicholl et al., “The Relationship Between Distance to Hospital and Patient Mortality in Emergencies: An Observational Study,” *Emergency Medicine Journal* 24 (2007): pp. 665–668, p. 665.

<sup>50</sup> Fl. Code 395.1041(4)(e).

<sup>51</sup> “Emergency Department Planning and Resource Guidelines,” *Annals of Emergency Medicine* 51(5) (2008): pp. 687–695 (“Emergency Department Planning and Resource Guidelines (2008)”), p. 693.

transport family members to hospitals, the choice of hospital is up to the patients or their families.<sup>52</sup>

37. Given the evidence that patients rely on hospital ratings to inform their hospital choices, accurate hospital ratings can improve patient welfare by steering patients towards better hospitals. Conversely, inaccurate and misleading hospital ratings, like those put forth by TLG, as I will discuss below, can distort patient choices and decrease patient welfare. These ratings can be harmful to patients by inappropriately steering them to hospitals that are in fact worse than others, or even if no worse, to hospitals that take longer to reach with the increased travel itself being potentially harmful to patients.

38. In view of the extent to which hospital ratings can affect patients' hospital choices, misleading hospital ratings can cause harm to a hospital's reputation. Academic literature has found that such public reports on hospital quality "can affect the public image or reputation of a provider or medical care organization"<sup>53</sup> and that a "downturn in reputation" can adversely impact critical factors such as a hospital's ability to raise funds (as charitable donations are an important source of income for not-for-profit hospitals),<sup>54</sup> "maintain legitimacy and professional standing,"<sup>55</sup> and "recruit[sic] and retain[sic] qualified physicians and nurses."<sup>56</sup> Indeed, I understand that chief executive officers of Plaintiff hospitals have noted that their hospitals have suffered substantial reputational harm as a result of the poor grades they were assigned by TLG, and that reputational harm has been accompanied by a decline in patient visits, recruitment challenges, and worsened relationships with physicians.<sup>57</sup>

## **IX. Description of TLG's Methodology for Evaluating Hospital Safety**

39. TLG is a non-profit organization that has conducted annual surveys of hospital quality and safety since 2001 and has published "Hospital Safety Grades" since 2012.<sup>58</sup> More specifically, TLG publishes letter grades ("A" through "F") biannually for nearly 3,000 general

---

<sup>52</sup> Emergency Department Planning and Resource Guidelines (2008); "Emergency Ambulance Destination," *Annals of Emergency Medicine* 34(1) (1999).

<sup>53</sup> Judith H. Hibbard, Jean Stockard, and Martin Tusler, "Hospital Performance Reports: Impact on Quality, Market Share, And Reputation," *Health Affairs* 24(4) (2005): pp. 1150–1160 ("Hibbard et al. (2005)"), p. 1151.

<sup>54</sup> Hibbard et al. (2005), p. 1159.

<sup>55</sup> Hibbard et al. (2005), p. 1151.

<sup>56</sup> Hibbard et al. (2005), p. 1151.

<sup>57</sup> Cazares Declaration, ¶¶ 24–26; Hanlon Declaration, ¶¶ 23–25; Havericak Declaration, ¶¶ 24–28; McCauley Declaration, ¶¶ 36–37; Montgomery Declaration, ¶¶ 25–28.

<sup>58</sup> "History," *The Leapfrog Group*, available at <https://www.leapfroggroup.org/about/history>.

acute care hospitals across the country.<sup>59</sup> The stated purpose of TLG's Hospital Safety Grades is to "educate consumers and purchasers about the safety and quality of healthcare facilities in their community so they can choose the best place for their care."<sup>60</sup>

40. TLG's Hospital Safety Grades aggregate a variety of patient safety measures to produce a single letter grade that purports to represent a hospital's overall performance in keeping patients safe from preventable harm and medical errors.<sup>61</sup> The measures that comprise each Hospital Safety Grade come from the survey responses hospitals provide to TLG, CMS data, and other supplemental sources.<sup>62</sup> These data sources produce up to 22 patient safety measures that are then aggregated into each Hospital Safety Grade.<sup>63</sup>

41. For hospitals that choose to participate in TLG's hospital survey ("participating hospitals"), TLG uses the hospitals' self-reported survey responses for the majority of its measures, i.e., for 12 of the 22 measures.<sup>64</sup> For measures not recorded on a continuous scale, TLG uses hospitals' survey responses and places them in one of five performance categories:<sup>65</sup>

1. "Achieved the Standard"
2. "Considerable Achievement"
3. "Some Achievement"
4. "Limited Achievement"
5. "Unable to Calculate Score" or "Does Not Apply."

42. However, many hospitals choose not to participate in TLG's hospital survey ("non-participating hospitals"). In 2013, more than half of hospitals scored by TLG did not

---

<sup>59</sup> Due to limited availability of public data, TLG does not calculate Hospital Safety Grades for the following types of hospitals: Critical access hospitals ("CAH"), rural emergency hospitals ("REH"), long-term care and rehabilitation facilities, mental health facilities, federal hospitals (e.g., Veterans Affairs, Indian Health Services, etc.), some specialty hospitals, such as surgery centers and cancer hospitals, free-standing pediatric hospitals, hospitals in U.S. territories, and hospitals that are missing scores for more than six process/structural measures, or more than five outcome measures, or missing Patient Safety Indicator ("PSI") 90. "Leapfrog Hospital Safety Grade Scoring Methodology," *The Leapfrog Group*, April 21, 2025, available at <https://www.hospitalsafetygrade.org/media/file/Methodology-Spring-2025-1.pdf> ("Spring 2025 TLG Scoring Methodology"), p. 3.

<sup>60</sup> "How Our Ratings Are Used," *The Leapfrog Group*, available at <https://www.leapfroggroup.org/ratings-reports/how-our-ratings-are-used> ("TLG How Our Ratings Are Used"); "Who We Are," *The Leapfrog Group*, available at <https://www.leapfroggroup.org/about>.

<sup>61</sup> Spring 2025 TLG Scoring Methodology, p. 3.

<sup>62</sup> Spring 2025 TLG Scoring Methodology, p. 3.

<sup>63</sup> A hospital may not have a score for all 22 measures due to missing data. Spring 2025 TLG Scoring Methodology, pp. 3–4.

<sup>64</sup> Spring 2025 TLG Scoring Methodology, pp. 4–8.

<sup>65</sup> There is a numerical score associated with each of the 12 measures that determines in which performance category a hospital is placed. "Achieved the Standard" is associated with a score of 100. "Considerable Achievement" is associated with a score of 50, 70, or 75, depending on the measure. "Some Achievement" is associated with a score of 15, 40, or 50, depending on the measure. "Limited Achievement" is associated with a score of 5, 15, or 25, depending on the measure. "Unable to Calculate Score" or "Does Not Apply" is recorded when a score is "Not Available." See Spring 2025 TLG Scoring Methodology, pp. 9–12.

participate in its survey.<sup>66</sup> Although the number of non-participating hospitals has declined since then, there are still hundreds of hospitals for which TLG issues Hospital Safety Grades but which do not in fact provide survey data to TLG. In 2025, of the approximately 3,000 hospitals that TLG scored, approximately 2,300 participated in its hospital survey, meaning that roughly 23% chose not to participate.<sup>67</sup> For all such non-participating hospitals, TLG prominently displays a letter grade on its [hospitalsafetygrade.org](https://hospitalsafetygrade.org) website, but on its [leapfroggroup.org](https://leapfroggroup.org) website TLG only states that these hospitals declined to participate in TLG's survey without displaying any letter grade.<sup>68</sup>

43. In order to assign grades to non-participating hospitals, TLG uses other sources for the 12 measures that are based on survey responses for participating hospitals:<sup>69</sup> for five of the measures, TLG uses CMS data;<sup>70</sup> for three of the measures, TLG does not include the measure in calculating the hospital's Safety Grade;<sup>71</sup> and for four of the measures, TLG uses an "imputation model."<sup>72</sup> The four measures for which TLG imputes values are:

1. Computerized Physician Order Entry ("CPOE")
2. Bar Code Medication Administration ("BCMA")
3. ICU Physician Staffing ("IPS")
4. Hand Hygiene Score ("HHS").

<sup>66</sup> Only approximately 42% of hospitals TLG scored in 2013 participated in TLG's hospital survey. See Wenke Hwang et al., "Hospital Patient Safety Grades May Misrepresent Hospital Performance," *Journal of Hospital Medicine* 9(2) (2014): pp. 111–115 ("Hwang et al. (2014)"), p. 112.

<sup>67</sup> "About the Leapfrog Group," *The Leapfrog Group*, November 15, 2024, available at <https://www.hospitalsafetygrade.org/about-the-score/about-the-leapfrog-group> ("About the Leapfrog Group"); Spring 2025 TLG Scoring Methodology, p. 3.

<sup>68</sup> See, e.g., "West Boca Medical Center," *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/h/west-boca-medical-center>; "West Boca Medical Center," *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/facility/details/10-0268/west-boca-medical-center-boca-raton-fl>; "Good Samaritan Medical Center," *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/h/good-samaritan-medical-center>; "Good Samaritan Medical Center," *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/facility/details/10-0287/good-samaritan-medical-center-west-palm-beach-fl>; "St. Mary's Medical Center," *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/h/st-marys-medical-center-west-palm-beach-fl>; "St. Mary's Medical Center," *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/facility/details/10-0288/st-mary-s-medical-center-west-palm-beach-fl>; "Delray Medical Center," *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/h/delray-medical-center>; "Delray Medical Center," *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/facility/details/10-0258/delray-medical-center-delray-beach-fl>; "Palm Beach Gardens Medical Center," *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/h/palm-beach-gardens-medical-center>; "Palm Beach Gardens Medical Center," *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/facility/details/10-0176/palm-beach-gardens-medical-center-palm-beach-gardens-fl>.

<sup>69</sup> For participating hospitals that decline to provide information on specific measures, TLG applies the same methodology for those measures that it does for non-participating hospitals. See Spring 2025 TLG Scoring Methodology, pp. 4–6, 9–15, 23.

<sup>70</sup> These five measures are Central Line-Associated Bloodstream Infections ("CLABSI"), Catheter-Associated Urinary Tract infections ("CAUTI"), Surgical Site Infections from Colon Surgery ("SSI: Colon"), Facility-Wide Inpatient MRSA Blood Laboratory-Identified Events ("MRSA"), and Facility-Wide Inpatient C.diff. Laboratory-identified Events ("C. Diff."). See Spring 2025 TLG Scoring Methodology, p. 6.

<sup>71</sup> These three measures are Total Nursing Care Hours per Patient Day, Safe Practice 1: Culture of Leadership Structures and Systems ("SP 1"), and Safe Practice 2: Culture Measurement, Feedback & Intervention ("SP 2"). Given that these three measures are excluded for non-participating hospitals, the standard weights of these measures are redistributed to the other measures for which there are data. Spring 2025 TLG Scoring Methodology, pp. 4–5, 20, 23.

<sup>72</sup> Spring 2025 TLG Scoring Methodology, pp. 4–5.

44. For these four measures, if a hospital does not participate in TLG's survey, TLG follows a two-step imputation model. Starting in the Fall of 2024, the imputation model consisted of the following. First, if the hospital had a prior score assigned by TLG in the last two rounds of hospital grade assignments, the hospital is assigned the same score as the most recent available score on that measure.<sup>73</sup> If a hospital does not have historical data from the last two rounds of hospital grades, TLG assigns "a point value that is equivalent to receiving 'Limited Achievement' for this measure," which is the lowest possible score a hospital can receive.<sup>74</sup> For the CPOE measure, the "Limited Achievement" value is 15, for the BCMA measure it is 25, for IPS it is 5, and for HHS it is 15.<sup>75</sup> Thus, hospitals that choose not to participate in TLG's survey receive only 60 out of 400 possible points for these four measures combined. By contrast, hospitals that choose to participate in TLG's survey have an average of 302 points for these four measures combined.<sup>76</sup> This difference of 242 points has a considerable impact on a hospital's safety grade. Based on the Spring 2025 safety grade criteria, the 242-point difference can correspond to an average grade that is one letter worse for non-participating hospitals, relative to the average letter grade received by participating hospitals, even if both types of hospitals received identical scores across all other measures.<sup>77</sup>

45. Note that prior to the Fall of 2024, TLG used a substantially different imputation model for non-participating hospitals that did not have a recent TLG-assigned score on these four measures.<sup>78</sup> Specifically, rather than assign such non-participating hospitals the lowest possible score on these four measures (as it does now), TLG previously assigned these hospitals

---

<sup>73</sup> Step 1 imputation is temporarily on pause for the BCMA measure due to changes TLG made to the measure in 2024. See "Final Updates to the Leapfrog Hospital Safety Grade Methodology for Fall 2024," *The Leapfrog Group*, available at [https://www.hospitalsafetygrade.org/media/file/Fall2024HospitalSafetyGrade\\_FinalMethodologyChanges.pdf](https://www.hospitalsafetygrade.org/media/file/Fall2024HospitalSafetyGrade_FinalMethodologyChanges.pdf) ("Final Updates to Fall 2024 TLG Scoring Methodology"), pp. 2–3. See also Spring 2025 TLG Scoring Methodology, p. 15.

<sup>74</sup> Spring 2025 TLG Scoring Methodology, pp. 9–12, 16; See Final Updates to Fall 2024 TLG Scoring Methodology, pp. 2–3.

<sup>75</sup> Spring 2025 TLG Scoring Methodology, p. 16.

<sup>76</sup> Spring 2025 TLG Scoring Methodology, p. 22.

<sup>77</sup> Note that TLG may set different Hospital Safety Grade cut-points for different years. In my calculation, I use the Spring 2025 grade cut-points and TLG's methodology to standardize scores in order to determine the Hospital Safety Grades for participating and non-participating hospitals. See Workpaper 1; "Key Dates and Information," *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/for-hospitals/key-dates-and-information>; "Explanation of Hospital Safety Grades," *The Leapfrog Group*, April 2025, available at [https://www.hospitalsafetygrade.org/media/file/ExplanationofSafetyGrades\\_Spring2025.pdf](https://www.hospitalsafetygrade.org/media/file/ExplanationofSafetyGrades_Spring2025.pdf), p. 2.

<sup>78</sup> If hospitals had an assigned score in any of the previous four rounds (i.e. two years) of grades, instead of previous two rounds of grades as is done currently, TLG would impute the most recent score. See "Leapfrog Hospital Safety Grade Scoring Methodology," *The Leapfrog Group*, April 22, 2024, available at <https://www.hospitalsafetygrade.org/media/file/Safety-Grade-Methodology-Spring-2024.pdf> ("Spring 2024 TLG Scoring Methodology"), p. 14.

the average score reported by a set of similar participating hospitals, based on comparison of various hospital characteristics such as urban/rural status and number of beds.<sup>79</sup>

46. TLG states that its Hospital Safety Grades are based on a public and peer-reviewed methodology under the guidance of a “National Expert Panel,” comprised of academics and researchers.<sup>80</sup> However, both TLG’s earlier and current imputation models conflict with the guidance of TLG’s Expert Panel. Because “not all hospitals have enough data publicly available to be eligible for a grade,” the Expert Panel’s guidance states that there are “requirements for the minimum amount of data [TLG] need[s] to issue an accurate grade.”<sup>81</sup> More specifically, the guidance states that “[a] hospital must have enough safety data available for our experts to issue them a letter grade. Hospitals missing more than **six** process measures” are “not graded.”<sup>82</sup> Yet, TLG assigns non-participating hospitals grades even though, without TLG’s imputation model, these non-participating hospitals would lack data for **seven** of the twelve process measures.

47. The remaining 10 of the 22 patient safety measures underlying TLG’s Hospital Safety Grade come from CMS data.<sup>83</sup> CMS collects and maintains data through the HQI, a CMS program that collects and distributes data on hospital performance and other metrics, and these data are fundamentally different from TLG’s hospital survey data.<sup>84</sup> First, CMS data have mandatory reporting standards. Hospitals that fail to publicly report data to CMS may receive reduced Medicare Fee-for-Service payments, a program that “pays physicians, hospitals, and other health care facilities based on statutorily established payment systems.”<sup>85</sup> Second, CMS hospital data are audited, and hospitals that “fail to report information in a timely, accurate, or complete manner” may be penalized.<sup>86</sup> In some cases, CMS may conduct additional “quality oversight activities, including inspection of survey administration procedures, statistical analyses of submitted data, and site visits of ... survey vendors and self-administering

---

<sup>79</sup> This average score second imputation step applies to CPOE, BCMA, and HHS. For IPS, if hospitals reported at least one ICU bed in CMS, TLG assigned non-participating hospitals the lowest possible score. See Final Updates to Fall 2024 TLG Scoring Methodology, p. 2; Spring 2024 TLG Scoring Methodology, pp. 14, 17.

<sup>80</sup> FAQ About TLG Hospital Safety Grade; “About the Grade,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/your-hospitals-safety-grade/about-the-grade> (“TLG About the Grade”).

<sup>81</sup> FAQ About TLG Hospital Safety Grade.

<sup>82</sup> TLG About the Grade.

<sup>83</sup> Spring 2025 TLG Scoring Methodology, pp. 5–7.

<sup>84</sup> CMS Hospital Quality Initiative.

<sup>85</sup> “Finding Medicare Fee-For-Service (FFS) Payment System Rules: Schedules and Resources,” *Congress.gov*, January 7, 2025, available at <https://www.congress.gov/crs-product/R46797>; “Hospital Quality Initiative Public Reporting,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/quality/initiatives/hospital-quality-initiative/hospital-compare>. For example, the HCAHPS survey, which includes five of the ten CMS patient safety measures in TLG’s survey, requires such reporting, and “hospitals that fail to publicly report the quality measures, which include the HCAHPS survey, may receive a reduced annual payment.” See CMS HCAHPS: Patients’ Perspectives of Care Survey.

<sup>86</sup> CMS Audits and Penalties.

hospitals.”<sup>87</sup> By contrast, TLG’s hospital survey data are self-reported with hundreds of hospitals declining to participate, and the available TLG data documentation do not mention any auditing of the survey responses. According to a 2019 evaluation of TLG’s methodology conducted by a group of physician scientists, TLG audits very few hospitals: “[TLG] leadership stated that they had only done a formal audit for approximately five hospitals of about 2,600 in the past year, and only 72 hospitals underwent an electronic audit.”<sup>88</sup>

48. After TLG compiles the 22 measures for each hospital, it produces a standardized score, which allows it to assign a Hospital Safety Grade for each hospital. To standardize data from measures with different performance scales, TLG converts each measure’s value to a z-score. A z-score is calculated using a hospital’s actual measure score, the national mean for that measure, and the national standard deviation for that measure.<sup>89</sup> Specifically, for process measures, z-scores are calculated as (Hospital Score – Mean)/Standard Deviation, and for outcome measures, z-scores are calculated as (Mean – Hospital Score)/Standard Deviation.<sup>90</sup>

49. TLG then calculates an overall numerical score for each hospital. First, TLG multiplies the z-score for each measure by the weight assigned to that measure. Then, TLG sums the weighted scores for each measure and adds 3, to normalize scores to a positive distribution. Lastly, the overall standardized numerical score (typically between 1.0 and 4.0) is converted into a Hospital Safety Grade.<sup>91</sup>

50. Additionally, TLG assigns standard weights to all 22 measures. TLG’s methodology to assign standard weights includes four criteria: “Evidence,” “Impact,” “Opportunity,” and “Number of Component Measures.”<sup>92</sup> These four criteria are then combined to produce a standard weight for each measure that represents the measure’s relative importance within the Hospital Safety Grade.<sup>93</sup> After incorporating these weights, the 10

<sup>87</sup> CMS HCAHPS: Patients’ Perspectives of Care Survey.

<sup>88</sup> Karl Y. Bilimoria et. al., “Rating the Raters: An Evaluation of Publicly Reported Hospital Quality Rating Systems,” *NEJM Catalyst* 5(4) (2019), p. 14.

<sup>89</sup> Spring 2025 TLG Scoring Methodology, p. 21.

<sup>90</sup> There are 12 process/structural measures: CPOE, BCMA, IPS, SP 1, SP 2, Total Nursing Care Hours per Patient Day, HHS, H-COMP-1, H-COMP-2, H-COMP-3, H-COMP-4, H-COMP-5, and H-COMP-6. There are 10 outcome measures: Foreign Object Retained, Air Embolism, Falls and Trauma, CLABSI, CAUTI, SSI: Colon, MRSA, C. Diff., PSI 4, and PSI 90. Spring 2025 TLG Scoring Methodology, pp. 20–21.

<sup>91</sup> Spring 2025 TLG Scoring Methodology, p. 24.

<sup>92</sup> The Evidence Score is determined by the strength and quality of the evidence that supports the measure. The Impact Score is a function of the number of patients affected and the severity of harm. The Opportunity Score is based on the Coefficient of Variation of that measure, calculated as  $1 + (\text{Standard Deviation}/\text{Mean})$ . The Number of Component Measures simply reflects how many component measures comprise the measure. For PSI 90, the number of component measures is 10 and for all other measures, the number of component measures is one. Spring 2025 TLG Scoring Methodology, pp. 18–19.

<sup>93</sup> Standard Weight = Evidence + (Impact x Opportunity x Number of Component Measures); Spring 2025 TLG Scoring Methodology, pp. 18–20.

measures taken from CMS data account for *less than 44%* of the overall Hospital Safety Grade while the remaining 12 measures from TLG's hospital survey account for *more than 56%* of the overall Hospital Safety Grade.<sup>94</sup> The four measures for which TLG uses its imputation model for non-participating hospitals alone account for 24% of the overall Hospital Safety Grade.<sup>95</sup>

## **X. TLG's Rating Methodology Is Fundamentally Flawed**

51. In Section VII, I described important guiding principles for measuring hospital quality. TLG's hospital rating system departs from these established principles, resulting in ratings that are unreliable and incapable of predicting actual patient outcomes.

### **A. TLG's Methodology for Generating Hospital Grades Fails to Provide an Appropriate Basis for Comparison of Hospitals**

52. As discussed in Section VII, for a rating system to allow for meaningful comparisons across the entities being ranked, the methodology used to determine ratings should be consistently applied across all entities.<sup>96</sup> In other words, if ratings were to be generated using different methodologies across different entities, such ratings would not actually allow different entities to be meaningfully compared to one another. TLG's methodology for generating hospital grades suffers from this fundamental flaw.

53. As discussed in Section IX, participation in TLG's survey is voluntary, and while the rate of non-participation has decreased over time from more than 50% in 2013 to approximately 23% in 2025, it still remains the case that many hospitals for which TLG provides safety grades choose to submit no information at all as part of TLG's hospital survey.<sup>97</sup> The statistics literature has found that the quality of inferences that can be drawn based on available data is directly related to the proportion of missing data, and that any "statistical analysis is likely to be biased when more than 10% of the data are missing."<sup>98</sup> As such, the fact that TLG continues to generate hospital grades for hundreds of hospitals that

---

<sup>94</sup> Workpaper 2.

<sup>95</sup> Workpaper 2. If any of the measures are missing for a given hospital, the standard weight of that measure is redistributed to the other measures for which there are data. Spring 2025 TLG Scoring Methodology, pp. 20, 23–24.

<sup>96</sup> For example, as part of the HCAHPS program, CMS also conducts "quality oversight activities, including inspection of survey administration procedures, statistical analyses of submitted data, and site visits of HCAHPS survey vendors and self-administering hospitals, to assure that the HCAHPS survey is being administered according to the protocols." Similarly, in the article that will be published later this year, my co-authors and I independently audit data underlying our research to ensure data reporting is consistent across different health plans and compliant with required data specifications. *See* CMS HCAHPS: Patients' Perspectives of Care Survey; Stankaitis, Singh and Nicholson (2025).

<sup>97</sup> Hwang et al. (2014), p. 112; About the Leapfrog Group; Spring 2025 TLG Scoring Methodology, p. 3.

<sup>98</sup> Yiran Dong and Chao-Ying Joanne Peng, "Principled missing data methods for researchers," *SpringerPlus* 2(222) (2013): pp. 1–17, p. 2.

provide no survey responses and represent approximately 23% of all hospitals that TLG grades calls into question the scientific reliability of TLG's hospital grades.

54. The unreliability of TLG's hospital grades is further underscored by the fact that the major contributor of these hospital grades (56.6% of the overall grade) is the collective 12 measures that participating hospitals self-report in TLG's survey and non-participating hospitals do not. As discussed in Section IX, TLG applies a different rating methodology for participating hospitals versus non-participating hospitals with respect to these 12 measures. For participating hospitals, these 12 measures are based on non-audited, self-reported values obtained from TLG's hospital survey, whereas the same measures for non-participating hospitals are based either on audited, mandatory reported values from public sources, or "imputed" as the lowest possible score. Academic literature has raised similar concerns about the reliability of TLG's methodology due to different treatment of participating and non-participating hospitals, even before TLG's methodology update in Fall 2024 regarding the imputation model used for non-participating hospitals.<sup>99</sup>

55. Further, for some of the measures that are obtained from public sources for both participating and non-participating hospitals, these measures are obtained from *different* public sources for the different type of hospital. For example, the standardized infection ratio ("SIR") measure, which accounts for 21.6% of a hospital's grade, is obtained from CMS for non-participating hospitals, while it is obtained using the National Healthcare Safety Network ("NHSN") data for participating hospitals.<sup>100</sup> Although data should be similar from both sources, it is well acknowledged that the data often do not match in practice,<sup>101</sup> and TLG has made public recognition of this fact.<sup>102</sup> Namely, TLG acknowledges that SIR data obtained from CMS and NHSN often do not match, because CMS data are "frozen based on the quarterly reporting deadline, whereas NHSN is constantly changing if a hospital changes its data."<sup>103</sup> In other words, participating hospitals are permitted to retroactively adjust their SIR data, but non-

<sup>99</sup> See, e.g., Karl Y. Bilimoria et al., "Rating the Raters: An Evaluation of Publicly Reported Hospital Quality Rating Systems," *NEJM Catalyst* 5(4) (2019), p. 14; Shawna N. Smith et al., "Dissecting Leapfrog: How Well Do Leapfrog Safe Practices Scores Correlate with Hospital Compare Ratings and Penalties, and How Much Do They Matter?" *Medical Care* 55(6) (2017): pp. 606–614 ("Smith et al. (2017)") at p. 613; Hwang et al. (2014), p. 111.

<sup>100</sup> Spring 2025 TLG Scoring Methodology, pp. 13–15. See also "Leapfrog Hospital Survey Hard Copy," *The Leapfrog Group*, May 14, 2024, available at [https://www.leapfroggroup.org/sites/default/files/Files/2024HospitalSurvey\\_20240514\\_v9.1%20%28version%20%29.pdf](https://www.leapfroggroup.org/sites/default/files/Files/2024HospitalSurvey_20240514_v9.1%20%28version%20%29.pdf), p. 242.

<sup>101</sup> "CMS Quality Reporting Programs Frequently Asked Questions," CDC, March 15, 2023, available at [https://www.cdc.gov/nhsn/faqs/cms/faq\\_cms\\_hai.html](https://www.cdc.gov/nhsn/faqs/cms/faq_cms_hai.html).

<sup>102</sup> "NHSN Guidance: Join the Group, Data Rights Template, and Downloading Reports," April 1, 2025, available at [https://www.leapfroggroup.org/sites/default/files/Files/2025\\_NHSN\\_Instructions\\_v02.pdf](https://www.leapfroggroup.org/sites/default/files/Files/2025_NHSN_Instructions_v02.pdf) ("NHSN Guidance (2025)"), pp. 19–20.

<sup>103</sup> NHSN Guidance (2025), p. 20.

participating hospitals are not provided this same opportunity. Research has shown that participating hospitals' SIR data are substantially more favorable than the SIR data publicly available through CMS, leading researchers to recommend that TLG use CMS data for all hospitals.<sup>104</sup> TLG does not explain why it chooses this inconsistent methodology between participating and non-participating hospitals, instead of using CMS data for all hospitals. These inconsistent methodological practices of TLG in generating ratings preclude the ability to perform an apples-to-apples comparison of participating and non-participating hospitals.

56. Yet another inconsistency in how TLG treats participating and non-participating hospitals is that the former are graded based on (self-reported) performance during a more recent period than the latter. For example, as noted by TLG in its scoring methodology for Spring 2025, TLG used data on participating hospitals' self-reported performance during July 2023-June 2024 on a variety of measures including measures of the incidence of five different types of infections that patients can develop while treated in the hospital.<sup>105</sup> By comparison, for non-participating hospitals TLG used data from CMS on these measures even though those data were reported to CMS for a different time period—January-December 2023.<sup>106</sup> In other words, in addition to relying on data from different *sources* for participating and non-participating hospitals, TLG also relies on data from different *time periods* for these two types of hospitals. Such a methodological inconsistency further undermines the ability of TLG's resulting hospital grades to capture quality differences across hospitals.

57. Finally, even among hospitals that do participate in TLG's survey, the hospital grades are not comparable. This is because the 12 measures that are derived from hospital responses to TLG's survey are self-reported and hospitals are provided no uniform rubric to generate these responses. For example, the "National Quality Forum ('NQF') Safe Practices" measure is only defined by TLG as "measur[ing] a hospital's progress towards implementing endorsed processes and protocols to reduce and prevent adverse events."<sup>107</sup> It is not clear what exactly constitutes an adverse event, nor how one might measure progress towards reducing incidence of such events. As another example, TLG defines the BCMA measure as measuring, in part, a hospital's progress towards "implementation of BCMA throughout the hospital" and "structures to monitor and reduce workarounds."<sup>108</sup> Again, TLG provides no rubric or specifics

---

<sup>104</sup> Smith et al. (2017).

<sup>105</sup> Spring 2025 TLG Scoring Methodology, p. 6.

<sup>106</sup> Spring 2025 TLG Scoring Methodology, p. 6.

<sup>107</sup> Spring 2025 TLG Scoring Methodology, p. 11.

<sup>108</sup> Spring 2025 TLG Scoring Methodology, p. 9.

regarding how progress should be measured and provides no indication of what types of structures would need to be in place. To the extent hospitals are reporting these scores using different informal rubrics, the resulting overall grades are not comparable across hospitals.

**B. TLG's Rating System Results in Inappropriately Inflated Grades for Hospitals that Choose to Participate in Its Survey and Inappropriately Deflated Grades for Hospitals that Choose Not to Participate**

58. As described in Section IX, for hospitals that choose to participate in TLG's survey, 12 of the 22 measures used to determine the hospital safety grade are based on self-reporting by these hospitals. TLG lacks an appropriate auditing mechanism to ensure that the self-reported data are accurate. For example, and as noted above, one such measure in the hospital survey is the HHS.<sup>109</sup> However, it is simply not possible to verify that each doctor or nurse at participating hospitals was washing their hands whenever they claim they did. Similarly, as noted above, another measure in the survey is "National Quality Forum Safe Practices," which purports to capture a hospital's progress toward implementing certain safety protocols.<sup>110</sup> But TLG has no way of independently verifying that a hospital truly practices any such protocols.

59. Participating hospitals are strongly incentivized to give themselves higher scores on these self-reported measures to improve their grades,<sup>111</sup> and in fact, a 2017 study examining TLG's hospital grades concluded that participating hospitals do indeed inflate their responses to the survey, as evidenced by the fact that 50% or more of participating hospitals self-report a perfect score on all but one measure, as shown in Exhibit 1.<sup>112</sup>

---

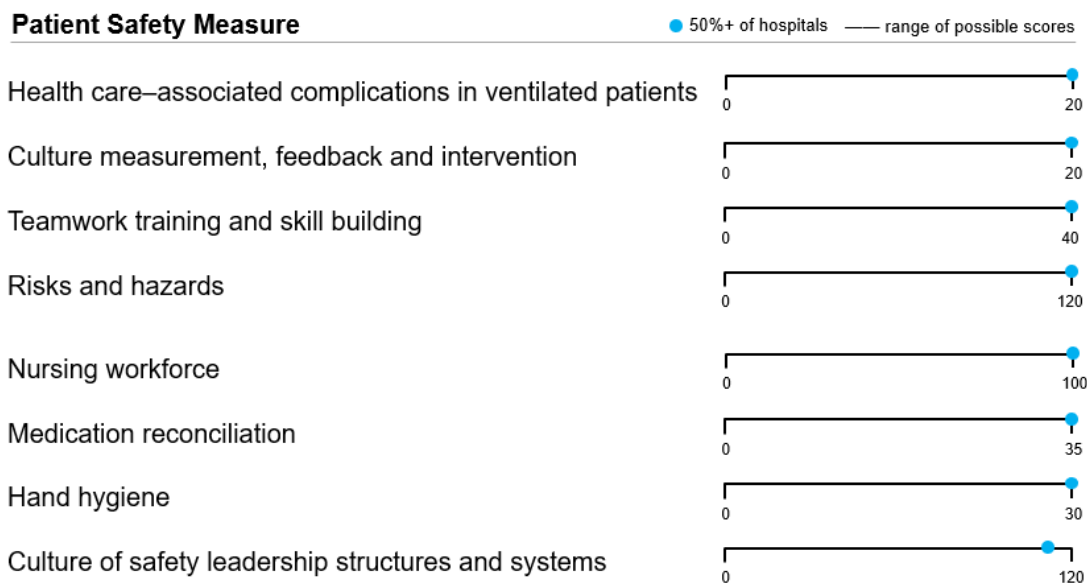
<sup>109</sup> Spring 2025 TLG Scoring Methodology, p. 12.

<sup>110</sup> Spring 2025 TLG Scoring Methodology, p. 11.

<sup>111</sup> Smith et al. (2017).

<sup>112</sup> Smith et al. (2017).

***Exhibit 1: 50% or More of Participating Hospitals Self-Report Perfect Scores on Nearly All TLG Measures***



Source: Smith et al. (2017)

Note: This exhibit includes all eight patient safety measures included in the 2013 TLG Hospital Survey for which hospitals participating in the survey were asked to self-report. These measures combined contributed 22.6% a hospital's safety grade.

60. Further, the study found a “consistently weak” correlation between these *self-reported* scores and a set of *actual* patient outcomes such as incidence of two different types of infection rates and incidence of hospital penalties due to high rates of unplanned patient readmissions and hospital-acquired conditions (“HAC”),<sup>113</sup> meaning that hospitals that self-report inflated scores provide no observable benefit to patients with respect to these outcomes as compared to non-participating hospitals.<sup>114</sup> As such, given that TLG cannot verify the accuracy of survey responses and the fact that participating hospitals inflate their scores, this results in overall TLG grades that are inflated for participating hospitals.

61. Likewise, exactly the opposite is true for non-participating hospitals. Contrary to TLG’s claim that “Hospital Safety Grades are not...automatically lowered if a hospital

<sup>113</sup> In 2012, CMS began their HRRP and HACRP, which aim to reduce unplanned readmissions and HAC, respectively. Hospitals whose HAC or readmissions exceed expected values could be penalized up to 1% of total hospital Medicare reimbursement under HACRP or up to 3% of total hospital Medicare reimbursement under HRRP. See “Hospital Readmissions Reduction Program (HRRP),” CMS, September 10, 2024, available at <https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/hospital-readmissions-reduction-program-hrrp>. See also “Hospital-Acquired Condition Reduction Program,” CMS, September 10, 2024, available at <https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/hospital-acquired-condition-reduction-program-hacrp>.

<sup>114</sup> Smith et al. (2017).

declines to participate,”<sup>115</sup> TLG’s methodology does in fact “automatically” penalize hospitals that do not respond to the survey by inappropriately deflating those hospitals’ grades. This occurs primarily through TLG’s imputation model, adopted in the Fall of 2024 as discussed in Section IX, which assigns non-participating hospitals the *lowest possible score* for four measures without having any factual basis to do so.<sup>116</sup> As also discussed above, this imputation model has an outsized impact on a hospital’s safety grade and can lead to a non-participating hospital receiving a safety grade that is one letter grade lower than an otherwise identical participating hospital.

62. As an example, the Spring 2025 TLG grades for Florida hospitals demonstrate the marked difference in grades between participating and non-participating hospitals. *Every* hospital in Florida that received a grade of A or B from TLG had completed TLG’s survey, and *every* hospital in Florida that did not complete the survey received a grade of C or lower.<sup>117</sup> Moreover, the majority of these Florida hospitals that received a grade of A or B from TLG received CMS Overall Hospital Quality Star Ratings below the national average of 3.1 stars (out of five).<sup>118</sup> This provides another example of how participation in TLG’s survey may result in inflated TLG grades.

63. Even prior to adopting this imputation model in the Fall of 2024, TLG’s methodology penalized non-participating hospitals. For example, for two of the measures for which TLG currently imputes the lowest possible value for non-participating hospitals, TLG previously used data from another source (a survey administered by the American Hospital Association (“AHA”)) for non-participating hospitals.<sup>119</sup> This AHA survey, however, had a lower maximum possible score, so that even if a hospital scored the maximum points on the AHA survey, that score would still be lower than the maximum possible score on TLG’s

---

<sup>115</sup> “Follow-Up Statement from Leapfrog President and CEO Leah Binder on Tenet Healthcare Hospitals’ Lawsuit to Suppress Poor Safety Grade Performance,” *The Leapfrog Group*, May 2, 2025, available at <https://www.leapfroggroup.org/news-events/follow-statement-leapfrog-president-and-ceo-leah-binder-tenet-healthcare-hospitals%E2%80%9999>.

<sup>116</sup> “Leapfrog Hospital Safety Grade Scoring Methodology,” *The Leapfrog Group*, November 4, 2024, available at <https://www.hospitalsafetygrade.org/media/file/Safety-Grade-Scoring-Methodology-Fall-2024-1.pdf>, p. 15; Spring 2025 TLG Scoring Methodology, pp. 15–16.

<sup>117</sup> “How Safe is Your Hospital?” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/>. See Workpaper 3.

<sup>118</sup> The CMS Overall Hospital Quality Star Rating is part of the HQR. See “Hospital Quality Initiative Public Reporting,” *CMS.gov*, available at <https://www.cms.gov/medicare/quality/initiatives/hospital-quality-initiative/hospital-compare>. This rating “summarizes a variety of measures across 5 areas of quality into a single star rating for each hospital.” These 5 areas include “Mortality,” “Safety,” “Readmission,” “Patient Experience,” and “Timely & Effective Care.” See “Overall Hospital Quality Star Rating,” *Data.CMS.gov*, available at <https://data.cms.gov/provider-data/topics/hospitals/overall-hospital-quality-star-rating>. The national average CMS Overall Hospital Quality Star Rating is calculated across all U.S. hospitals that received a CMS star rating. Among Florida hospitals that received a TLG grade of A or B, at least 51 percent of hospitals received a CMS Overall Hospital Quality Star Rating of three or lower. See Workpaper 4.

<sup>119</sup> See, e.g., “Hospital Safety Score Scoring Methodology,” *The Leapfrog Group*, May 2013, available at [https://www.hospitalsafetygrade.org/media/file/HospitalSafetyScore\\_ScoringMethodology\\_May2013.pdf](https://www.hospitalsafetygrade.org/media/file/HospitalSafetyScore_ScoringMethodology_May2013.pdf) (“Spring 2013 TLG Scoring Methodology”), pp. 13–15.

survey.<sup>120</sup> TLG's methodology did not take into account the different point scales for the two surveys, which resulted in non-participating hospitals having their scores appear inappropriately deflated relative to the scores of participating hospitals.<sup>121</sup>

64. This inappropriate deflation of scores and resulting safety grades for non-participating hospitals was documented in a 2014 study that examined TLG's safety grades for 35 hospitals, all considered "top hospitals" according to a rating by the *U.S. News & World Report*,<sup>122</sup> but 17 of which did not participate in TLG's hospital survey and 18 of which did. Unlike TLG, the study's authors "rescored" the 17 non-participating hospitals by assigning them the average values of the self-reported measures of the 18 participating hospitals.<sup>123</sup> This rescoring allowed the non-participating hospitals to benefit from any score inflation inherent in the self-reported measures of the participating hospitals. It also allowed the non-participating hospitals to be shielded from any score deflation caused by TLG using a different scale with a lower possible maximum score for non-participating hospitals than for participating ones.

65. The study authors found that virtually all (15 of the 17) non-participating hospitals would have obtained higher safety grades simply by virtue of participating in TLG's survey, and eight of these hospitals would have received such a substantial improvement in their safety grades that would have amounted to a one- or two- letter grade improvement, further demonstrating the bias in TLG's method of addressing missing data from non-participating hospitals.<sup>124</sup> Exhibit 2 displays the impact of the rescoring on the grades of non-participating hospitals.

---

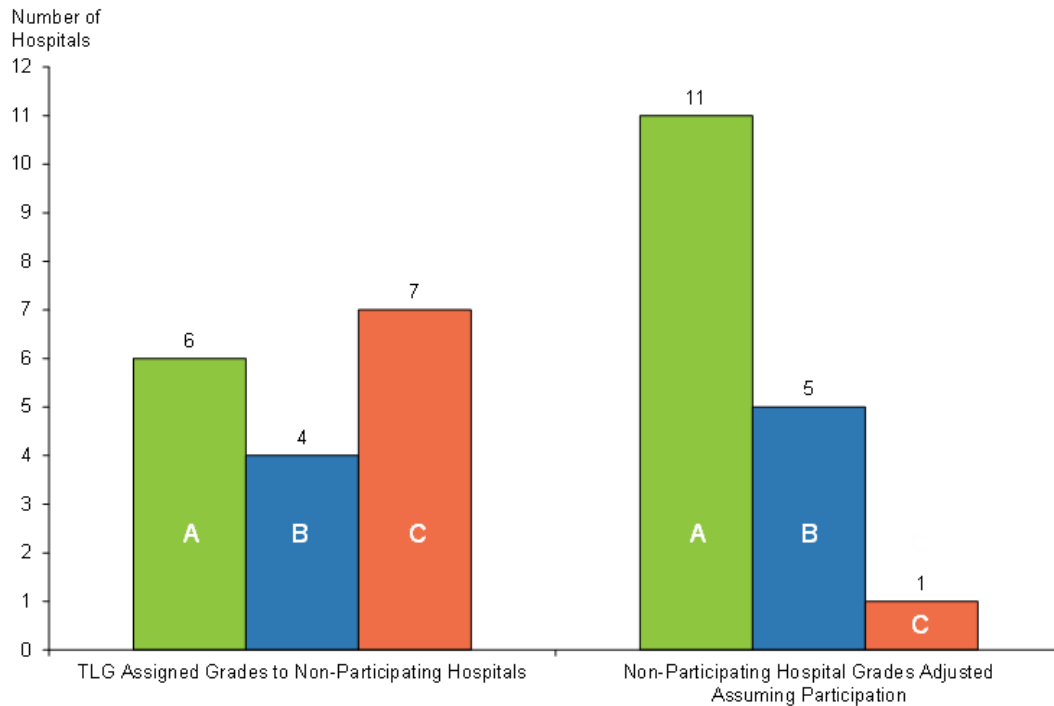
<sup>120</sup> For the CPOE measure, participating hospitals were scored from 5 to 100, whereas non-participating hospitals were scored from 5 to a maximum of 65. Similarly, for the IPS measure, participating hospitals were scored from 5 to 100, whereas non-participating hospitals were scored from 5 to a maximum of 85. Spring 2013 TLG Scoring Methodology, pp. 13–15.

<sup>121</sup> In 2018, TLG lowered the maximum CPOE score for non-participating hospitals to 45 (from 65) using data from the AHA survey. In Spring 2021, TLG began applying its average score methodology to CPOE as described in Section IX above. In Fall 2023, TLG imputed the lowest IPS score of 5 for non-participating hospitals that reported having any ICU hospital beds to CMS. See Spring 2013 TLG Scoring Methodology, pp. 13–15; "Leapfrog Hospital Safety Score Scoring Methodology," *The Leapfrog Group*, October 17, 2018, available at [https://www.hospitalsafetygrade.org/media/file/HospitalSafetyGrade\\_ScoringMethodology\\_Fall2018\\_Final2.pdf](https://www.hospitalsafetygrade.org/media/file/HospitalSafetyGrade_ScoringMethodology_Fall2018_Final2.pdf), p. 14; "Leapfrog Hospital Safety Score Scoring Methodology," *The Leapfrog Group*, November 17, 2020, available at [https://www.hospitalsafetygrade.org/media/file/HospitalSafetyGrade\\_ScoringMethodology\\_Fall2020.pdf](https://www.hospitalsafetygrade.org/media/file/HospitalSafetyGrade_ScoringMethodology_Fall2020.pdf), pp. 15–17, 29; "Leapfrog Hospital Safety Score Scoring Methodology," *The Leapfrog Group*, October 23, 2023, available at <https://www.hospitalsafetygrade.org/media/file/Safety-Grade-Methodology-Fall2023.pdf>, pp. 15–18.

<sup>122</sup> The *U.S. News and World Report* Best Hospitals ratings evaluate nearly 6,000 hospitals each year, in collaboration with industry experts on a number of criteria for health outcomes, process, and structure measures. See "U.S. News Best Hospitals 2024-2025," *U.S. News & World Report*, available at <https://health.usnews.com/best-hospitals>.

<sup>123</sup> Hwang et al. (2014), p. 112.

<sup>124</sup> Hwang et al. (2014).

***Exhibit 2: Example of How TLG Penalized Non-Participating Hospitals Even Prior to Fall 2024***

Source: Hwang et al. (2014).

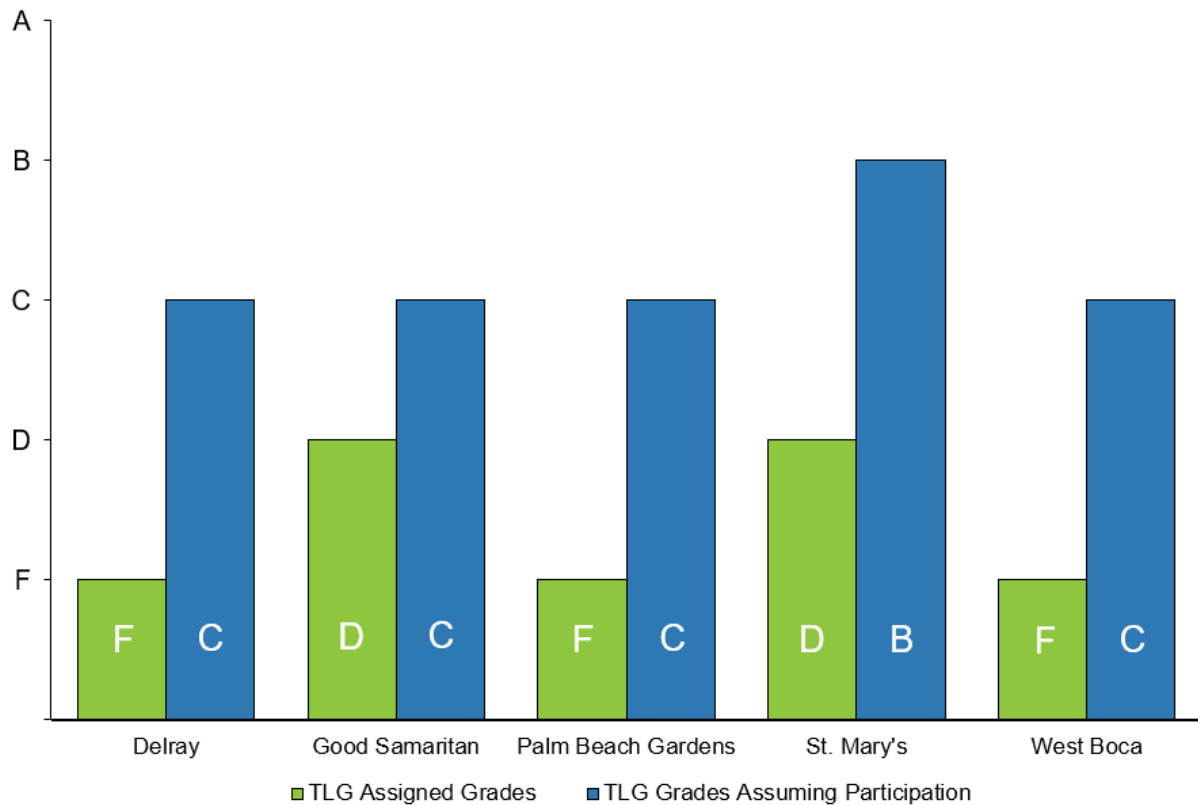
Note: Displayed are the results of an analysis of TLG's hospital grades for 17 "top" hospitals (based on rating of the *US News and World Report*) all of which did not participate in TLG's hospital survey. Hwang et al. (2014) compared the actual hospital grades assigned to these hospitals by TLG (histogram on the left) with what grades these hospitals would have obtained had they participated in the survey (histogram on the right).

66. I conducted a similar rescoring exercise using the data provided by TLG for Plaintiffs for Spring 2025. Specifically, I compared the grades that TLG assigned to Plaintiffs with the grades that Plaintiffs would have been assigned had they participated in TLG's survey and self-reported data in a similar way to most participating hospitals—giving themselves perfect scores on all measures as was demonstrated by the 2017 study cited above.<sup>125</sup> Exhibit 3 illustrates the impact of this rescoring exercise. As this Exhibit shows, had Plaintiffs chosen to participate in TLG's survey and answered that survey in the way most participating hospitals do, Plaintiffs would have been assigned by TLG grades of B or C, i.e., one to two letter grades

<sup>125</sup> As noted in that study, the median score, i.e., the score self-reported by 50% or more of the participating hospitals was the highest possible score for all but one measure. For that last measure, the median score was still very close to the maximum—111.43 points out of 120 maximum points. (Smith et al. (2017), Table 1, p. 609.) When constructing the counterfactual scenario where Plaintiffs participate in TLG's survey, I conservatively assume that Plaintiffs would have given themselves perfect scores on only seven out of 12 measures—those seven measures for which TLG either imputes the lowest possible score for a non-participating hospital or those measures that TLG disregards for non-participating hospitals (but includes for participating ones). For all other measures, I leave TLG's scoring methodology unchanged. See Workpaper 5.

higher than the grades Plaintiffs were actually assigned when they chose not to participate in TLG's survey.<sup>126</sup>

***Exhibit 3: TLG Would Have Assigned All Plaintiffs One or Two Letter Higher Grades for Spring 2025 Had Plaintiffs Participated in TLG's Survey in a Manner Consistent with the Majority of Participating Hospitals***



Source: 2025 – PBHN – Leapfrog Calculators.xlsx; Smith et al. (2017).

Note: This graph demonstrates the impact of rescoring seven of the total 12 measures that hospitals participating in TLG's survey self-report. Each of these 7 measures are ones that for non-participating hospitals, TLG either imputes the lowest possible value or ignores in the calculation of the final grade. By contrast, as noted by Smith et al. (2017), 50% or more of participating hospitals self-report the maximum possible value on nearly all such measures. As a result, to construct the counterfactual grades that TLG would have assigned Plaintiffs had they participated in the survey, I rescore each of the seven measures to be the highest possible score.

67. The statistics literature recommends several methods to address missing data from survey non-participants, none of which involve TLG's current method of arbitrarily

<sup>126</sup> I also conducted another, even more conservative, rescoring exercise where I assume that in the counterfactual scenario where Plaintiffs participate in TLG's survey, Plaintiffs would have given themselves the average score on these seven measures. This is even more conservative not only because of the evidence that most participating hospitals do not behave this way, but also because the average score I use for this rescoring exercise is an average calculated across both participating and non-participating hospitals. For the latter type of hospitals, as discussed above, four of the scores are imputed by TLG as the lowest possible score. In other words, in this counterfactual scenario where Plaintiffs participate in TLG's survey, I am assuming that Plaintiffs would self-report lower scores than most participating hospitals do. Even this more conservative scenario, however, leads to a one- or two-letter grade improvement in each Plaintiff's grade assigned by TLG. See Workpaper 5, Smith et al. (2017), Table 1, p. 609.

imputing the lowest-possible value for non-participating hospitals.<sup>127</sup> TLG has explained the rationale for this Fall 2024 change in its imputation model as follows: “[h]ospitals that decline to complete the Survey should not inadvertently benefit when compared to hospitals that demonstrate, through transparency, [that] they are on a pathway to achieve Leapfrog’s high standards for patient safety.”<sup>128</sup> In other words, TLG seems to be suggesting that non-participation in its survey indicates lack of transparency, and that this lack of transparency in turn indicates lower hospital safety. Similarly, on its website, TLG features an interview with Ashley Tait-Dinger, Director at the Florida Alliance for Healthcare Value, in which she states that, “if a hospital or an ambulatory surgical center chooses not to participate in the hospital survey, that’s a big red flag...that they are not supportive of transparency...what is it that they’re hiding?”<sup>129</sup>

68. Yet, TLG provides no evidence to support such implied claims that lack of participation in its survey is a signal of lower hospital safety, and thus has no basis to assume that non-participating hospitals would have meaningfully lower values for these safety measures than participating hospitals. Indeed, this assumption is contradicted by academic literature that has found in numerous settings, including the health care context, lack of survey participation is *not* an indicator of an entity lagging behind survey participants.<sup>130</sup> It is also contradicted both by the 2014 study noted above as well as the 2017 study noted further above. The latter and more recent study also found no statistically significant differences between hospitals that chose to participate in TLG’s hospital survey and those that did not, in terms of several patient health outcomes measured by CMS in its Hospital Compare program.<sup>131</sup> This lack of differentiation is illustrated in Exhibit 4.

---

<sup>127</sup> TLG’s imputation model is referred to as “single imputation” by statisticians. See Derrick A. Bennett, “How Can I Deal with Missing Data in My Study?” *Australian and New Zealand Journal of Public Health* 25(5) (2001): pp. 464–469 (“Bennett (2001)”), p. 465. The statistics literature supports several established approaches to single imputation such as “Last value carried forward,” “Mean substitution,” “Regression methods,” “Hot-deck imputation,” and “Cold-deck imputation.” See Bennett (2001), p. 465.

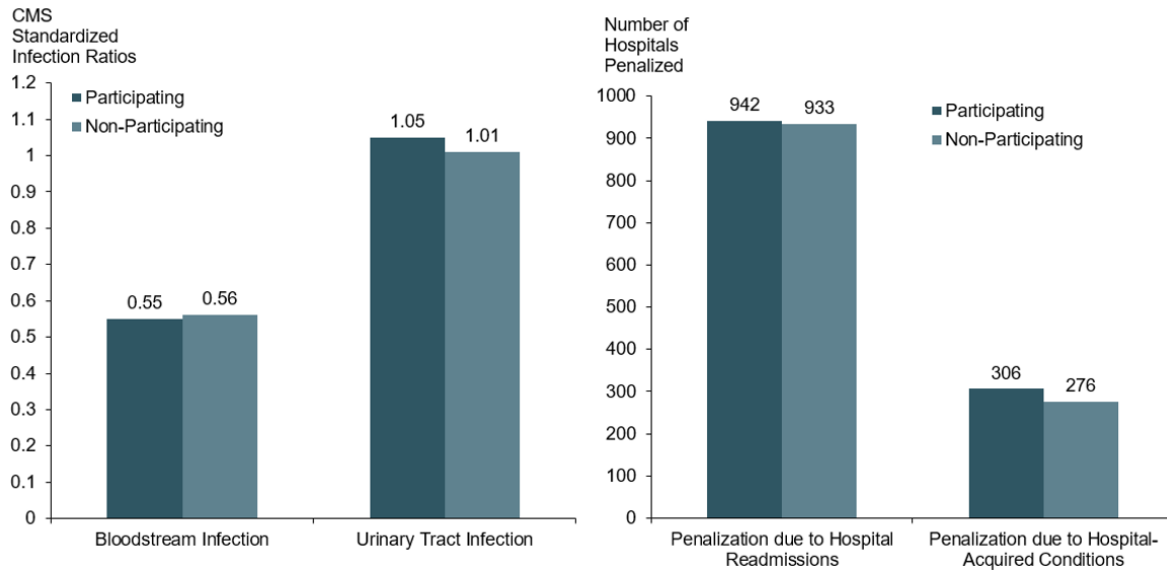
<sup>128</sup> Final Updates to Fall 2024 TLG Scoring Methodology, pp. 2–3.

<sup>129</sup> “License the Leapfrog Hospital Safety Grade,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/Licensure/DataLicense>; Transcription of YouTube Video: The Leapfrog Hospital Safety Grade, *Good Samaritan Medical Center, Inc., et al v. The Leapfrog Group*, Case No. 9:25-cv-80526, May 15, 2025, 2:10–20.

<sup>130</sup> Mark Meterko et al., “Response Rates, Nonresponse Bias, and Data Quality: Results from a National Survey of Senior Healthcare Leaders,” *Public Opinion Quarterly* 79(1) (2015): pp. 130–144.

<sup>131</sup> As noted further above, the 2017 study examined four types of patient outcomes—two outcomes related to hospital performance in terms of patient readmission rates and new patient conditions acquired during a hospital stay under the HRRP and the HACRP, and two types of infections observed among hospital patients—CLABSIs and CAUTIs. Smith et al. (2017), Table 2, pp. 1 – 2.

***Exhibit 4: There Is No Significant Difference Between Participating and Non-Participating Hospitals in Terms of Several Hospital Outcomes Measured by CMS***



Source: Smith et al. (2017).

Note: The left-hand panel shows SIRs obtained from CMS Hospital Compare. SIRs are risk-adjusted measures that divide the number of observed infections by the number of predicted infections calculated from: (1) Bloodstream Infection (CLABSI) and (2) Urinary Tract Infection (CAUTI) rates from a standard population. SIRs >1.0 indicate more infections observed than predicted, whereas SIRs <1.0 indicate fewer observed than predicted. The right-hand panel shows hospital penalization counts: hospitals whose HACs or readmissions during the evaluation period exceeded expected values. The right-hand panel shows: (3) Penalization due to Hospital Readmissions (i.e. penalizations under the HRRP), which could result in a penalty of up to 3% of total hospital Medicare reimbursement, and (4) Penalization due to HAC (i.e. penalizations under the HACRP), which could result in a penalty of up to 1% of total hospital Medicare reimbursement amounts. Smith et al. (2017) conducted statistical tests to examine whether there are statistically significant differences in any of these patient outcomes between participating and non-participating hospitals and found no such differences. In these data, the number of participating and non-participating hospitals were approximately the same (1098 hospitals participated and 1080 hospitals did not participate).

**C. TLG's Grades Are Not Reliable Indicators of Actual Patient Health and Safety Outcomes in Hospitals**

69. As discussed in Section VII, it is important for hospital ratings to serve as reliable indicators of actual patient health and safety outcomes. TLG's safety grades have been found to be severely deficient in this regard, in part by focusing more on structures and protocols rather than on actual clinical processes and patient outcomes.<sup>132</sup>

70. For instance, one study examined the extent to which TLG's grades had any association with the actual incidence of certain common infections in hospitals, such as CLABSIs, finding no statistically significant relationship.<sup>133</sup> CLABSIs are a major source of hospital-acquired infections, result in significant cost of care to hospitals, and are associated with mortality rates of up to 30%.<sup>134</sup> Another study found that TLG's grades do not consistently

<sup>132</sup> Smith et al. (2017).

<sup>133</sup> Smith et al. (2017).

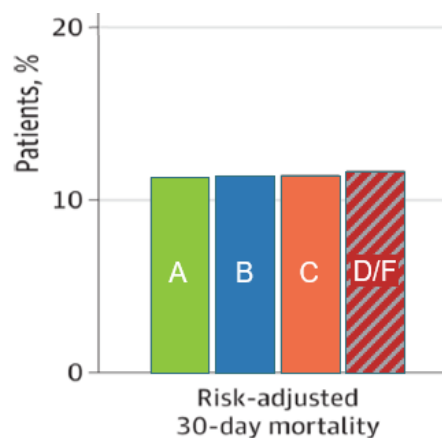
<sup>134</sup> Keyvan Rahmani et al., "Early Prediction of Central Line Associated Bloodstream Infection Using Machine Learning," *American Journal of Infection Control* 50(4) (2022): pp. 440–445.

or accurately predict the prevalence of infections that occur in rated hospitals, with “A” grade hospitals performing no better than “B” and “C” grade hospitals in terms of controlling certain infections, such as MRSA bloodstream infections.<sup>135</sup> TLG’s grades have also been shown to have no statistically significant relationship with other patient outcomes such as surgical mortality or trauma outcomes.<sup>136</sup> Yet another study found that among hospitals receiving A, B, or C grades, there were only negligible differences in patient mortality, surgical complications, and patient readmission rates.<sup>137</sup> Exhibits 5 and 6 illustrate some of these findings.

---

***Exhibit 5: Higher Graded Hospitals by TLG May Not Have Significantly Better Mortality Outcomes***

---



Source: Gonzalez et al. (2014) *JAMA Surgery* “Hospital Safety Scores: Do Grades Really Matter?”

Note: Risk-adjusted 30-day mortality rates are measured for medical admissions. Gonzales et al. (2014) find no statistically significant difference in risk-adjusted 30-day mortality between hospitals receiving A, B, or C grades from TLG.

---

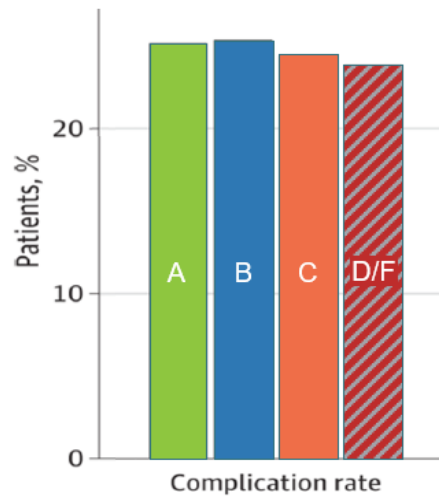
<sup>135</sup> Amy L. Pakyz et al., “Leapfrog Hospital Safety Score, Magnet Designation, and Healthcare-Associated Infections in United States Hospitals,” *Journal of Patient Safety* 17(6) (2021): pp. 445–450.

<sup>136</sup> Smith et al. (2017).

<sup>137</sup> Andrew A. Gonzalez and Amir A. Ghaferi, “Hospital Safety Scores: Do Grades Really Matter?” *JAMA Surgery* 149(5) (2014): pp. 413–414, p. 2.

---

***Exhibit 6: Higher Graded Hospitals by TLG May Have Higher Surgical Complication Rates***



Source: Gonzalez et al. (2014) *JAMA Surgery* “Hospital Safety Scores: Do Grades Really Matter?”; “After Surgery: Discomforts and Complications,” Johns Hopkins Medicine, <https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/after-surgery-discomforts-and-complications>.

Note: Surgical complications may refer to a number of different negative patient outcomes experienced during surgery including shock, bleeding, wound infection, deep vein thrombosis, pulmonary embolism, lung problems, urinary retention, and reaction to anesthesia.

---

71. Taken together, these findings indicate that TLG’s safety grades are not reliable predictors of actual patient outcomes. One explanation for this lack of predictive power might be the methodological flaws in the measures underlying TLG’s safety grades, which I have noted in Sections X.A and B above. Regardless of the explanation, the empirical evidence that better safety grades given by TLG to some hospitals are not always associated with better health outcomes experienced by patients in those hospitals demonstrates that TLG’s safety grades fail to achieve their stated purpose of “educat[ing] consumers and purchasers about the safety and quality of healthcare facilities in their community so they can choose the best place for their care.”<sup>138</sup>

Executed this 16<sup>th</sup> day of May, 2025

---

Sean Nicholson

---

<sup>138</sup> TLG How Our Ratings Are Used.

## **Curriculum Vitae Sean Nicholson**

Department of Economics and School of Public Policy  
Cornell University  
3301c Martha Van Rensselaer Hall  
Ithaca, NY 14853

phone: (607) 342-2842  
fax: (607) 255-4071  
e-mail: sn243@cornell.edu

### **Education**

Ph.D. in economics, University of Wisconsin-Madison, 1997.  
A.B. in economics, Dartmouth College, magna cum laude, 1986.

### **Employment**

Professor, Department of Economics, Cornell University, 2021 - present.  
Professor, Brooks School of Public Policy, Cornell University, 2021 – present.  
Associate Center Director, Cornell Health Policy Center, 2024.  
Director, Sloan Program in Health Administration, Cornell University, 2015 – 2024.  
Professor, Department of Policy Analysis and Management, Cornell University, 2011 - 2021.  
Associate Professor, Department of Policy Analysis and Management, Cornell University, 2006 - 2011.  
Assistant Professor, Department of Policy Analysis and Management, Cornell University, 2004 - 2006.  
Assistant Professor, Health Care Systems, The Wharton School, University of Pennsylvania, 1997 - 2004.  
Worcester Academy, Worcester, MA, 1990 – 1992 (math teacher, cross country and track coach).  
APM, Inc., New York, NY and Boston, MA (management consulting), 1986 – 1990.

### **Affiliations**

Research Associate, National Bureau of Economic Research, 2009 – present (previously Faculty Research Fellow, 2002 – 2009). Health care group and entrepreneurship working group.  
Research Director, Upstate Health Research Network, 2010-2013.  
Associate Editor, *Health Economics*, 2013.  
Research Fellow at VIVE, The Danish National Centre for Social Research, 2012-2020.  
Advisory Committee, Institute for the Advancement of Economics at Cornell, 2010-2012.  
Editorial Advisory Board, *Biotechnology HealthCare*, 2003-2013.  
Senior fellow, Leonard Davis Institute, University of Pennsylvania, 1997 - 2011.  
Research Associate, Population Studies Center, University of Pennsylvania, 1998 - 2004.  
Visiting Scholar, National Board of Medical Examiners, 1999-2000.

### **Honors and Awards**

Weiss Presidential Fellow, Cornell University, 2016.  
SUNY Excellence in Teaching Award, 2009.  
Helen Kardon Moss Anvil Award, Wharton, University of Pennsylvania, 2004.  
Teaching excellence award, Worcester Academy, 1992.  
Phi Beta Kappa, Dartmouth College, 1986.

## **Publications**

Jungbauer, Thomas, Sean Nicholson, June Pan, Michael Waldman, and Lucy Xiaolu Wang, 2025, “The Organization of Innovation: Incomplete Contracts and the Outsourcing Decision,” conditionally accepted at *American Economic Journal: Microeconomics*. NBER working paper 28379.

Stankaitis, Joseph, Samyukta Singh, and Sean Nicholson, 2025, “Assessing Healthcare Disparities Using a Health Plan Quality Measures Index,” *American Journal of Managed Care*, forthcoming (September 2025 issue).

Zhang, Yongkang, Atul Gupta, Sean Nicholson, and Jing Li, 2023, “Elevated End-of-Life Spending: A New Measure of Potentially Wasteful Spending at End of Life,” *Health Services Research*, 58(1): 186-194.

Subramanian, Kritika, Juana Martinez, Joseph R. Osborne, Sean Nicholson, Jessica Van Parys, Parmanand Singh, Anjile An, Rachel Heise, Tamara Al-Hakim, Mindy Buchanan, and Trisha Youn, 2023, “Complex implementation factors demonstrated when evaluating cost-effectiveness and monitoring racial disparities associated with [18F]DCFPyL PET/CT in Prostate Cancer men,” *Clinical Imaging*, 94 (February): 50-55.

Subramanian, Kritika, Juana Martinez, Sandra Huicochea Castellanos, Jana Ivanidze, Himanshu Nagar, Sean Nicholson, Trisha Youn, Jones T. Nauseef, Scott Tagawa, and Joseph R. Osborne, 2023, “Access to Cardiac PET/CT by Sarcoidosis Patients and Cost-Effectiveness Analysis of Cardiac PET/MR Compared to the Standard of Care,” *Scientific Reports*.

Lucarelli, Claudio, Sean Nicholson, and Nicholas Tilipman, 2022, “Price Indices and the Value of Innovation with Heterogenous Patients,” *Journal of Health Economics*, 84(July).

Bao, Yuhua, Hao Zhang, Katherine Wen, Phyllis Johnson, Philip J. Jeng, Lisa R Witkin, Sean Nicholson, M. Carrington Reid, and Bruce R. Schackman, 2021, “Robust Prescription Monitoring Programs and Abrupt Discontinuation of Long-term Opioid Use,” *American Journal of Preventive Medicine*, 61(4): 537-544.

Epstein, Jordan, Sean Nicholson, Lucy Wang, Katherine Hempstead, and Sam Asin, 2020, “The Secret Menu in Health Care: A Cash Market for Imaging in California,” *INQUIRY*, 57:1-8.

Asch, David A., Justin Grischkan, and Sean Nicholson, 2020, “Managing the Cost, Price, and Debt of Medical Education,” *New England Journal of Medicine*, 383: 6-9.

Asch, David A., Sean Nicholson, and Marc L. Berger, 2019, “Toward Facilitated Self-Service in Health Care,” *New England Journal of Medicine* 380(20) 1891-1893.

Asch, David A., Sean Nicholson, and Marc L. Berger, 2019, “How Bots Will Change the Doctor-Patient Relationship,” *Harvard Business Review*, June 4, 2019.

Weatherall, Cecilie D., Anne T. Hansen, and Sean Nicholson, 2019, “The Effect of Assigning Dedicated General Practitioners to Nursing Homes,” *Health Services Research* 54(3): 547-554.

Jindal, Rupinder P., Dinesh K. Gauri, Gaganjot Singh, and Sean Nicholson, 2018, “Factors Influencing Hospital Readmission Penalties: Are They Really Under Hospitals' Control?” *Decision Support Systems*, 110: 58-70.

Song, Minjae, Sean Nicholson, and Claudio Lucarelli, 2017, “Mergers with Inter-Firm Bundling: a Case of Pharmaceutical Cocktails,” *RAND Journal of Economics* 48(3): 810 – 834.

Epstein, Andrew J., Sean Nicholson, David A. Asch, 2016, “The Production of and Market for New Physicians’ Skill,” *American Journal of Health Economics* 2(1): 41-66.

Lakdawalla, Darius, Jason Shafrin, Claudio Lucarelli, Sean Nicholson, Zeba Khan, and Tomas Philipson, 2015, “Quality-Adjusted Cost of Care: a Meaningful Way to Measure Innovation Cost Growth Versus the Value of Health Gains,” *Health Affairs* 34(4): 555-561.

Nicholson, Sean, Marko Vujicic, Tanya Wanchek, Anthony Ziebert, and Adriana Menezes, 2015, “The Impact of Educational Debt on Dentists’ Career Decisions,” *Journal of the American Dental Association* 146(11): 800-807.

David, Guy, Henry Bergquist, and Sean Nicholson, 2014, “Income Gap across Physician Specialties in the USA.” In: Anthony Culyer (ed.), *Encyclopedia of Health Economics*, Vol 2. San Diego: Elsevier, pages 15-21.

Asch, David A., Sean Nicholson, Sindhu K. Srinivas, Jeph Herrin, and Andrew J. Epstein, 2014, “How Do You Deliver a Good Obstetrician? Outcome-Based Evaluation of Medical Education,” *Academic Medicine* 89(1): 1-3.

Wanchek, Tanya, Sean Nicholson, Marko Vujicic, Adriana Menezes, and Anthony Ziebert, 2014, “Educational Debt and Intended Employment among Dental School Seniors,” *Journal of the American Dental Association* 145(5):428-434.

Milsom, Ian, Karin S. Coyne, Sean Nicholson, Marion Kvasz, Chieh-I Chen, and Alan J. Wein, 2014, “Global Prevalence and Economic Burden of Urgency Urinary Incontinence: A Systematic Review,” *European Urology* 65(1): 79-95.

Coyne, Karin, Alan Wein, Sean Nicholson, Marion Kvasz, Chieh-I Chen, and Ian Milsom, 2014, “Economic Burden of Urgency Urinary Incontinence in the United States: A Systematic Review,” *Journal of Managed Care Pharmacy* 20(2): 130-140.

Asch, David A., Sean Nicholson, and Marko Vujicic, 2013, “Are We in a Medical Education Bubble Market,” *New England Journal of Medicine* 369(21): 1973 - 1975.

Epstein, Andrew J., Sindhu K. Srinivas, Sean Nicholson, Jeph Herrin, David A. Asch, 2013, “Association between Physician Experience after Training and Maternal Obstetrical Outcomes: Cohort Study,” *BMJ* 346: f1596.

Coyne, Karin S., Alan Wein, Sean Nicholson, Marion Kvasz, Chieh-I Chen, and Ian Milsom, 2013, “Comorbidities and Personal Burden of Urgency Urinary Incontinence: A Systematic Review,” *International Journal of Clinical Practice* 67(10): 1015-1033.

Nicholson, Sean, and Carol Propper, 2012, “Medical Workforce,” in *Handbook of Health Economics*, Volume 2, edited by Mark Pauly, Thomas McGuire, and Pedro Pito Barros. Amsterdam: Elsevier, pages

873-925.

Danzon, Patricia M., and Sean Nicholson, editors, 2012. The Oxford Handbook of the Economics of the Biopharmaceutical Industry. Oxford University Press.

Nicholson, Sean, 2012, "Financing Research and Development," in The Oxford Handbook of the Economics of the Biopharmaceutical Industry, edited by Patricia M. Danzon and Sean Nicholson. Oxford University Press.

Nicholson, Sean, Matthew Sweeney, Jennifer Whiteley, and James Harnett, 2012, "Is There a Business Case for Reducing Employees' Antidepressant Prescription Drug Cost Sharing?" *Journal of Health and Productivity* 6(1):14-22.

Nicholson, Sean, 2012, "Research Opportunities of a New Private Health Insurance Claims Data Set," *Health Management, Policy and Innovation* 1(1): 37-41.

Burns, Lawton, R., Sean Nicholson, and Joanna Wolkowski, 2012, "Pharmaceutical Strategy and the Evolving Role of Mergers and Acquisitions (M&A)," in Burns, Lawton R., ed., The Business of Healthcare Innovation, 2<sup>nd</sup> Edition. Cambridge, UK: Cambridge University Press, pages 116-193.

Morra, Dante, Sean Nicholson, Wendy Levinson, David N. Gans, Terry Hammons, and Larry P. Casalino, 2011, "US Physician Practices Spend Nearly Four Times as Much Money Interacting with Health Plans and Payors Than Do Their Canadian Counterparts," *Health Affairs* 30(8): 1443-1450.

Dorsey Ray E., Sean Nicholson, William H. Frist, 2011, "Improving the Supply and Distribution of Primary Care Physicians," *Academic Medicine* 86:541-543.

Epstein, Andrew, Jonathan Ketcham, and Sean Nicholson, 2010, "Specialization and Matching in Professional Services Firms," *RAND Journal of Economics* 41(4): 812-835.

Srinivas, Sindhu K., Andrew J. Epstein, Sean Nicholson, Jeph Herrin, and David A. Asch, 2010, "Improvements in US Maternal Obstetrical Outcomes From 1992 to 2006," *Medical Care* 48(5): 487-493.

Epstein, Andrew J., and Sean Nicholson, 2009, "The Formation and Evolution of Physician Treatment Styles: An Application to Caesarean Sections," *Journal of Health Economics* 28: 1126-1140.

Asch, David A., Sean Nicholson, Sindhu Srinivas, Jeph Herrin, and Andrew J. Epstein, 2009, "Evaluating Obstetrical Residency Programs Using Patient Outcomes," *Journal of the American Medical Association* 302(12): 1277-1283.

Dorsey, Ray E., Joel P. Thompson, Melisa Carrasco, Jason de Roulet, Philip Vitticore, Sean Nicholson, S. Claiborne Johnston, Robert G. Holloway, Hamilton Moses, 2009, "Financing and Productivity of Biomedical Research across Therapeutic Areas," *PLoS One* 4(9): e7015.doi:10.1371/journal.pone.0007015.

Casalino, Lawrence P., Sean Nicholson, David N. Gans, Terry Hammons, Dante Morra, Theodore Karrison, and Wendy Levinson, 2009, "What Does It Cost Physician Practices to Interact With Health Insurance Plans?" *Health Affairs* web exclusive, May 14, 2009: w533-w543. (One of the "top 20 most read" *Health Affairs* papers for 2009). Also appears as a section in Yong PL, Saunders RS, Olsen L, eds. The Healthcare Imperative: Lowering Costs and Improving Outcomes. Washington, DC: The National Academies Press; 2010.

Dorsey, E. Ray, Joel P. Thompson, Mark Frasier, Todd Sherer, Brian Fiske, Sean Nicholson, S. Claiborne Johnston, Robert G. Holloway, and Hamilton Moses III, 2009, "Funding of Parkinson's Research from Industry and U.S. Federal and Foundation Sources," *Movement Disorders* 24: 731-737.

Nicholson, Sean, 2009, "Will the United States Have a Shortage of Physicians in 10 Years?" Changes in Health Care Financing & Organization report: [www/hcfo.org](http://www/hcfo.org).

Pauly, Mark V., Sean Nicholson, Daniel Polsky, Marc L. Berger, and Claire Sharda, 2008, "Valuing Reductions in On-the-Job Illness: 'Presenteeism' from Managerial and Economic Perspectives," *Health Economics* 17(4): 469-485.

Waldman, Michael, Sean Nicholson, Nodir Adilov, and John Williams, 2008, "Autism Prevalence and Precipitation Rates in California, Oregon, and Washington Counties," *Journal of Pediatrics and Adolescent Medicine* 162(11): 1026-1034.

Nicholson, Sean, Mark V. Pauly, Anita Ya Jung Wu, James F. Murray, Steven M. Teutsch, and Marc Berger, 2008, "Getting Real Performance Out of Pay-for-Performance," *The Milbank Quarterly* 86(3): 435-457.

Nicholson, Sean, 2008, "Medical Career Choices and Rates of Return," in Frank A. Sloan and Hirschel Kasper, editors, *Incentives and Choice in Health and Health Care*. Cambridge, MA: MIT Press.

Loeppke, Ron, Sean Nicholson, Michael Taitel, Matthew Sweeney, Vince Haufle, and Ronald C. Kessler, 2008, "The Impact of an Integrated Population Health Enhancement and Disease Management Program on Employee Health Risk, Health Conditions, and Productivity," *Population Health Management* 11(6): 287-296.

Asch, David A., Andrew Epstein, and Sean Nicholson, 2007, "Evaluating Medical Training Programs by the Quality of Care Delivered by Their Alumni," *Journal of the American Medical Association* 289(9): 1049-1051.

Danzon, Patricia M., Andrew Epstein, and Sean Nicholson, 2007, "Mergers and Acquisitions in the Pharmaceutical and Biotech Industries," *Managerial and Decision Economics* 28: 307-328.

Nicholson, Sean, Mark V. Pauly, Daniel Polsky, Claire Sharda, Helena Szrek, and Marc L., Berger, 2006, "Measuring the Effects of Workloss on Productivity With Team Production," *Health Economics* 15(2): 111-123.

Nicholson, Sean, 2006, "The Effect of Cost Sharing on Employees With Diabetes," *The American Journal of Managed Care* December: SP20-SP26.

Murray, James F., Sean Nicholson, Mark Pauly, and Marc Berger, 2006, "Investing in Health to Boost Employee Productivity: The Employer's Perspective," in Ronald C. Kessler and Paul E. Stang, editors, *Health & Work Productivity: Making the Business Case for Quality Health Care*, pages 185-206.

Arcidiacono, Peter and Sean Nicholson, 2005, "Peer Effects in Medical Schools," *Journal of Public Economics* 89(2): 327-350.

Nicholson, Sean, Patricia M. Danzon, and Jeffrey McCullough, 2005, "Biotech-Pharmaceutical Alliances as a Signal of Asset and Firm Quality," *Journal of Business* 78(4): 1433-1464.

Nicholson, Sean, 2005, "How Much Do Medical Students Know About Physician Income?" *Journal of Human Resources* 40(1): 100-114.

Danzon, Patricia M., Sean Nicholson, and Nuno Sousa Pereira, 2005, "Productivity in Biotech-Pharmaceutical R&D: The Role of Experience and Alliances," *Journal of Health Economics* 24(2): 317-339.

Polsky, Daniel, Rebecca Stein, Sean Nicholson, and M. Kate Bundorf, 2005, "Employer Health Insurance Offerings and Employee Enrollment Decisions," *Health Services Research* 40(5): 1259-1278.

Nicholson, Sean, Mark V. Pauly, Daniel Polsky, Catherine Baase, Gary M. Bilotti, Ronald J. Ozminkowski, Marc L. Berger, and Claire Sharda, 2005, "How to Present the Business Case for Healthcare Quality to Employers," *Applied Health Economics and Health Policy* 4(4): 209-218.

Burns, Lawton R., Sean Nicholson, and John Evans, 2005, "Mergers, Acquisitions, and the Advantages of Scale in the Pharmaceutical Sector." In Burns, Lawton R., ed., The Business of Healthcare Innovation. Cambridge, UK: Cambridge University Press. Pages 223-268.

Burns, Lawton, R., Gilbert Gimm, and Sean Nicholson, 2005, "The Financial Performance of Integrated Delivery Networks (IDNs)," *Journal of Healthcare Management* 50(3): 191-211.

Collins, James J., Catherine M. Baase, Claire E. Sharda, Ronald J. Ozminkowski, Sean Nicholson, Gary M. Billotti, Robin S. Turpin, Michael Olson, and Marc L. Berger, 2005, "The Assessment of Chronic Health Conditions on Work Performance, Absence, and Total Economic Impact for Employers," *Journal of Occupational and Environmental Medicine* 47(6): 547-557.

Nicholson, Sean and Barbara Wolfe, 2005, "Public Policy and Health Care Expenditures," in Lee-Jay Cho, Hyungpyo Moon, Yoon Hyung Kim, Sang-Hyop Lee, editors, *A New Paradigm for Social Welfare in the New Millenium*. Seoul, Korea: Korea Development Institute Press. Pages 265-290.

Polsky, Daniel, and Sean Nicholson, 2004, "Why Are Managed Care Plans Less Expensive: Risk Selection, Utilization, or Reimbursement?" *Journal of Risk and Insurance* 71(1): 21-40.

Nicholson, Sean, Daniel Polsky, Kate Bundorf, and Rebecca Stein, 2004, "The Magnitude and Nature of Risk Selection in Employer-Sponsored Health Plans," *Health Services Research* 39(6) Part 1: 1817-1838.

Turpin, Robin S., Ronald J. Ozminkowski, Claire E. Sharda, James J. Collins, Marc L. Berger, Gary M. Billotti, Catherine M. Baase, Michael J. Olson, and Sean Nicholson, 2004, "Reliability and Validity of the Stanford Presenteeism Scale," *Journal of Occupational and Environmental Medicine* 46(11): 1123-1133.

Berger, Marc L., Robert A. Howell, Sean Nicholson, and Claire E. Sharda, 2003, "Investing in Healthy Human Capital," *Journal of Occupational and Environmental Medicine* 45(12): 1213-1225.

Nicholson, Sean, 2002, "Physician Specialty Choice Under Uncertainty," *Journal of Labor Economics* 20(4): 816-847.

Pauly, Mark V., Sean Nicholson, Judy Xu, Dan Polsky, Patricia Danzon, James F. Murray, and Marc L. Berger, 2002, "A New General Model of the Impact of Absenteeism on Employers and Employees," *Health Economics* 11(3): 221-231.

Nicholson, Sean. *Medicare Hospital Subsidies: Money in Search of a Purpose*. Washington, D.C.: American Enterprise Institute Press, May 2002.

Nicholson, Sean and David Song, 2001, "The Incentive Effects of the Medicare Indirect Medical Education Policy," *Journal of Health Economics* 20(6): 909-933.

Nicholson, Sean, Mark V. Pauly, Lawton R. Burns, Agnieszka Baumritter, and David A. Asch, 2000, "Measuring Community Benefits Provided by For-Profit and Nonprofit Hospitals," *Health Affairs* November/December: 168-177.

Pauly, Mark V. and Sean Nicholson, 1999, "The Managed Care Backlash: Adverse Consequences of Adverse Selection," *Journal of Health Politics, Policy and Law* 24(5): 921-930.

Kreider, Brent and Sean Nicholson, 1997, "Health Insurance and the Homeless," *Health Economics* 6(1): 31-41.

### **Non-Refereed Op Ed Articles**

Asch, David. A, Justin Grischkan, and Sean Nicholson, "Lower the Cost of Producing Doctors, Not Just the Price of Going to Medical School," *STAT*, July 21, 2020.

Nicholson, Sean, and David A. Asch, "Hospitals Need Cash. Health Insurers Have It," *Harvard Business Review*, March 25, 2020.

### **Working Papers**

Nicholson, Sean, Michael Waldman, and Robin Wang, 2024, "Autism Diagnosis Rates and Precipitation: Evidence from the United Kingdom, 1995-2013," under review.

Braun, Robert Tyler, Sean Nicholson, Michael Richards, Derek Lake, Rahul Fernandez, Brendan O'Connell, and Larry Casalino, 2024, "Association of Optum Ownership of Physician Practices with Medicare Advantage Risk Scores."

Braun, Robert Tyler, Sean Nicholson, Michael Richards, Derek Lake, Rahul Fernandez, Brendan O'Connell, and Larry Casalino, 2024, "The Impact of Health Insurer Acquisitions of Physician Practices on Prices and Patient Visits."

Nicholson, Sean, Stephenson Strobel, and Xingqi Ye, 2024, "Access, Health and Wealth: the Short and Long Run Effects of the Saskatchewan Municipal Doctors Scheme on Rural Access to Physicians, Health Improvements, and Economic Well-being."

Braun, Robert Tyler, Sean Nicholson, Michael Richards, Derek Lake, Rahul Fernandez, Brendan O'Connell, and Larry Casalino, 2025, "Insurer-Owned Physician Practices and ASC Referral Patterns."

Braun, Robert Tyler, Sean Nicholson, Michael Richards, Derek Lake, Rahul Fernandez, Brendan O'Connell, and Larry Casalino, 2025, "Changes in Prices at Ambulatory Surgery Centers Following Optum Acquisition, 2015-2018."

## **Research Grants**

Principal Investigator, Gilead Sciences, The Business Impact of Environmental, Social, and Governance (ESG) Programs and Policies in the Pharmaceutical Industry.

Co-investigator, Cornell University Cross Campus Health Policy Seed Grant, Implications of PBM Consolidation on Pharmaceutical Access and Related Disparities. Pragma Kakani, Principal Investigator. Award: \$20,000.

Co-investigator, Cornell University Cross Campus Health Policy Seed Grant, The Effect of Medicaid Expansion on Pharmacy Availability in Disproportionately Black and Hispanic Neighborhoods. Pragma Kakani, Principal Investigator. Award: \$15,000.

Co-investigator, Laura & John Arnold Foundation, The Impact of Health Insurer Acquisition of Physician Practices and Ambulatory Surgery Centers on Commercial Prices and Spending. Award: \$82,000 (9/2022 – 3/2024).

Co-investigator, Substance Abuse and Mental Health Services Administration, Addressing Buffalo's Opioid Epidemic with Medication-Assisted Treatment. Joseph Stankaitis, Principal Investigator. Award: \$523,000 (9/2018 – 9/2021).

Co-investigator, Agency for Healthcare Research and Review, The Medicaid Fee Bump: Increased Reimbursements to Primary Care Providers and Health Care Utilization Among Dual-Eligibles with Chronic Conditions. Mark Unruh, Principal Investigator. Award: \$78,000 (9/2017 – 9/2020).

Co-Investigator, Robert Wood Johnson Foundation, 73185, Exploring Cash Markets for Health Care and Related Policy Changes Needed to Enable a Consumer-Oriented, Value-Based Health System. Jordan Epstein, Principal Investigator. Award: \$120,000 (1/2016 – 10/2016).

Co-Investigator, Agency for Healthcare Research & Quality, R01HS022306, Relative Price, Payer Mix and Regional Variations in Medical Care. Jonathan D. Ketcham, Principal Investigator. Award: \$282,000 (2013 – 2014).

Principal Investigator, FAIR Health (subcontract from Syracuse University), Developing a New Method to Determine Out-of-Network Payments. Award: \$410,000 (1/11 – 12/13).

Principal Investigator, gift from Larry Stern, Is the Additional Money the U.S. Spends on Medical Care Relative to Europe Worth It? Award: \$100,000 (1/12 – 12/13).

Principal Investigator, FAIR Health (subcontract from Syracuse University), Developing a New Method to Determine Out-of-Network Payments. Award: \$50,000 (8/10 – 12/10).

Principal Investigator, Pfizer, A Quality-adjusted Price Index for Lung and Breast Cancer Drugs. Award: \$82,000 (3/08 – 12/08).

Investigator, National Board of Medical Examiners, Clinical Outcome-Based Assessment of Medical Education: Concept and Evaluation. David A. Asch, Principal Investigator. Award: \$150,000 (7/07 – 6/08).

Principal Investigator, Pfizer, Johnson & Johnson, and AstraZeneca, A Quality-adjusted Price Index for Colon Cancer Drugs: 1993-2005. Award: \$72,000 (8/06 – 12/07).

Principal Investigator, Merck & Co., Inc., The Impact of Pay-for-Performance Programs on Health Outcomes and the Delivery of Medical Care. Award: \$25,000 (12/05 – 10/06).

Principal Investigator, Integrated Benefits Institute, The Cost of Absences in the Retail Sales Industry, Award: \$5,000 (12/05 – 8/06).

Investigator, Robert Wood Johnson Foundation, Costs and Benefits of Physician Interaction with Health Plans. Lawrence Casalino, Principal Investigator. Award: \$101,000 (9/05 – 8/06).

Principal Investigator, Merck Company Foundation, A Quality-adjusted Price Index for Cancer Drugs. Award: \$35,000 (1/05 – 12/06).

Principal Investigator, Centers for Disease Control and Prevention, A New Method of Valuing Investments in Workers' Health. R01 CD000011-01. Award: \$725,000 direct costs (9/04 – 9/07).

Principal Investigator, Cornell University, Determinants of Physician and Hospital Adoption of New Medical Technologies. Award: \$30,000 (3/05-3/08).

Co-principal investigator, Mack Center for Technological Innovation, University of Pennsylvania, Incentives to Innovate in the Biotechnology and Pharmaceutical Industries. Andrew Metrick, Principal Investigator. Award: \$14,000 (7/04 – 6/05).

Principal Investigator, The Research Foundation, University of Pennsylvania, Incentives to Innovate in the Biotechnology and Pharmaceutical Industries. Award: \$16,000 (2/04 – 6/05).

Principal Investigator, U.S. Department of Agriculture. Determinants of Physicians' Treatment Choices. Award: \$5,000 (7/04 – 6/05).

Wharton Program on Pharmaceutical Policy, Economics and Management, Merck & Company Foundation. Patricia Danzon, Principal Investigator. Award: \$1,090,910 (1/00-12/05).

Principal Investigator, The Leonard Davis Institute of Health Economics, University of Pennsylvania. Physician Learning, Information Diffusion, and Best Practice Adoption. Award: \$10,000 (7/02 - 6/03).

Developing and Validating a Measure of the Impact of Absenteeism and Reduced Presenteeism on Worker and Team Productivity. Merck & Company. Mark V. Pauly, Principal Investigator. Award: \$171,000 (7/02 - 6/03).

Principal Investigator, The Research Foundation, University of Pennsylvania. The Impact of Managed Care on the Delivery of Medical Care. Award: \$12,000 (7/01 – 6/02).

Health Plan Choices and Adverse Selection in Employer-Sponsored Health Insurance. Robert Wood Johnson Foundation. Daniel Polsky, Principal Investigator. Award: \$125,000 (2/02 – 7/03).

Current and Potential Labor Shortages in Child Neurology. Child Neurology Society. Daniel Polsky, Principal Investigator. Award: \$100,000 (10/01 – 9/02).

Evolution of HMOs and Risk Selection. The Robert Wood Johnson Foundation. Daniel Polsky, Principal Investigator. Award: \$100,000 (2/99 - 1/00).

Principal Investigator, The Research Foundation, University of Pennsylvania. Determinants and Accuracy of Income Expectations. Award: \$21,000 (7/98 - 6/99).

Principal Investigator, Population Studies Center, University of Pennsylvania. Government Reimbursement of Medicare HMOs. Award: \$19,000 (7/99 - 6/00).

Provision of Community Benefits Among the Federation of American Hospital Systems □ Member Hospitals. Federation of American Hospital Systems. Mark V. Pauly, Principal Investigator. Award: \$77,000 (1/99 - 9/99).

Measuring the Effects of Health-improving Employee Benefits on Employer Profits and Productivity. Merck & Company. Mark V. Pauly, Principal Investigator. Award: \$140,000 (9/99 - 12/00).

Department of Health and Human Services, Bureau of Health Professions. Health Administration Trainingships and Special Projects. Mark V. Pauly, Principal Investigator. Award: \$146,000 (1/97 - 6/02).

Co-principal investigator, Huntsman Emerging Technologies Program. Determinants of R&D Success in Biotech and Pharmaceuticals. Award: \$14,000.

Co-principal investigator. Merck & Company. Determinants of R&D Success in Biotech and Pharmaceuticals. Award: \$10,000.

Co-principal investigator, Huntsman Emerging Technologies Program. Efficiency in the Market for Biotech-Pharmaceutical Deals. Award: \$14,000.

### **External Presentations**

“Elevated End-of-Life Spending: A New Measure of Potentially Wasteful Spending at End of Life,” University of Georgia (December 2022).

“Quality-Adjusted Prescription Drug Price Indexes,” Ireland Health Economics Masterclass, Dublin, Ireland (March 2022).

“Price Indices and the Value of Innovation When Preferences are Heterogeneous,” Hoover Institution, Stanford University (remote) (June 2020).

“A Cash Market for Imaging in California,” American Society of Health Economists conference, Philadelphia, PA (June 2016).

“Relative Prices, Payer Mix and Regional Variations in Medical Care,” University of North Carolina (February 2019); Weill Medical College (May 2018); Indiana University (October 2017); University of Southern California (April 2015); University of Connecticut, Storrs, CT (September 2014); The Danish National Centre for Social Research, Copenhagen, Denmark (April 2014); Vanderbilt University, Nashville, TN (March 2014); University of Pennsylvania, Philadelphia, PA (December 2013).

“Insurer and Patient Payments for Out-of-Network Physician Services,” International Health Economics Association meetings, Sydney Australia (July 2013).

“The Effect of Educational Debt on Dentists’ Career Decisions,” Weill Medical College, New York, NY (November 2013); Intelligence Fair, American Dental Association, Chicago, IL (May 2013).

“Bundling Among Rivals: a Case of Pharmaceutical Cocktails,” University of Southern California, Los Angeles, CA (December 2011).

“Supply Side Implications of Insurance Coverage Expansions: Research Insights for Policy,” Academy Health conference, Washington, D.C. (December 2011).

“The Effect of the Economy on Health and Health Related Behaviors,” University of Colorado – Denver School of Public Health, Denver, CO (January 2011); Work, Stress and Health 2011 conference, Orlando, FL (May 2011); The Danish National Centre for Social Research seminar, Copenhagen, Denmark (June 2011); International Stress Management Association international congress, Porto Alegre, Brazil (June 2012).

“What is the Value of a Healthy Worker to a Company?” keynote address at the International Stress Management Association international congress, Porto Alegre, Brazil (June 2012); keynote address at the Work, Stress and Health 2011 conference, Orlando, FL (May 2011).

“Specialization and Matching in Professional Services Firms,” Boston University/Harvard University/MIT University health economics seminar, Boston, MA (March 2010); University of Connecticut School of Business, Storrs, CT (April 2010).

“What Does the U.S. Buy and What Does It Get From Its Cancer Chemotherapy Purchases Compared to European Nations?” University of Porto Business School, Porto, Portugal (March 2010); American Society of Health Economics conference, Ithaca, NY (June 2010); Academy Health, Boston, MA (June 2010).

“Medical Workforce,” Harvard University, Handbook of Health Economics, Volume 2 conference, Cambridge, MA (October 2010).

“Financing Research and Development,” conference on the Economics of the Biopharmaceutical Industry, The Wharton School (November 2009).

“A Quality-Adjusted Price Index for Colorectal Cancer Drugs,” Health Economics Interest Group, Academy Health, Orlando, Florida (June 2007); Ad Hoc Pharmaceutical Group, New York City (October 2007); Pharmaceutical Economics and Policy Council, Rome, Italy (November 2007); Duke University (April 2008); University of Chicago (May 2008); Missoula Tumor Board, Missoula, MT (July 2008); National Bureau of Economic Research (November 2008); Bureau of Economics Analysis, Washington, D.C. (September 2011); Value of Innovation in Cancer Care conference, Princeton, NJ (November 2011).

“Medical Career Choices and Rates of Return,” Council of Graduate Medical Education, Rockville, MD (May 2008).

“A Simple Measurement Tool to Measure a Company’s Absenteeism and Presenteeism Costs,” The Conference Board: The Wellness Advantage, Boca Raton, FL (December 2008).

“Valuing Reductions in On-the-Job Illness: ‘Presenteeism’ From Managerial and Economic Perspectives,” International Health Economics Association conference, Copenhagen, Denmark (July 2007).

“Is Early Childhood Television Watching an Environmental Cause of Autism?” NBER Health Care Meeting, Cambridge, MA (October 2006); Yale School of Public Health, New Haven, CT (September 2007); Penn State University (October 2007); Federal Trade Commission (October 2007).

“Does Financing Have a Real Effect on Drug Development?” RAND Corporation, Los Angeles, California (September 2006); University of Illinois-Chicago, Chicago, IL (October 2006); ASHE conference, Madison, WI (June 2006); Pharmaceutical Economics and Policy Council, Chicago, IL (January 2007); BIO Conference, Boston, MA (May 2007).

“Specialization and Sorting in the Obstetrics Market?” NBER Health Care Meeting (May 2006); Syracuse University (October 2005); University of Chicago (January 2005).

“A New Method of Valuing Investments in Workers’ Health,” IBI/NBGH Joint Forum on Health, Productivity, and Absence Management, Washington, D.C. (November 2006); IBI Research Meeting, Philadelphia, PA (April 2007); Centers for Disease Control and Prevention, Atlanta (April 2006); Investment Forum Foundation meeting, Washington, D.C. (March 2006).

“Incentives to Innovate in the Biotech and Pharmaceutical Industries,” International Health Economics Association conference, Barcelona, Spain (July 2005).

“How to Quantify the Financial Value of Improvements in Workers’ Health?,” International Health Economics Association conference, Barcelona, Spain (July 2005); Centers for Disease Control and Prevention, Atlanta (April 2005); Consumers, Information and the Evolving Healthcare Marketplace conference, Cornell University (April 2005).

“Mergers and Acquisitions in the Pharmaceutical and Biotech Industries”: Pharmaceutical Economics and Policy Council (January 2005); Federal Trade Commission (March 2004); Lehigh University (November 2003); University of Rochester (October 2003).

“Physician Learning and Best Practice Adoption: An Application to Cesarean Sections”: Weill Cornell Medical Center, New York, NY (March 2006); American Economics Association annual meeting (January 2004); Medical University of South Carolina (January 2004); Cornell University (January 2004); Columbia University/NYU/CUNY seminar (September 2003); NBER Summer Institute (July 2003); International Health Economics Association meeting (June 2003); 14<sup>th</sup> Annual Health Economics Conference (April 2003); Brigham Young University (February 2003); Dartmouth College (October 2002).

“Barriers to Entering Medical Specialties”: Federal Trade Commission (April 2004); Yale University (October 2003); Brigham Young University (February 2003); International Health Economics Association meetings (July 2001).

“Peer Effects in Medical School”: Stanford University (February 2002); University of Wisconsin-Madison (November 2001); College of William and Mary (September 2001); 12<sup>th</sup> Annual Health Economics Conference (June 2000); National Board of Medical Examiners (June 2000).

“Biotech-Pharmaceutical Alliances as a Signal of Asset and Firm Quality”: Northwestern University (February 2002); Program on Pharmaceutical Policy Issues Research Conference, University of Siena, Italy (February 2002).

“Physician Income Prediction Errors: Sources and Implications for Behavior,” University of Chicago (February 2002); Stanford University (February 2002); University of California-Berkeley (February

2002).

“The Magnitude and Nature of Risk Selection in Employer-Sponsored Health Plans”: University of California, Irvine (June 2003); International Health Economics Association meeting (June 2003); 8<sup>th</sup> Northeast Regional Health Economics Research Symposium (August 2002); University of Wisconsin-Madison (November 2001); Johns Hopkins School of Hygiene and Public Health (May 2001).

“Physician Income Expectations and Specialty Choice”: Survey Research on Household Expectations and Preferences, University of Michigan (November 2001); Iowa State University (November 2001); Duke University (November 1999); International Health Economics Association meetings (June 1999).

“Developing and Validating a Measure of the Impact of Absenteeism and Reduced Presenteeism on Worker and Team Productivity,” International Health Economics Association meetings (June 2003).

“The Effect of Patient Outcomes on Physicians’ Patient Volumes, Patient Severity, and Treatment Methods,” International Health Economics Association meetings (June 2003).

“Private Sector Drug Development Alliances,” Wharton Impact Conference: Pharmaceutical Innovation in the Global Economy (October 2002).

“Personal Economics and Other Factors Influencing Specialty Selection,” Institute of Medicine Workshop on the Obstacles to the Incorporation of Research Into Psychiatry Residency Training (June 2002).

“Determinants of R&D Success: Drugs or Firms?,” Merck & Company (October 2001).

“Measuring Community Benefits Provided by For-Profit and Nonprofit Hospitals,” St. Louis Area Business Health Coalition (March 2001).

“Public Policy and Health Expenditures,” A New Paradigm for Social Welfare in the New Millenium, East-West Center (January 2001).

“The Unintended Consequences of Medicare’s Payment Policies”: American Enterprise Institute (March 1999); 6<sup>th</sup> Northeast Regional Health Economics Research Symposium (August 1998).

“Applying the RBRVS Concept to Medical Education,” American Medical Association Section on Medical Schools (December 1998).

“The Effect of Federal Policy on Hospital Care for the Poor,” 10<sup>th</sup> annual Health Economics Conference (June 1998).

## **Teaching**

The U.S. Health Care System, PAM 2350 (undergraduate): 2008 - 2023

Health Care Organizations and Behavior, PAM 5353 (executive MHA): 2019 – 2024.

Health Care Financial Management II, PAM 5630 (masters): 2004 - 2009; 2011 - 2023.

Health Care Finance, PAM 5633 (executive MHA): 2020 - 2024.

Key Management Issues in the Biotech and Pharmaceutical Industries, PAM 5900 (executive): 2019 - 2024.

Pharmaceutical Management and Policy, PAM 3110 (undergraduate): 2012 - 2014.

Perspectives on Health Policy and Management in the U.S., PAM 2351 (undergraduate), 2020.

Health Care Financial Management, PAM 5620 (masters): 2005 - 2006.

Information Resources Management in Health Care Organizations, PAM 5641 (masters): 2007-2009; 2015-2020.

Financial Management of Health Institutions, HCMG 849 (MBA): 1998-2003.

The Economics of Health Care and Policy, HCMG 844 (Ph.D./MBA): 1997-2004.

e-Health: Business Models and Impact, HCMG 866 (MBA): 2001-2004.

The Economics of Information in the Health Care Market HCMG 900 (Ph.D.): 2002.

Financial Management of Health Institutions, HCMG 214 (undergraduates): 1999.

## **Service**

Trustee, Atlantic Health System (Morristown, NJ), 2018 - present.

Trustee, Robert Packer Hospital, Guthrie Health System (Sayre, PA), 2009 - present.

Member, Faculty Advisory Committee on Tenure Appointments, Cornell University, 2019 – 2021.

Chair, Faculty Committee on Program Review, Cornell University, 2017 – present (member 2017 – 2019).

School of Public Policy Planning Committee, Cornell University, 2020 – 2021.

School of Public Policy Dean Search Committee, Cornell University, 2021.

Faculty adviser, Swimming and Diving team, Cornell University, 2010 – present.

Study section reviewer, National Institutes of Health, Health Services Organization and Delivery Study Section, June 2007, February 2008, February 2010, and June 2012. NIA, fall 2017.

NSF grant reviewer: 2008 and 2009.

Study panel member, Treating the Health of the World Trade Center Rescue Workers, Centers for Disease Control and Prevention, Denver, CO, 2006.

**Prior Testimony of Sean Nicholson in the Last Four Years**

Trial Testimony, *The People of the State of California v. Purdue Pharma L.P., et al.*, Supreme Court of the State of California in and for the County of Orange, Case No. 30-2014-00725287-CY-BT-CXC, July 2021

Deposition, *Sandoz Inc. et al. v. United Therapeutics Corp. et al.*, United States District Court for the District of New Jersey, Case No. 3:19-cv-10170, August 2021

Deposition, *The State of Rhode Island, by and through Peter F. Neronha, Attorney General, v. Purdue Pharma L.P., et al.*, Supreme Court of the State of Rhode Island, Case No. PC2018-4555, September 2021

Deposition, *County of Dallas v. Purdue Pharma L.P., et al.*, District Court 116<sup>th</sup> Judicial District, Dallas County, Texas, Case No. 2018-77098, September 2021

Trial Testimony, *IN RE OPIOID LITIGATION: Suffolk County v. Purdue Pharma L.P., et al.*, Index No. 400001/2017, U.S. District Court for the Southern District of New York; *Nassau County v. Purdue Pharma L.P., et al.*, Index No. 400008/2017, U.S. District Court for the Southern District of New York; *The State of New York v. Purdue Pharma L.P., et al.*, Index No. 400016/2018, U.S. District Court for the Southern District of New York, November 2021

Deposition, *The State Florida, Office of the Attorney General, Department of Legal Affairs v. Purdue Pharma L.P., et al.*, Circuit Court of the Sixth Judicial Circuit In and For Pasco County, FL, Case No. 2018-CA-001438, December 2021

Deposition, *The City and County of San Francisco, California and The People of the State of California v. Purdue Pharma L.P., et al.*, U.S. District Court for the Northern District of California, Case No. 3:18-cv-07591-CRB, December 2021

Deposition, *Joseluis Gutierrez Montal, et al. v. Gilead Sciences, Inc., et al.*, Superior Court of Alameda County, RG19028249, (as to Plaintiff Shelton Stile only), in *Gilead Tenofovir Cases*, Judicial Council Coordination Proceeding (JCCP) No. 5043 (CJC-19-005043), Superior Court for the State of California, County of San Francisco, March 2022

Deposition, *The United States of America v. Gilead Sciences, Inc. and Gilead Sciences Ireland, UC*, United States Court of Federal Claims, Case No. 20-499 C, April 2022

Trial Testimony, *State of West Virginia ex rel., Patrick Morrissey, Attorney General v. Teva Pharmaceutical Industries, Ltd., et al.*, Circuit Court of Kanawha County, West Virginia, Civil Action No. 19-C-104 BNE, May 2022

Deposition, *State of New Mexico ex. rel. Hector Balderas, Attorney General vs. Purdue Pharma L.P., et al.*, New Mexico First Judicial District Court, County of Santa Fe, State of New Mexico, No. D-101-CV-2017-02541, May 2022

Deposition, *In Re: Valeant Pharmaceuticals International, Inc. Securities Litigation*, U.S. District Court for the District of New Jersey, Case No. 18-cv-00343-MASLHG, June 2022

Trial Testimony, *The City and County of San Francisco and the People of the State of California v. Purdue Pharma L.P., et al.*, United States District Court, Northern District of California, Case No. 3:18-cv-07591-CRB, June 2022

Trial Testimony, *The United States of America v. Gilead Sciences, Inc. and Gilead Sciences Ireland, UC*, United States Court of Federal Claims, Case No. 20-499 C, June/July 2022

Deposition, *In re: Insulin Pricing Litigation*, United States District Court for the District of New Jersey, Civil Action No. 17-699, August 2022

Deposition, *State of Nevada vs. McKesson Corporation, et al.*, District Court Clark County, Nevada, Case No. A-19-796755-B, January 2023

Deposition, *Mayor and City Council of Baltimore, and Government Employees Health Association v. Actelion Pharmaceuticals LTD., Actelion Pharmaceuticals US, Inc., Janssen Research & Development, LLC*, United States District Court for the District of Maryland, Case No. 1:18-cv-03560, July 2023

Deposition, *In re ACTOS Antitrust Litigation*, United States District Court, Southern District of New York, Case No. 1:13-cv-09244, February 2024

Deposition, *Mayor & City Council of Baltimore City v. Purdue Pharma L.P., et al.*, Circuit Court of Maryland for Baltimore City, Case No. 24C18000515, March 2024

Deposition, *Janssen Pharmaceuticals, Inc. v. Emergent Biosolutions, Inc., and Emergent Manufacturing Operations Baltimore, LLC*, American Arbitration Association, Case No. 01-22-9992-5304, April 2024

Trial testimony, *Sandoz Inc. et al. v. United Therapeutics Corp. et al.*, United States District Court for the District of New Jersey, Case No. 3:19-cv-10170, May 2024

## Documents Considered List

### Academic Articles

- Amitabh Chandra et al., “Health Care Exceptionalism? Performance and Allocation in the US Health Care Sector,” *American Economic Review* 106(8) (2016): pp. 2110–2144
- Amy L. Pakyz et al., “Leapfrog Hospital Safety Score, Magnet Designation, and Healthcare-Associated Infections in United States Hospitals,” *Journal of Patient Safety* 17(6) (2021): pp. 445–450
- Andrew A. Gonzalez and Amir A. Ghaferi, “Hospital Safety Scores: Do Grades Really Matter?” *JAMA Surgery* 149(5) (2014): pp. 413–414
- Andrew J. Epstein et al., “Association Between Physician Experience After Training and Maternal Obstetrical Outcomes: Cohort Study,” *BMJ* 346: f1596 (2013): pp. 2–10
- Andrew J. Epstein, Sean Nicholson and David A. Asch, “The Production of and Market for New Physicians’ Skill,” *American Journal of Health Economics* 2(1) (2016): pp. 41–66
- Avedis Donabedian, “Evaluating the Quality of Medical Care,” *The Milbank Memorial Fund Quarterly* 44(3) (1966): pp. 166–206
- Charlotte Kelly et al., “Are Differences in Travel Time or Distance to Healthcare for Adults in Global North Countries Associated with an Impact on Health Outcomes? A Systematic Review,” *BMJ Open* (2016)
- David A. Asch et al., “Evaluating Obstetrical Residency Programs Using Patient Outcomes,” *Journal of the American Medical Association* 302(12) (2009): pp. 1277–1283
- David A. Asch et al., “How Do You Deliver a Good Obstetrician? Outcome-Based Evaluation of Medical Education,” *Academic Medicine* 89(1) (2014): pp. 24–26
- David M. Cutler et al., “The Role of Information in Medical Markets: An Analysis of Publicly Reported Outcomes in Cardiac Surgery,” *American Economic Review* 94(2) (2004): pp. 342–346
- Derrick A. Bennett, “How Can I Deal with Missing Data in My Study?” *Australian and New Zealand Journal of Public Health* 25(5) (2001): pp. 464–469
- Devin G. Pope, “Reacting to Rankings: Evidence from ‘America’s Best Hospitals,’” *Journal of Health Economics* 28 (2009): pp. 1154–1165
- Donald Berwick and Daniel M. Fox, “Evaluating the Quality of Medical Care,” *The Millbank Quarterly* 94(2) (2016): pp. 237–241

- “Emergency Ambulance Destination,” *Annals of Emergency Medicine* 34(1) (1999)
- “Emergency Department Planning and Resource Guidelines,” *Annals of Emergency Medicine* 51(5) (2008): pp. 687–695
- Jon Nicholl et al., “The Relationship Between Distance to Hospital and Patient Mortality in Emergencies: An Observational Study,” *Emergency Medicine Journal* 24 (2007): pp. 665–668
- Joseph Stankaitis, Samyukta Singh and Sean Nicholson, “Addressing Health Care Disparities Using a Health Plan Quality Measures Index,” *American Journal of Managed Care* 31(9) (2025): pp. 1–19
- Judith H. Hibbard, Jean Stockard, and Martin Tusler, “Hospital Performance Reports: Impact on Quality, Market Share, And Reputation,” *Health Affairs* 24(4) (2005): pp. 1150–1160
- Karl Y. Bilimoria et al., “Rating the Raters: An Evaluation of Publicly Reported Hospital Quality Rating Systems,” *NEJM Catalyst* 5(4) (2019)
- Keyvan Rahmani et al., “Early Prediction Of Central Line Associated Bloodstream Infection Using Machine Learning,” *American Journal of Infection Control* 50(4) (2022): pp. 440–445
- Mark Meterko et al., “Response Rates, Nonresponse Bias, and Data Quality: Results from a National Survey of Senior Healthcare Leaders,” *Public Opinion Quarterly* 79(1) (2015): pp. 130–144
- Matt Austin and Jordan Derk, “Lives Lost, Lives Saved: An Updated Comparative Analysis of Avoidable Deaths at Hospitals Graded by The Leapfrog Group,” *Armstrong Institute for Patient Safety and Quality Johns Hopkins Medicine* (2019)
- Nisha Kurian et al., “Predicting Hospital Overall Quality Star Ratings in the USA,” *Healthcare* 9(4) (2021): pp. 1–12
- Sarah A. Ibrahim et al., “The Evidence Base for US Joint Commission Hospital Accreditation Standards: Cross Sectional Study,” *BMJ* 377:e063064 (2022)
- Shawna N. Smith et al., “Dissecting Leapfrog: How Well Do Leapfrog Safe Practices Scores Correlate with Hospital Compare Ratings and Penalties, and How Much Do They Matter?” *Medical Care* 55(6) (2017): pp. 606–614
- ShinYi Chou, Mary E. Deily and Sihui Li, “Travel Distance and Health Outcomes for Scheduled Surgery,” *Medical Care* 52(3) (2014): pp. 250–257
- Sindhu K. Srinivas et al., “Improvements in US Maternal Obstetrical Outcomes From 1992 to 2006,” *Medical Care* 48(5) (2010): pp. 487–493

- Thomas C. Buchmueller, Mireille Jacobson and Cheryl Wold, “How Far to the Hospital?: The Effect of Hospital Closures on Access to Care,” *Journal of Health Economics* 25(4) (2006): pp. 740–761
- Wenke Hwang et al., “Hospital Patient Safety Grades May Misrepresent Hospital Performance,” *Journal of Hospital Medicine* 9(2) (2014): pp. 111–115
- Yiran Dong and Chao-Ying Joanne Peng, “Principled Missing Data Methods for Researchers,” *SpringerPlus* 2(222) (2013): pp. 1–17

### **Declarations**

- Declaration of Cynthia McCauley, May 13, 2025
- Declaration of Erik Cazares, May 13, 2025
- Declaration of Heather Havericak, May 14, 2025
- Declaration of Jerad Hanlon, May 13, 2025
- Declaration of Sheri Montgomery, May 14, 2025

### **Industry Reports**

- “2024 Condition-Specific Readmission Measures Updates and Specifications Report,” Yale New Haven Health Services Corporation — Center for Outcomes Research and Evaluation, April, 2024, available at [https://qualitynet.cms.gov/files/663548ea2b87360fd3523eff?filename=2024\\_CSR\\_A\\_US\\_Report\\_v1.0.pdf](https://qualitynet.cms.gov/files/663548ea2b87360fd3523eff?filename=2024_CSR_A_US_Report_v1.0.pdf)
- “NHSN Guidance: Join the Group, Data Rights Template, and Downloading Reports, April 1, 2024, available at [https://www.leapfroggroup.org/sites/default/files/Files/2024\\_NHSN\\_Instructions\\_v03.pdf](https://www.leapfroggroup.org/sites/default/files/Files/2024_NHSN_Instructions_v03.pdf)

### **Legal Documents**

- Fl. Code 395.1041(4)(e)
- Section 1886(b)(3)(B)(viii)(XI) of the Social Security Act

### **Pleadings**

- Complaint and Demand for Jury Trial, *Good Samaritan Medical Center, Inc., Delray Medical Center, Inc., Palm Beach Gardens Community Hospital, Inc. d/b/a Palm Beach Gardens Medical Center, St. Mary’s Medical Center, Inc., and West Boca Medical Center, Inc. v. The Leapfrog Group*, Case No. 9:25-cv-80526, April 30, 2025

## Press Releases

- “Follow-Up Statement from Leapfrog President and CEO Leah Binder on Tenet Healthcare Hospitals’ Lawsuit to Suppress Poor Safety Grade Performance,” *The Leapfrog Group*, May 2, 2025, available at <https://www.leapfroggroup.org/news-events/follow-statement-leapfrog-president-and-ceo-leah-binder-tenet-healthcare-hospitals%E2%80%99>

## Transcripts

- Transcription of YouTube Video: The Leapfrog Hospital Safety Grade, *Good Samaritan Medical Center, Inc., et al v. The Leapfrog Group*, Case No. 9:25-cv-80526, May 15, 2025

## Websites

- “About the Grade,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/your-hospitals-safety-grade/about-the-grade>
- “About the Leapfrog Group,” *The Leapfrog Group*, November 15, 2024, available at <https://www.hospitalsafetygrade.org/about-the-score/about-the-leapfrog-group>
- “Audits and Penalties,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/OpenPayments/Program-Participants/Reporting-Entities/Audits-and-Penalties>
- “CMS Inpatient Value, Incentives, and Quality Reporting Programs Overview,” *Quality Reporting Center*, December 2020, available at [https://www.qualityreportingcenter.com/globalassets/2021/06/cms-iviqr-programs-overview\\_fy-2023\\_vfinal508.pdf](https://www.qualityreportingcenter.com/globalassets/2021/06/cms-iviqr-programs-overview_fy-2023_vfinal508.pdf)
- “CMS Quality Reporting Programs Frequently Asked Questions,” *CDC*, March 15, 2023, available at [https://www.cdc.gov/nhsn/faqs/cms/faq\\_cms\\_hai.html](https://www.cdc.gov/nhsn/faqs/cms/faq_cms_hai.html)
- “Delray Medical Center,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/h/delray-medical-center>
- “Delray Medical Center,” *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/facility/details/10-0258/delray-medical-center-delray-beach-fl>
- “Explanation of Hospital Safety Grades,” *The Leapfrog Group*, April 2025, available at [https://www.hospitalsafetygrade.org/media/file/ExplanationofSafetyGrades\\_Spring2025.pdf](https://www.hospitalsafetygrade.org/media/file/ExplanationofSafetyGrades_Spring2025.pdf)

- “Federal Deemed Status Fact Sheet,” *The Joint Commission*, available at <https://www.jointcommission.org/resources/news-and-multimedia/fact-sheets/facts-about-federal-deemed-status/>
- “Final Updates to the Leapfrog Hospital Safety Grade Methodology for Fall 2024,” *The Leapfrog Group*, available at [https://www.hospitalsafetygrade.org/media/file/Fall2024HospitalSafetyGrade\\_FinalMethodologyChanges.pdf](https://www.hospitalsafetygrade.org/media/file/Fall2024HospitalSafetyGrade_FinalMethodologyChanges.pdf)
- “Finding Medicare Fee-For-Service (FFS) Payment System Rules: Schedules and Resources,” *Congress.gov*, January 7, 2025, available at <https://www.congress.gov/crs-product/R46797>
- “Frequently Asked Questions About the Leapfrog Hospital Safety Grade,” *The Leapfrog Group*, May 1, 2025, available at <https://www.hospitalsafetygrade.org/frequently-asked-questions>
- “Good Samaritan Medical Center,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/h/good-samaritan-medical-center>
- “Good Samaritan Medical Center,” *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/facility/details/10-0287/good-samaritan-medical-center-west-palm-beach-fl>
- “HCAHPS: Patients’ Perspectives of Care Survey,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/quality/initiatives/hospital-quality-initiative/hcahps-patients-perspectives-care-survey>
- “Health Care Ratings and Reports,” *The Leapfrog Group*, available at <https://www.leapfroggroup.org/ratings-reports>
- “History of the Joint Commission,” *The Joint Commission*, available at <https://www.jointcommission.org/who-we-are/facts-about-the-joint-commission/history-of-the-joint-commission/>
- “History,” *The Leapfrog Group*, available at <https://www.leapfroggroup.org/about/history>
- “Hospital Accreditation Fact Sheet,” *The Joint Commission*, available at <https://www.jointcommission.org/resources/news-and-multimedia/fact-sheets/facts-about-hospital-accreditation/>
- “Hospital Quality Initiative Public Reporting,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/quality/initiatives/hospital-quality-initiative/hospital-compare>
- “Hospital Quality Initiative,” *CMS.gov*, December 9, 2024, available at <https://www.cms.gov/medicare/quality/initiatives/hospital-quality-initiative>

- “Hospital Ratings & Awards Methodologies,” *Healthgrades*, available at <https://www.healthgrades.com/quality/ratings-awards/methodology>
- “Hospital Readmissions Reduction Program (HRRP),” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/hospital-readmissions-reduction-program-hrrp>
- “Hospital Safety Score Scoring Methodology,” *The Leapfrog Group*, May 2013, available at [https://www.hospitalsafetygrade.org/media/file/HospitalSafetyScore\\_ScoringMethodology\\_May2013.pdf](https://www.hospitalsafetygrade.org/media/file/HospitalSafetyScore_ScoringMethodology_May2013.pdf)
- “Hospital Value-Based Purchasing Program,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/quality/initiatives/hospital-quality-initiative/hospital-value-based-purchasing>
- “Hospital-Acquired Condition Reduction Program,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/hospital-acquired-condition-reduction-program-hacrp>
- “How Our Ratings Are Used,” *The Leapfrog Group*, available at <https://www.leapfroggroup.org/ratings-reports/how-our-ratings-are-used>
- “How Safe is Your Hospital?” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/>
- “How Safe is Your Hospital: Hospital Matches – Within 5 miles from the Center of 33401,” *Leapfrog Hospital Safety Grade*, available at [https://www.hospitalsafetygrade.org/search?findBy=zip&zip\\_code=33401&radius=5&city=&state\\_prov=&hospital=](https://www.hospitalsafetygrade.org/search?findBy=zip&zip_code=33401&radius=5&city=&state_prov=&hospital=)
- “How Safe is Your Hospital: Hospital Matches – Within 5 miles from the Center of 33484,” *Leapfrog Hospital Safety Grade*, available at [https://www.hospitalsafetygrade.org/search?findBy=zip&zip\\_code=33484&radius=5&city=&state\\_prov=&hospital=](https://www.hospitalsafetygrade.org/search?findBy=zip&zip_code=33484&radius=5&city=&state_prov=&hospital=)
- “How Safe is Your Hospital: Hospital Matches – Within 5 miles from the Center of 33410,” *Leapfrog Hospital Safety Grade*, available at [https://www.hospitalsafetygrade.org/search?findBy=zip&zip\\_code=33410&radius=5&city=&state\\_prov=&hospital=](https://www.hospitalsafetygrade.org/search?findBy=zip&zip_code=33410&radius=5&city=&state_prov=&hospital=)
- “How Safe is Your Hospital: Hospital Matches – Within 5 miles from the Center of 33428,” *Leapfrog Hospital Safety Grade*, available at [https://www.hospitalsafetygrade.org/search?findBy=zip&zip\\_code=33428&radius=5&city=&state\\_prov=&hospital=](https://www.hospitalsafetygrade.org/search?findBy=zip&zip_code=33428&radius=5&city=&state_prov=&hospital=)
- “How Safe is Your Hospital: Hospital Matches – Within 5 miles from the Center of 33407,” *Leapfrog Hospital Safety Grade*, available at

- [https://www.hospitalsafetygrade.org/search?findBy=zip&zip\\_code=33407&radius=5&city=&state\\_prov=&hospital=](https://www.hospitalsafetygrade.org/search?findBy=zip&zip_code=33407&radius=5&city=&state_prov=&hospital=)
- “Joint Commission FAQs,” *The Joint Commission*, available at <https://www.jointcommission.org/who-we-are/facts-about-the-joint-commission/joint-commission-faqs/>
  - “Key Dates and Information,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/for-hospitals/key-dates-and-information>
  - “Leapfrog Hospital Safety Grade Scoring Methodology,” *The Leapfrog Group*, April 21, 2025, available at <https://www.hospitalsafetygrade.org/media/file/Methodology-Spring-2025-1.pdf>
  - “Leapfrog Hospital Safety Grade Scoring Methodology,” *The Leapfrog Group*, November 4, 2024, available at <https://www.hospitalsafetygrade.org/media/file/Safety-Grade-Scoring-Methodology-Fall-2024-1.pdf>
  - “Leapfrog Hospital Safety Grade Scoring Methodology,” *The Leapfrog Group*, April 22, 2024, available at <https://www.hospitalsafetygrade.org/media/file/Safety-Grade-Methodology-Spring-2024.pdf>
  - “Leapfrog Hospital Safety Score Scoring Methodology,” *The Leapfrog Group*, October 17, 2018, available at [https://www.hospitalsafetygrade.org/media/file/HospitalSafetyGrade\\_ScoringMethodology\\_Fall2018\\_Final2.pdf](https://www.hospitalsafetygrade.org/media/file/HospitalSafetyGrade_ScoringMethodology_Fall2018_Final2.pdf)
  - “Leapfrog Hospital Safety Score Scoring Methodology,” *The Leapfrog Group*, November 17, 2020, available at [https://www.hospitalsafetygrade.org/media/file/HospitalSafetyGrade\\_ScoringMethodology\\_Fall2020.pdf](https://www.hospitalsafetygrade.org/media/file/HospitalSafetyGrade_ScoringMethodology_Fall2020.pdf)
  - “Leapfrog Hospital Safety Score Scoring Methodology,” *The Leapfrog Group*, October 23, 2023, available at <https://www.hospitalsafetygrade.org/media/file/Safety-Grade-Methodology-Fall2023.pdf>
  - “Leapfrog Hospital Survey Hard Copy,” *The Leapfrog Group*, May 14, 2024, available at [https://www.leapfroggroup.org/sites/default/files/Files/2024HospitalSurvey\\_20240514\\_v9.1%20%28version%20%29.pdf](https://www.leapfroggroup.org/sites/default/files/Files/2024HospitalSurvey_20240514_v9.1%20%28version%20%29.pdf)
  - “License the Leapfrog Hospital Safety Grade,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/Licensure/DataLicense>
  - “Lives Lost and Lives Saved,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/your-hospitals-safety-grade/LivesLost>

- “Meaningful Use: Electronic Health Record (EHR) incentive programs,” *American Medical Association*, available at <https://www.ama-assn.org/practice-management/medicare-medicaid/meaningful-use-electronic-health-record-ehr-incentive>
- “Measures and Current Data Collection Periods,” *CMS.gov*, available at <https://data.cms.gov/provider-data/topics/hospitals/measures-and-current-data-collection-periods>
- “Our Ratings,” *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/our-ratings>
- “Overall Hospital Quality Star Rating,” *Data.CMS.gov*, available at <https://data.cms.gov/provider-data/topics/hospitals/overall-hospital-quality-star-rating>
- “Palm Beach Gardens Medical Center,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/h/palm-beach-gardens-medical-center>
- “Palm Beach Gardens Medical Center,” *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/facility/details/10-0176/palm-beach-gardens-medical-center-palm-beach-gardens-fl>
- “Patient Survey Star Rating for Hospitals,” *Medicare.gov*, available at <https://www.medicare.gov/care-compare/resources/hospital/patient-survey-rating>
- “Quality Measures,” *CMS.gov*, September 10, 2024, available at <https://www.cms.gov/medicare/quality/measures>
- “St. Mary’s Medical Center,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/h/st-marys-medical-center-west-palm-beach-fl>
- “St. Mary’s Medical Center,” *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/facility/details/10-0288/st-mary-s-medical-center-west-palm-beach-fl>
- “Types of Data Users,” *The Leapfrog Group*, available at <https://www.leapfroggroup.org/data-users/types-data-users>
- “U.S. News Best Hospitals 2024-2025,” *U.S. News & World Report*, available at <https://health.usnews.com/best-hospitals>
- “Using Rubrics,” *Cornell University Center for Teaching Innovation*, available at <https://teaching.cornell.edu/teaching-resources/assessing-student-learning/using-rubrics>
- “West Boca Medical Center,” *The Leapfrog Group*, available at <https://www.hospitalsafetygrade.org/h/west-boca-medical-center>

- “West Boca Medical Center,” *The Leapfrog Group*, available at <https://ratings.leapfroggroup.org/facility/details/10-0268/west-boca-medical-center-boca-raton-fl>
- “What Are Value-Based Programs?” *CMS.gov*, September 25, 2024, available at <https://www.cms.gov/medicare/quality/value-based-programs>
- “Who We Are,” *The Leapfrog Group*, available at <https://www.leapfroggroup.org/about>
- Reda Chouffani, “Meaningful Use Stage 3,” *TechTarget*, September, 2016, available at <https://www.techtarget.com/searchhealthit/definition/meaningful-use-stage-3>

**Note: In addition to the documents on this list, I relied on all documents cited in my report to form my opinions.**

## Workpaper 1

|                    | Overall Score | Letter Grade |
|--------------------|---------------|--------------|
| Mean Values        | 3.00          | B            |
| TLG Imputed Values | 2.59          | C            |

Source: "Explanation of Hospital Safety Grades," The Leapfrog Group, April 2025, available at [https://www.hospitalsafetygrade.org/media/file/ExplanationofSafetyGrades\\_Spring2025.pdf](https://www.hospitalsafetygrade.org/media/file/ExplanationofSafetyGrades_Spring2025.pdf), p. 2; "Leapfrog Hospital Safety Grade Scoring Methodology," *The Leapfrog Group*, April 21, 2025, available at <https://www.hospitalsafetygrade.org/media/file/Methodology-Spring-2025.pdf>, pp. 4–7, 15–17, 20, 22.

**Appendix D**

| weights                                     | Standard Measure Weight | Standard Measure Weight |                       |
|---------------------------------------------|-------------------------|-------------------------|-----------------------|
| scores                                      | Mean Score              | Imputed Score           | Standard Deviation    |
| Measure                                     | Mean Score Weighted     | Imputed Score Weighted  | Imputed Score Z-Score |
| CPOE                                        | 4.97426                 | 0.93                    | -0.118461043          |
| BCMA                                        | 4.9122                  | 1.5                     | -0.112059113          |
| IPS                                         | 4.49535                 | 0.345                   | -0.09490853           |
| SP 1                                        | 3.64219                 | NA                      | NA                    |
| SP 2                                        | 3.7392                  | NA                      | NA                    |
| Total Nursing Care Hours<br>per Patient Day | 3.62229                 | NA                      | NA                    |
| HHS                                         | 3.6456                  | 0.735                   | -0.080536801          |
| H-COMP-1                                    | 2.7057                  | NA                      | NA                    |
| H-COMP-2                                    | 2.6973                  | NA                      | NA                    |
| H-COMP-3                                    | 2.4489                  | NA                      | NA                    |
| H-COMP-5                                    | 2.30702                 | NA                      | NA                    |
| H-COMP-6                                    | 2.5575                  | NA                      | NA                    |
| Foreign Object Retained                     | 0.000588                | NA                      | NA                    |
| Air Embolism                                | 0.000048                | NA                      | NA                    |
| Falls and Trauma                            | 0.018816                | NA                      | NA                    |
| CLABSI                                      | 0.029295                | NA                      | NA                    |
| CAUTI                                       | 0.02538                 | NA                      | NA                    |
| SSI Colon                                   | 0.028254                | NA                      | NA                    |
| MRSA                                        | 0.032355                | NA                      | NA                    |
| C. Diff.                                    | 0.018045                | NA                      | NA                    |
| PSI 4                                       | 3.54904                 | NA                      | NA                    |
| PSI 90                                      | 0.1503                  | NA                      | NA                    |

**Appendix D**

| Measure                                     | Evidence Score | Opportunity Score | Impact Score | Number of<br>Component<br>Measures | Standard Measure<br>Weight |
|---------------------------------------------|----------------|-------------------|--------------|------------------------------------|----------------------------|
| Process/Structural Measure Domain (50%)     |                |                   |              |                                    |                            |
| CPOE                                        | 2              | 1.43              | 3            | 1                                  | 6.2%                       |
| BCMA                                        | 2              | 1.37              | 3            | 1                                  | 6.0%                       |
| IPS                                         | 2              | 1.67              | 3            | 1                                  | 6.9%                       |
| SP 1                                        | 1              | 1.06              | 2            | 1                                  | 3.1%                       |
| SP 2                                        | 1              | 1.12              | 2            | 1                                  | 3.2%                       |
| Total Nursing Care Hours<br>per Patient Day | 2              | 1.41              | 2            | 1                                  | 4.7%                       |
| HHS                                         | 2              | 1.49              | 2            | 1                                  | 4.9%                       |
| H-COMP-1                                    | 1              | 1.03              | 2            | 1                                  | 3.0%                       |
| H-COMP-2                                    | 1              | 1.03              | 2            | 1                                  | 3.0%                       |
| H-COMP-3                                    | 1              | 1.05              | 2            | 1                                  | 3.0%                       |
| H-COMP-5                                    | 1              | 1.06              | 2            | 1                                  | 3.1%                       |
| H-COMP-6                                    | 1              | 1.04              | 2            | 1                                  | 3.0%                       |
| Outcome Measure Domain (50%)                |                |                   |              |                                    |                            |
| Foreign Object Retained                     | 1              | 3.00              | 2            | 1                                  | 4.2%                       |
| Air Embolism                                | 1              | 3.00              | 1            | 1                                  | 2.4%                       |
| Falls and Trauma                            | 2              | 2.05              | 3            | 1                                  | 4.9%                       |
| CLABSI                                      | 2              | 1.85              | 3            | 1                                  | 4.5%                       |
| CAUTI                                       | 2              | 1.91              | 3            | 1                                  | 4.7%                       |
| SSI Colon                                   | 2              | 1.83              | 2            | 1                                  | 3.4%                       |
| MRSA                                        | 2              | 1.82              | 3            | 1                                  | 4.5%                       |
| C. Diff.                                    | 2              | 1.81              | 3            | 1                                  | 4.5%                       |
| PSI 4                                       | 1              | 1.14              | 2            | 1                                  | 2.0%                       |
| PSI 90                                      | 1              | 1.20              | 2            | 10                                 | 15.0%                      |

| Measure                                     | Mean Score | Standard Deviation | Imputed Score |
|---------------------------------------------|------------|--------------------|---------------|
| CPOE                                        | 80.23      | 34.14              | 15            |
| BCMA                                        | 81.87      | 30.45              | 25            |
| IPS                                         | 65.15      | 43.73              | 5             |
| SP 1                                        | 117.49     | 6.79               | NA            |
| SP 2                                        | 116.85     | 13.98              | NA            |
| Total Nursing Care Hours<br>per Patient Day | 77.07      | 31.61              | NA            |
| HHS                                         | 74.4       | 36.14              | 15            |
| H-COMP-1                                    | 90.19      | 2.51               | NA            |
| H-COMP-2                                    | 89.91      | 2.48               | NA            |
| H-COMP-3                                    | 81.63      | 4.36               | NA            |
| H-COMP-5                                    | 74.42      | 4.13               | NA            |
| H-COMP-6                                    | 85.25      | 3.7                | NA            |
| Foreign Object Retained                     | 0.014      | 0.05               | NA            |
| Air Embolism                                | 0.002      | 0.055              | NA            |
| Falls and Trauma                            | 0.384      | 0.402              | NA            |
| CLABSI                                      | 0.651      | 0.552              | NA            |
| CAUTI                                       | 0.54       | 0.494              | NA            |
| SSI Colon                                   | 0.831      | 0.689              | NA            |
| MRSA                                        | 0.719      | 0.591              | NA            |
| C. Diff.                                    | 0.401      | 0.326              | NA            |
| PSI 4                                       | 177.452    | 24.02              | NA            |
| PSI 90                                      | 1.002      | 0.196              | NA            |

## Workpaper 2

| Measure                                  | Primary Data Source | Secondary Data Source | Standard Measure Weight |
|------------------------------------------|---------------------|-----------------------|-------------------------|
| <i>Process Structural</i>                |                     |                       |                         |
| CPOE                                     | Survey              | Imputation            | 6.2%                    |
| BCMA                                     | Survey              | Imputation            | 6.0%                    |
| IPS                                      | Survey              | Imputation            | 6.9%                    |
| SP 1                                     | Survey              | -                     | 3.1%                    |
| SP 2                                     | Survey              | -                     | 3.2%                    |
| Total Nursing Care Hours per Patient Day | Survey              | -                     | 4.7%                    |
| HHS                                      | Survey              | Imputation            | 4.9%                    |
| H-COMP-1                                 | CMS                 | -                     | 3.0%                    |
| H-COMP-2                                 | CMS                 | -                     | 3.0%                    |
| H-COMP-3                                 | CMS                 | -                     | 3.0%                    |
| H-COMP-5                                 | CMS                 | -                     | 3.1%                    |
| H-COMP-6                                 | CMS                 | -                     | 3.0%                    |
| <i>Outcome</i>                           |                     |                       |                         |
| Foreign Object Retained                  | CMS                 | -                     | 4.2%                    |
| Air Embolism                             | CMS                 | -                     | 2.4%                    |
| Falls and Trauma                         | CMS                 | -                     | 4.9%                    |
| CLABSI                                   | Survey              | CMS                   | 4.5%                    |
| CAUTI                                    | Survey              | CMS                   | 4.7%                    |
| SSI Colon                                | Survey              | CMS                   | 3.4%                    |
| MRSA                                     | Survey              | CMS                   | 4.5%                    |
| C. Diff.                                 | Survey              | CMS                   | 4.5%                    |
| PSI 4                                    | CMS                 | -                     | 2.0%                    |
| PSI 90                                   | CMS                 | -                     | 15.0%                   |
| <i>Total Weight by Data Source</i>       |                     |                       |                         |
| CMS                                      |                     |                       | 43.6%                   |
| Survey                                   |                     |                       | 56.6%                   |
| Imputation                               |                     |                       | 24.0%                   |

Source: "Leapfrog Hospital Safety Grade Scoring Methodology," *The Leapfrog Group*, April 21, 2025, available at <https://www.hospitalafetygrade.org/media/file/Methodology-Spring-2025.pdf>, pp. 4–7, 20.

Note: The total weights reported in TLG's scoring methodology do not add up to 100%. Adjusting the weights to add up to 100% do not meaningfully change the weights.

## Workpaper 3

## Appendix D

| Hospital name                                   | Spring 2025 TLG grade | Participated in TLG survey? | TLG grade source     | Survey participation source |
|-------------------------------------------------|-----------------------|-----------------------------|----------------------|-----------------------------|
| AdventHealth Altamonte Springs                  | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Carrollwood                        | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Celebration                        | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth DeLand                             | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth East Orlando                       | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Fish Memorial                      | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Ocala                              | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Orlando                            | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Wesley Chapel                      | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Winter Park                        | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Ascension Sacred Heart Pensacola                | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Health Homestead Hospital               | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Medical Center Beaches                  | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Medical Center Nassau                   | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Cape Coral Hospital                             | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida North Florida Hospital              | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Sarasota Doctors Hospital           | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida St. Lucie Hospital                  | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Westside Hospital                   | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Healthpark Medical Center                       | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Jupiter Medical Center                          | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Larkin Community Hospital                       | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Lee Memorial Hospital                           | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Mayo Clinic-Jacksonville                        | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Mease Countryside Hospital                      | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Mease Dunedin Hospital                          | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Morton Plant Hospital                           | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Morton Plant North Bay Hospital                 | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Orlando Health South Lake Hospital              | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Oviedo Medical Center                           | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Sarasota Memorial Hospital                      | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| St. Anthony's Hospital                          | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| St. Joseph's Hospital                           | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| St. Joseph's Hospital - North                   | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| St. Joseph's Hospital - South                   | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| UF Health Shands Hospital                       | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Apopka                             | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Dade City                          | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Kissimmee                          | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Lake Wales                         | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth New Smyrna Beach                   | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth North Pinellas                     | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Winter Garden                      | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Zephyrhills                        | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Health Hospital Doral                   | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Health South Miami Hospital             | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Health West Kendall Baptist Hospital    | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Medical Center Clay                     | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Bartow Regional Medical Center                  | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Broward Health Coral Springs                    | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Broward Health North                            | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Coral Gables Hospital                           | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Highlands Hospital                  | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Kendall Hospital                    | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Raulerson Hospital                  | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida South Tampa Hospital                | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Trinity Hospital                    | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Hialeah Hospital                                | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Holmes Regional Medical Center                  | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Lakewood Ranch Medical Center                   | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Larkin Community Hospital - Palm Springs Campus | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Memorial Hospital Miramar                       | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Memorial Hospital Pembroke                      | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Orlando Health Bayfront Hospital                | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Orlando Health Horizon West Hospital            | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Orlando Health Melbourne Hospital               | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Sarasota Memorial Hospital - Venice             | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| St. Vincent's Medical Center Clay County        | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |

## Appendix D

| Hospital name                                    | Spring 2025 TLG grade | Participated in TLG survey? | TLG grade source     | Survey participation source |
|--------------------------------------------------|-----------------------|-----------------------------|----------------------|-----------------------------|
| St. Vincent's Medical Center Southside           | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Winter Haven Hospital                            | A                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Daytona Beach                       | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Heart of Florida                    | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Palm Coast                          | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Sebring                             | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Waterman                            | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Ascension St. Vincent's Riverside                | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Health Baptist Hospital of Miami         | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Health Boca Raton Regional Hospital      | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Health Doctors Hospital                  | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Medical Center Jacksonville              | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Medical Center South                     | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Cape Canaveral Hospital                          | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Cleveland Clinic Hospital Weston                 | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Cleveland Clinic Indian River Hospital           | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Gulf Coast Medical Center                        | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Aventura Hospital                    | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Blake Hospital                       | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Brandon Hospital                     | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Capital Hospital                     | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Englewood Hospital                   | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Fort Walton-Destin Hospital          | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Gulf Coast Hospital                  | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Lake City Hospital                   | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Lawnwood Hospital                    | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Oak Hill Hospital                    | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Orange Park Hospital                 | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Osceola Hospital                     | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Pasadena Hospital                    | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida South Shore Hospital                 | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida St. Petersburg Hospital              | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Twin Cities Hospital                 | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida University Hospital                  | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida West Hospital                        | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Woodmont Hospital                    | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Holy Cross Hospital                              | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Jackson West Medical Center                      | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Lehigh Regional Medical Center                   | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Lower Keys Medical Center                        | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Memorial Regional Hospital                       | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Naval Hospital Jacksonville                      | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| NCH North Naples Hospital                        | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Orlando Health Dr. P. Phillips Hospital          | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Orlando Health Lake Mary Hospital                | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Orlando Health Sebastian River Hospital          | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Orlando Health St. Cloud Hospital                | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Orlando Health - Health Central Hospital         | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Orlando Health - Orlando Regional Medical Center | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Palm Bay Hospital                                | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Sacred Heart Hospital On The Emerald Coast       | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| South Florida Baptist Hospital                   | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Tallahassee Memorial Healthcare                  | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| UCF Lake Nona Medical Center                     | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| UF Health Jacksonville                           | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| UF Health Leesburg Hospital                      | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| UF Health North                                  | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| UF Health-Spanish Plaines                        | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Viera Hospital                                   | B                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Lake Placid                         | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Port Charlotte                      | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| AdventHealth Tampa                               | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Ascension Sacred Heart Hospital Bay              | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Ascension St. Vincent's St. Johns County         | C                     | N                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Health Bethesda Hospital East            | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Health Bethesda Hospital West            | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Baptist Hospital                                 | C                     | N                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Broward Health Imperial Point                    | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |

## Appendix D

| Hospital name                                                      | Spring 2025 TLG grade | Participated in TLG survey? | TLG grade source     | Survey participation source |
|--------------------------------------------------------------------|-----------------------|-----------------------------|----------------------|-----------------------------|
| Broward Health Medical Center                                      | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Cleveland Clinic Martin North Hospital                             | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Cleveland Clinic Martin South Hospital                             | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Cleveland Clinic Tradition Hospital                                | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Desoto Memorial Hospital                                           | C                     | N                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Flagler Hospital                                                   | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Florida Medical Center                                             | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Gulf Breeze Hospital                                               | C                     | N                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Halifax Health Medical Center                                      | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Halifax Health UF Medical Center of Deltona Hospital               | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Bayonet Point Hospital                                 | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Citrus Hospital                                        | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Fawcett Hospital                                       | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida JFK Hospital                                           | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida JFK North Hospital, A part of HCA Florida JFK Hospital | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Lake Monroe Hospital                                   | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Largo Hospital                                         | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Memorial Hospital                                      | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Mercy Hospital                                         | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Northside Hospital                                     | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Northwest Hospital                                     | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Palms West Hospital                                    | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Poinciana Hospital                                     | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Putnam Hospital                                        | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida West Marion Hospital                                   | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Jackson Hospital                                                   | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Jackson Memorial Hospital                                          | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Jackson North Medical Center                                       | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Jackson South Medical Center                                       | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Kerality Hospital Miami                                            | C                     | N                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Lakeland Regional Medical Center                                   | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Manatee Memorial Hospital                                          | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Memorial Hospital West                                             | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Memorial Regional Hospital South                                   | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Mount Sinai Medical Center                                         | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| NCH Baker Hospital                                                 | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| North Okaloosa Medical Center                                      | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| North Shore Medical Center                                         | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Palmetto General Hospital                                          | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Parrish Medical Center                                             | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Physicians Regional Healthcare System - Collier Boulevard          | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Physicians Regional Healthcare System - Pine Ridge                 | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Santa Rosa Medical Center                                          | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Tampa General Hospital                                             | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Tampa General Hospital Brooksville                                 | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Tampa General Hospital Crystal River                               | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Tampa General Hospital Spring Hill                                 | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Wellington Regional Medical Center                                 | C                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Good Samaritan Medical Center                                      | D                     | N                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Halifax Health Medical Center - Port Orange                        | D                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| HCA Florida Ocala Hospital                                         | D                     | Y                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| St. Mary's Medical Center                                          | D                     | N                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Delray Medical Center                                              | F                     | N                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| Palm Beach Gardens Medical Center                                  | F                     | N                           | <a href="#">Link</a> | <a href="#">Link</a>        |
| West Boca Medical Center                                           | F                     | N                           | <a href="#">Link</a> | <a href="#">Link</a>        |

## Workpaper 4

|                                                                                           |        |
|-------------------------------------------------------------------------------------------|--------|
| Share of A- and B-graded TLG hospitals in Florida known to have CMS rating of 3 or lower: | 50.39% |
|-------------------------------------------------------------------------------------------|--------|

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| National average CMS star rating among hospitals that receive a rating: | 3.14 |
|-------------------------------------------------------------------------|------|

## Appendix D

| Hospital name                                   | Spring 2025 TLG grade | CMS Star Rating                | TLG grade source     | CMS Star Rating source     |
|-------------------------------------------------|-----------------------|--------------------------------|----------------------|----------------------------|
| AdventHealth Altamonte Springs                  | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| AdventHealth Carrollwood                        | A                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| AdventHealth Celebration                        | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| AdventHealth DeLand                             | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth East Orlando                       | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| AdventHealth Fish Memorial                      | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Ocala                              | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Orlando                            | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Wesley Chapel                      | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Winter Park                        | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Ascension Sacred Heart Pensacola                | A                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Baptist Health Homestead Hospital               | A                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Baptist Medical Center Beaches                  | A                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Baptist Medical Center Nassau                   | A                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Cape Coral Hospital                             | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida North Florida Hospital              | A                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Sarasota Doctors Hospital           | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida St. Lucie Hospital                  | A                     | 1                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| HCA Florida Westside Hospital                   | A                     | 3                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Healthpark Medical Center                       | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Jupiter Medical Center                          | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| Larkin Community Hospital                       | A                     | Not available                  | <a href="#">Link</a> | CMS National Hospital Data |
| Lee Memorial Hospital                           | A                     | 5                              | <a href="#">Link</a> | CMS National Hospital Data |
| Mayo Clinic-Jacksonville                        | A                     | 5                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Mease Countryside Hospital                      | A                     | 5                              | <a href="#">Link</a> | CMS National Hospital Data |
| Mease Dunedin Hospital                          | A                     | 5                              | <a href="#">Link</a> | CMS National Hospital Data |
| Morton Plant Hospital                           | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| Morton Plant North Bay Hospital                 | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| Orlando Health South Lake Hospital              | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| Oviedo Medical Center                           | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| Sarasota Memorial Hospital                      | A                     | 5                              | <a href="#">Link</a> | CMS National Hospital Data |
| St. Anthony's Hospital                          | A                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| St. Joseph's Hospital                           | A                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| St. Joseph's Hospital - North                   | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| St. Joseph's Hospital - South                   | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| UF Health Shands Hospital                       | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Apopka                             | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| AdventHealth Dade City                          | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Kissimmee                          | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| AdventHealth Lake Wales                         | A                     | 1                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth New Smyrna Beach                   | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth North Pinellas                     | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Winter Garden                      | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| AdventHealth Zephyrhills                        | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Baptist Health Hospital Doral                   | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Baptist Health South Miami Hospital             | A                     | 5                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Baptist Health West Kendall Baptist Hospital    | A                     | 5                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Baptist Medical Center Clay                     | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Bartow Regional Medical Center                  | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| Broward Health Coral Springs                    | A                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| Broward Health North                            | A                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| Coral Gables Hospital                           | A                     | 3                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| HCA Florida Highlands Hospital                  | A                     | 1                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Kendall Hospital                    | A                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Raulerson Hospital                  | A                     | 3                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| HCA Florida South Tampa Hospital                | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Trinity Hospital                    | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| Hialeah Hospital                                | A                     | 1                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Holmes Regional Medical Center                  | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| Lakewood Ranch Medical Center                   | A                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| Larkin Community Hospital - Palm Springs Campus | A                     | 3                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Memorial Hospital Miramar                       | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| Memorial Hospital Pembroke                      | A                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| Orlando Health Bayfront Hospital                | A                     | 1                              | <a href="#">Link</a> | CMS National Hospital Data |
| Orlando Health Horizon West Hospital            | A                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Orlando Health Melbourne Hospital               | A                     | 2                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Sarasota Memorial Hospital - Venice             | A                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |

## Appendix D

| Hospital name                                    | Spring 2025 TLG grade | CMS Star Rating                | TLG grade source     | CMS Star Rating source     |
|--------------------------------------------------|-----------------------|--------------------------------|----------------------|----------------------------|
| St. Vincent's Medical Center Clay County         | A                     | 3                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| St. Vincent's Medical Center Southside           | A                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Winter Haven Hospital                            | A                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Daytona Beach                       | B                     | 5                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Heart of Florida                    | B                     | 1                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Palm Coast                          | B                     | 3                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| AdventHealth Sebring                             | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| AdventHealth Waterman                            | B                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| Ascension St. Vincent's Riverside                | B                     | 2                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Baptist Health Baptist Hospital of Miami         | B                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Baptist Health Boca Raton Regional Hospital      | B                     | 2                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Baptist Health Doctors Hospital                  | B                     | 5                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Baptist Medical Center Jacksonville              | B                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Baptist Medical Center South                     | B                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Cape Canaveral Hospital                          | B                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| Cleveland Clinic Hospital Weston                 | B                     | 3                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Cleveland Clinic Indian River Hospital           | B                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| Gulf Coast Medical Center                        | B                     | 4                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| HCA Florida Aventura Hospital                    | B                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Blake Hospital                       | B                     | 1                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Brandon Hospital                     | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Capital Hospital                     | B                     | 1                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Englewood Hospital                   | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Fort Walton-Destin Hospital          | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Gulf Coast Hospital                  | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Lake City Hospital                   | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Lawnwood Hospital                    | B                     | 1                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Oak Hill Hospital                    | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Orange Park Hospital                 | B                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Osceola Hospital                     | B                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Pasadena Hospital                    | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida South Shore Hospital                 | B                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida St. Petersburg Hospital              | B                     | 2                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| HCA Florida Twin Cities Hospital                 | B                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida University Hospital                  | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida West Hospital                        | B                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| HCA Florida Woodmont Hospital                    | B                     | 1                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Holy Cross Hospital                              | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| Jackson West Medical Center                      | B                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Lehigh Regional Medical Center                   | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| Lower Keys Medical Center                        | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| Memorial Regional Hospital                       | B                     | 3                              | <a href="#">Link</a> | CMS National Hospital Data |
| Naval Hospital Jacksonville                      | B                     | Not available                  | <a href="#">Link</a> | <a href="#">Link</a>       |
| NCH North Naples Hospital                        | B                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Orlando Health Dr. P. Phillips Hospital          | B                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Orlando Health Lake Mary Hospital                | B                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| Orlando Health Sebastian River Hospital          | B                     | 3                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Orlando Health St. Cloud Hospital                | B                     | 2                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Orlando Health - Health Central Hospital         | B                     | 2                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Orlando Health - Orlando Regional Medical Center | B                     | 2                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Palm Bay Hospital                                | B                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| Sacred Heart Hospital On The Emerald Coast       | B                     | 5                              | <a href="#">Link</a> | CMS National Hospital Data |
| South Florida Baptist Hospital                   | B                     | 4                              | <a href="#">Link</a> | CMS National Hospital Data |
| Tallahassee Memorial Healthcare                  | B                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| UCF Lake Nona Medical Center                     | B                     | Not available                  | <a href="#">Link</a> | <a href="#">Link</a>       |
| UF Health Jacksonville                           | B                     | 3                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| UF Health Leesburg Hospital                      | B                     | 2                              | <a href="#">Link</a> | CMS National Hospital Data |
| UF Health North                                  | B                     | Hospital not identified in CMS | <a href="#">Link</a> |                            |
| UF Health-Spanish Plains                         | B                     | 1                              | <a href="#">Link</a> | <a href="#">Link</a>       |
| Viera Hospital                                   | B                     | 5                              | <a href="#">Link</a> | CMS National Hospital Data |

## Workpaper 5

**Appendix D**

| <b>Hospital</b> | <b>TLG Spring 2025</b> |              | <b>Highest Possible Value for Process Measures</b> |              | <b>Mean Value for Process Measures</b> |              |
|-----------------|------------------------|--------------|----------------------------------------------------|--------------|----------------------------------------|--------------|
|                 | <b>Score</b>           | <b>Grade</b> | <b>Score</b>                                       | <b>Grade</b> | <b>Score</b>                           | <b>Grade</b> |
| Delray          | 1.643                  | F            | 2.543714388                                        | C            | 2.330188767                            | D            |
| Good Samaritan  | 1.9638                 | D            | 2.793270248                                        | C            | 2.579744627                            | C            |
| PB Gardens      | 1.7777                 | F            | 2.617952343                                        | C            | 2.404426722                            | C            |
| St. Mary's      | 2.2512                 | D            | 3.046371879                                        | B            | 2.832846259                            | C            |
| West Boca       | 1.8346                 | F            | 2.679285191                                        | C            | 2.465759570                            | C            |

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 15                                                     | 80.23  | 34.14              | -1.9104              | -1.9104          | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 7.9%                             | -0.1507                                           |
|                                           | Bar Code Medication Administration (BCMA)                                     | 25                                                     | 81.87  | 30.45              | -1.8675              | -1.8675          | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 7.7%                             | -0.1435                                           |
|                                           | ICU Physician Staffing (IPS)                                                  | 5                                                      | 65.15  | 43.73              | -1.3754              | -1.3754          | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 8.8%                             | -0.1212                                           |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | N/A                                                    | 117.49 | 6.79               | N/A                  | N/A              | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 0.0%                             | 0.0000                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | N/A                                                    | 116.85 | 13.98              | N/A                  | N/A              | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 0.0%                             | 0.0000                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | N/A                                                    | 77.07  | 31.61              | N/A                  | N/A              | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 0.0%                             | 0.0000                                            |
|                                           | Hand Hygiene                                                                  | 15                                                     | 74.40  | 36.14              | -1.6434              | -1.6434          | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 6.2%                             | -0.1027                                           |
|                                           | H-COMP-1: Nurse Communication                                                 | 79                                                     | 90.19  | 2.51               | -4.4536              | -4.4536          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.8%                             | -0.1710                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 81                                                     | 89.91  | 2.48               | -3.5914              | -3.5914          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.8%                             | -0.1379                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 64                                                     | 81.63  | 4.36               | -4.0450              | -4.0450          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.9%                             | -0.1579                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 58                                                     | 74.42  | 4.13               | -3.9795              | -3.9795          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.9%                             | -0.1555                                           |
|                                           | H-COMP-6: Discharge Information                                               | 71                                                     | 85.25  | 3.70               | -3.8467              | -3.8467          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.9%                             | -0.1492                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.479                                                  | 0.384  | 0.40               | -0.2351              | -0.2351          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0115                                           |
|                                           | CLABSI                                                                        | 1.477                                                  | 0.651  | 0.55               | -1.4958              | -1.4958          | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | -0.0679                                           |
|                                           | CAUTI                                                                         | 0.271                                                  | 0.540  | 0.49               | 0.5450               | 0.5450           | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | 0.0254                                            |
|                                           | SSI: Colon                                                                    | 2.073                                                  | 0.831  | 0.69               | -1.8032              | -1.8032          | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | -0.0613                                           |
|                                           | MRSA                                                                          | 0.922                                                  | 0.719  | 0.59               | -0.3430              | -0.3430          | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | -0.0154                                           |
|                                           | C. Diff.                                                                      | 0.284                                                  | 0.401  | 0.33               | 0.3575               | 0.3575           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0160                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 108.94                                                 | 177.45 | 24.02              | 2.8522               | 2.8522           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0561                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 1.03                                                   | 1.00   | 0.20               | -0.1419              | -0.1419          | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | -0.0212                                           |
| Process Measure Domain Score:             |                                                                               | -1.2896                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.0675                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -1.3570                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 1.6430                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | F                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

## Additional Resources:

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 100                                                    | 80.23  | 34.14              | 0.5790               | 0.5790           | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 6.2%                             | 0.0356                                            |
|                                           | Bar Code Medication Administration (BCMA)                                     | 100                                                    | 81.87  | 30.45              | 0.5955               | 0.5955           | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 6.0%                             | 0.0357                                            |
|                                           | ICU Physician Staffing (IPS)                                                  | 100                                                    | 65.15  | 43.73              | 0.7968               | 0.7968           | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 6.9%                             | 0.0548                                            |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | 120.00                                                 | 117.49 | 6.79               | 0.3702               | 0.3702           | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 3.1%                             | 0.0113                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | 120.00                                                 | 116.85 | 13.98              | 0.2251               | 0.2251           | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 3.2%                             | 0.0072                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | 100                                                    | 77.07  | 31.61              | 0.7255               | 0.7255           | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 4.7%                             | 0.0343                                            |
|                                           | Hand Hygiene                                                                  | 100                                                    | 74.40  | 36.14              | 0.7084               | 0.7084           | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 4.9%                             | 0.0345                                            |
|                                           | H-COMP-1: Nurse Communication                                                 | 79                                                     | 90.19  | 2.51               | -4.4536              | -4.4536          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.0%                             | -0.1335                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 81                                                     | 89.91  | 2.48               | -3.5914              | -3.5914          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.0%                             | -0.1076                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 64                                                     | 81.63  | 4.36               | -4.0450              | -4.0450          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.0%                             | -0.1233                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 58                                                     | 74.42  | 4.13               | -3.9795              | -3.9795          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.1%                             | -0.1214                                           |
|                                           | H-COMP-6: Discharge Information                                               | 71                                                     | 85.25  | 3.70               | -3.8467              | -3.8467          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.0%                             | -0.1165                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.479                                                  | 0.384  | 0.40               | -0.2351              | -0.2351          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0115                                           |
|                                           | CLABSI                                                                        | 1.477                                                  | 0.651  | 0.55               | -1.4958              | -1.4958          | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | -0.0679                                           |
|                                           | CAUTI                                                                         | 0.271                                                  | 0.540  | 0.49               | 0.5450               | 0.5450           | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | 0.0254                                            |
|                                           | SSI: Colon                                                                    | 2.073                                                  | 0.831  | 0.69               | -1.8032              | -1.8032          | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | -0.0613                                           |
|                                           | MRSA                                                                          | 0.922                                                  | 0.719  | 0.59               | -0.3430              | -0.3430          | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | -0.0154                                           |
|                                           | C. Diff.                                                                      | 0.284                                                  | 0.401  | 0.33               | 0.3575               | 0.3575           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0160                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 108.94                                                 | 177.45 | 24.02              | 2.8522               | 2.8522           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0561                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 1.03                                                   | 1.00   | 0.20               | -0.1419              | -0.1419          | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | -0.0212                                           |
| Process Measure Domain Score:             |                                                                               | -0.3888                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.0675                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -0.4563                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 2.5437                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | C                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

## Additional Resources:

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|--------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                  |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 80.23153058                                            | 80.23  | 34.14              | 0.0000               | 0.0000           | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 6.2%                             | 0.0000                                           |
|                                           | Bar Code Medication Administration (BCMA)                                     | 81.86638388                                            | 81.87  | 30.45              | 0.0000               | 0.0000           | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 6.0%                             | 0.0000                                           |
|                                           | ICU Physician Staffing (IPS)                                                  | 65.15095729                                            | 65.15  | 43.73              | 0.0000               | 0.0000           | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 6.9%                             | 0.0000                                           |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | 117.49                                                 | 117.49 | 6.79               | 0.0000               | 0.0000           | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 3.1%                             | 0.0000                                           |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | 116.85                                                 | 116.85 | 13.98              | 0.0000               | 0.0000           | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 3.2%                             | 0.0000                                           |
|                                           | Total Nursing Care Hours per Patient Day                                      | 77.07                                                  | 77.07  | 31.61              | 0.0000               | 0.0000           | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 4.7%                             | 0.0000                                           |
|                                           | Hand Hygiene                                                                  | 74.40                                                  | 74.40  | 36.14              | 0.0000               | 0.0000           | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 4.9%                             | 0.0000                                           |
|                                           | H-COMP-1: Nurse Communication                                                 | 79                                                     | 90.19  | 2.51               | -4.4536              | -4.4536          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.0%                             | -0.1335                                          |
|                                           | H-COMP-2: Doctor Communication                                                | 81                                                     | 89.91  | 2.48               | -3.5914              | -3.5914          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.0%                             | -0.1076                                          |
|                                           | H-COMP-3: Staff Responsiveness                                                | 64                                                     | 81.63  | 4.36               | -4.0450              | -4.0450          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.0%                             | -0.1233                                          |
|                                           | H-COMP-5: Communication about Medicines                                       | 58                                                     | 74.42  | 4.13               | -3.9795              | -3.9795          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.1%                             | -0.1214                                          |
|                                           | H-COMP-6: Discharge Information                                               | 71                                                     | 85.25  | 3.70               | -3.8467              | -3.8467          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.0%                             | -0.1165                                          |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                           |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                           |
|                                           | Falls and Trauma                                                              | 0.479                                                  | 0.384  | 0.40               | -0.2351              | -0.2351          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0115                                          |
|                                           | CLABSI                                                                        | 1.477                                                  | 0.651  | 0.55               | -1.4958              | -1.4958          | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | -0.0679                                          |
|                                           | CAUTI                                                                         | 0.271                                                  | 0.540  | 0.49               | 0.5450               | 0.5450           | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | 0.0254                                           |
|                                           | SSI: Colon                                                                    | 2.073                                                  | 0.831  | 0.69               | -1.8032              | -1.8032          | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | -0.0613                                          |
|                                           | MRSA                                                                          | 0.922                                                  | 0.719  | 0.59               | -0.3430              | -0.3430          | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | -0.0154                                          |
|                                           | C. Diff.                                                                      | 0.284                                                  | 0.401  | 0.33               | 0.3575               | 0.3575           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0160                                           |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 108.94                                                 | 177.45 | 24.02              | 2.8522               | 2.8522           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0561                                           |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 1.03                                                   | 1.00   | 0.20               | -0.1419              | -0.1419          | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | -0.0212                                          |
| Process Measure Domain Score:             |                                                                               | -0.6024                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                  |
| Outcome Measure Domain Score:             |                                                                               | -0.0675                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                  |
| Process/Outcome Domains - Combined Score: |                                                                               | -0.6698                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                  |
| Normalized Numerical Score:               |                                                                               | 2.3302                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                  |
| Hospital Safety Grade (Letter Grade):     |                                                                               | D                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                  |

Additional Resources: 2.3302

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 15                                                     | 80.23  | 34.14              | -1.9104              | -1.9104          | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 7.9%                             | -0.1507                                           |
|                                           | Bar Code Medication Administration (BCMA)                                     | 25                                                     | 81.87  | 30.45              | -1.8675              | -1.8675          | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 7.7%                             | -0.1435                                           |
|                                           | ICU Physician Staffing (IPS)                                                  | 5                                                      | 65.15  | 43.73              | -1.3754              | -1.3754          | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 8.8%                             | -0.1212                                           |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | n/a                                                    | 117.49 | 6.79               | N/A                  | N/A              | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 0.0%                             | 0.0000                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | n/a                                                    | 116.85 | 13.98              | N/A                  | N/A              | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 0.0%                             | 0.0000                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | n/a                                                    | 77.07  | 31.61              | N/A                  | N/A              | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 0.0%                             | 0.0000                                            |
|                                           | Hand Hygiene                                                                  | 15                                                     | 74.40  | 36.14              | -1.6434              | -1.6434          | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 6.2%                             | -0.1027                                           |
|                                           | H-COMP-1: Nurse Communication                                                 | 84                                                     | 90.19  | 2.51               | -2.4637              | -2.4637          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.8%                             | -0.0946                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 86                                                     | 89.91  | 2.48               | -1.5761              | -1.5761          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.8%                             | -0.0605                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 72                                                     | 81.63  | 4.36               | -2.2091              | -2.2091          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.9%                             | -0.0862                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 63                                                     | 74.42  | 4.13               | -2.7680              | -2.7680          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.9%                             | -0.1082                                           |
|                                           | H-COMP-6: Discharge Information                                               | 76                                                     | 85.25  | 3.70               | -2.4971              | -2.4971          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.9%                             | -0.0969                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.789                                                  | 0.384  | 0.40               | -1.0053              | -1.0053          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0492                                           |
|                                           | CLABSI                                                                        | 0.538                                                  | 0.651  | 0.55               | 0.2042               | 0.2042           | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | 0.0093                                            |
|                                           | CAUTI                                                                         | 1.567                                                  | 0.540  | 0.49               | -2.0799              | -2.0799          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | -0.0968                                           |
|                                           | SSI: Colon                                                                    | 1.679                                                  | 0.831  | 0.69               | -1.2311              | -1.2311          | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | -0.0419                                           |
|                                           | MRSA                                                                          | 0.000                                                  | 0.719  | 0.59               | 1.2161               | 1.2161           | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | 0.0546                                            |
|                                           | C. Diff.                                                                      | 0.250                                                  | 0.401  | 0.33               | 0.4618               | 0.4618           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0207                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 156.08                                                 | 177.45 | 24.02              | 0.8897               | 0.8897           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0175                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 1.00                                                   | 1.00   | 0.20               | 0.0113               | 0.0113           | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | 0.0017                                            |
| Process Measure Domain Score:             |                                                                               | -0.9644                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.0717                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -1.0362                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 1.9638                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | D                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

## Additional Resources:

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 100                                                    | 80.23  | 34.14              | 0.5790               | 0.5790           | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 6.2%                             | 0.0356                                            |
|                                           | Bar Code Medication Administration (BCMA)                                     | 100                                                    | 81.87  | 30.45              | 0.5955               | 0.5955           | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 6.0%                             | 0.0357                                            |
|                                           | ICU Physician Staffing (IPS)                                                  | 100                                                    | 65.15  | 43.73              | 0.7968               | 0.7968           | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 6.9%                             | 0.0548                                            |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | 120.00                                                 | 117.49 | 6.79               | 0.3702               | 0.3702           | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 3.1%                             | 0.0113                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | 120.00                                                 | 116.85 | 13.98              | 0.2251               | 0.2251           | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 3.2%                             | 0.0072                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | 100                                                    | 77.07  | 31.61              | 0.7255               | 0.7255           | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 4.7%                             | 0.0343                                            |
|                                           | Hand Hygiene                                                                  | 100                                                    | 74.40  | 36.14              | 0.7084               | 0.7084           | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 4.9%                             | 0.0345                                            |
|                                           | H-COMP-1: Nurse Communication                                                 | 84                                                     | 90.19  | 2.51               | -2.4637              | -2.4637          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.0%                             | -0.0739                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 86                                                     | 89.91  | 2.48               | -1.5761              | -1.5761          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.0%                             | -0.0472                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 72                                                     | 81.63  | 4.36               | -2.2091              | -2.2091          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.0%                             | -0.0673                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 63                                                     | 74.42  | 4.13               | -2.7680              | -2.7680          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.1%                             | -0.0845                                           |
|                                           | H-COMP-6: Discharge Information                                               | 76                                                     | 85.25  | 3.70               | -2.4971              | -2.4971          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.0%                             | -0.0756                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.789                                                  | 0.384  | 0.40               | -1.0053              | -1.0053          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0492                                           |
|                                           | CLABSI                                                                        | 0.538                                                  | 0.651  | 0.55               | 0.2042               | 0.2042           | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | 0.0093                                            |
|                                           | CAUTI                                                                         | 1.567                                                  | 0.540  | 0.49               | -2.0799              | -2.0799          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | -0.0968                                           |
|                                           | SSI: Colon                                                                    | 1.679                                                  | 0.831  | 0.69               | -1.2311              | -1.2311          | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | -0.0419                                           |
|                                           | MRSA                                                                          | 0.000                                                  | 0.719  | 0.59               | 1.2161               | 1.2161           | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | 0.0546                                            |
|                                           | C. Diff.                                                                      | 0.250                                                  | 0.401  | 0.33               | 0.4618               | 0.4618           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0207                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 156.08                                                 | 177.45 | 24.02              | 0.8897               | 0.8897           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0175                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 1.00                                                   | 1.00   | 0.20               | 0.0113               | 0.0113           | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | 0.0017                                            |
| Process Measure Domain Score:             |                                                                               | -0.1350                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.0717                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -0.2067                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 2.7933                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | C                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

## Additional Resources:

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 80                                                     | 80.23  | 34.14              | 0.0000               | 0.0000           | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 6.2%                             | 0.0000                                            |
|                                           | Bar Code Medication Administration (BCMA)                                     | 82                                                     | 81.87  | 30.45              | 0.0000               | 0.0000           | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 6.0%                             | 0.0000                                            |
|                                           | ICU Physician Staffing (IPS)                                                  | 65                                                     | 65.15  | 43.73              | 0.0000               | 0.0000           | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 6.9%                             | 0.0000                                            |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | 117.49                                                 | 117.49 | 6.79               | 0.0000               | 0.0000           | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 3.1%                             | 0.0000                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | 116.85                                                 | 116.85 | 13.98              | 0.0000               | 0.0000           | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 3.2%                             | 0.0000                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | 77                                                     | 77.07  | 31.61              | 0.0000               | 0.0000           | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 4.7%                             | 0.0000                                            |
|                                           | Hand Hygiene                                                                  | 74                                                     | 74.40  | 36.14              | 0.0000               | 0.0000           | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 4.9%                             | 0.0000                                            |
|                                           | H-COMP-1: Nurse Communication                                                 | 84                                                     | 90.19  | 2.51               | -2.4637              | -2.4637          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.0%                             | -0.0739                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 86                                                     | 89.91  | 2.48               | -1.5761              | -1.5761          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.0%                             | -0.0472                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 72                                                     | 81.63  | 4.36               | -2.2091              | -2.2091          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.0%                             | -0.0673                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 63                                                     | 74.42  | 4.13               | -2.7680              | -2.7680          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.1%                             | -0.0845                                           |
|                                           | H-COMP-6: Discharge Information                                               | 76                                                     | 85.25  | 3.70               | -2.4971              | -2.4971          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.0%                             | -0.0756                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.789                                                  | 0.384  | 0.40               | -1.0053              | -1.0053          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0492                                           |
|                                           | CLABSI                                                                        | 0.538                                                  | 0.651  | 0.55               | 0.2042               | 0.2042           | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | 0.0093                                            |
|                                           | CAUTI                                                                         | 1.567                                                  | 0.540  | 0.49               | -2.0799              | -2.0799          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | -0.0968                                           |
|                                           | SSI: Colon                                                                    | 1.679                                                  | 0.831  | 0.69               | -1.2311              | -1.2311          | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | -0.0419                                           |
|                                           | MRSA                                                                          | 0.000                                                  | 0.719  | 0.59               | 1.2161               | 1.2161           | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | 0.0546                                            |
|                                           | C. Diff.                                                                      | 0.250                                                  | 0.401  | 0.33               | 0.4618               | 0.4618           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0207                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 156.08                                                 | 177.45 | 24.02              | 0.8897               | 0.8897           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0175                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 1.00                                                   | 1.00   | 0.20               | 0.0113               | 0.0113           | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | 0.0017                                            |
| Process Measure Domain Score:             |                                                                               | -0.3485                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.0717                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -0.4203                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 2.5797                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | C                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

Additional Resources: 2.5797

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 15                                                     | 80.23  | 34.14              | -1.9104              | -1.9104          | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 7.9%                             | -0.1507                                           |
|                                           | Bar Code Medication Administration (BCMA)                                     | 25                                                     | 81.87  | 30.45              | -1.8675              | -1.8675          | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 7.7%                             | -0.1435                                           |
|                                           | ICU Physician Staffing (IPS)                                                  | 5                                                      | 65.15  | 43.73              | -1.3754              | -1.3754          | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 8.8%                             | -0.1212                                           |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | N/A                                                    | 117.49 | 6.79               | N/A                  | N/A              | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 0.0%                             | 0.0000                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | N/A                                                    | 116.85 | 13.98              | N/A                  | N/A              | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 0.0%                             | 0.0000                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | N/A                                                    | 77.07  | 31.61              | N/A                  | N/A              | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 0.0%                             | 0.0000                                            |
|                                           | Hand Hygiene                                                                  | 15                                                     | 74.40  | 36.14              | -1.6434              | -1.6434          | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 6.2%                             | -0.1027                                           |
|                                           | H-COMP-1: Nurse Communication                                                 | 84                                                     | 90.19  | 2.51               | -2.4637              | -2.4637          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.8%                             | -0.0946                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 84                                                     | 89.91  | 2.48               | -2.3822              | -2.3822          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.8%                             | -0.0914                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 71                                                     | 81.63  | 4.36               | -2.4386              | -2.4386          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.9%                             | -0.0952                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 62                                                     | 74.42  | 4.13               | -3.0103              | -3.0103          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.9%                             | -0.1177                                           |
|                                           | H-COMP-6: Discharge Information                                               | 76                                                     | 85.25  | 3.70               | -2.4971              | -2.4971          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.9%                             | -0.0969                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.439                                                  | 0.384  | 0.40               | -0.1357              | -0.1357          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0066                                           |
|                                           | CLABSI                                                                        | 0.596                                                  | 0.651  | 0.55               | 0.0992               | 0.0992           | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | 0.0045                                            |
|                                           | CAUTI                                                                         | 0.758                                                  | 0.540  | 0.49               | -0.4414              | -0.4414          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | -0.0205                                           |
|                                           | SSI: Colon                                                                    | 0.511                                                  | 0.831  | 0.69               | 0.4652               | 0.4652           | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | 0.0158                                            |
|                                           | MRSA                                                                          | 0.278                                                  | 0.719  | 0.59               | 0.7460               | 0.7460           | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | 0.0335                                            |
|                                           | C. Diff.                                                                      | 0.395                                                  | 0.401  | 0.33               | 0.0170               | 0.0170           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0008                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 165.31                                                 | 177.45 | 24.02              | 0.5055               | 0.5055           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0099                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 1.34                                                   | 1.00   | 0.20               | -1.7248              | -1.7248          | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | -0.2583                                           |
| Process Measure Domain Score:             |                                                                               | -1.0138                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.2085                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -1.2223                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 1.7777                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | F                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

## Additional Resources:

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 100                                                    | 80.23  | 34.14              | 0.5790               | 0.5790           | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 6.2%                             | 0.0356                                            |
|                                           | Bar Code Medication Administration (BCMA)                                     | 100                                                    | 81.87  | 30.45              | 0.5955               | 0.5955           | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 6.0%                             | 0.0357                                            |
|                                           | ICU Physician Staffing (IPS)                                                  | 100                                                    | 65.15  | 43.73              | 0.7968               | 0.7968           | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 6.9%                             | 0.0548                                            |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | 120.00                                                 | 117.49 | 6.79               | 0.3702               | 0.3702           | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 3.1%                             | 0.0113                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | 120.00                                                 | 116.85 | 13.98              | 0.2251               | 0.2251           | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 3.2%                             | 0.0072                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | 100                                                    | 77.07  | 31.61              | 0.7255               | 0.7255           | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 4.7%                             | 0.0343                                            |
|                                           | Hand Hygiene                                                                  | 100                                                    | 74.40  | 36.14              | 0.7084               | 0.7084           | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 4.9%                             | 0.0345                                            |
|                                           | H-COMP-1: Nurse Communication                                                 | 84                                                     | 90.19  | 2.51               | -2.4637              | -2.4637          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.0%                             | -0.0739                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 84                                                     | 89.91  | 2.48               | -2.3822              | -2.3822          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.0%                             | -0.0714                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 71                                                     | 81.63  | 4.36               | -2.4386              | -2.4386          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.0%                             | -0.0743                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 62                                                     | 74.42  | 4.13               | -3.0103              | -3.0103          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.1%                             | -0.0919                                           |
| Outcome Measures                          | H-COMP-6: Discharge Information                                               | 76                                                     | 85.25  | 3.70               | -2.4971              | -2.4971          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.0%                             | -0.0756                                           |
|                                           | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.439                                                  | 0.384  | 0.40               | -0.1357              | -0.1357          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0066                                           |
|                                           | CLABSI                                                                        | 0.596                                                  | 0.651  | 0.55               | 0.0992               | 0.0992           | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | 0.0045                                            |
|                                           | CAUTI                                                                         | 0.758                                                  | 0.540  | 0.49               | -0.4414              | -0.4414          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | -0.0205                                           |
|                                           | SSI: Colon                                                                    | 0.511                                                  | 0.831  | 0.69               | 0.4652               | 0.4652           | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | 0.0158                                            |
|                                           | MRSA                                                                          | 0.278                                                  | 0.719  | 0.59               | 0.7460               | 0.7460           | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | 0.0335                                            |
|                                           | C. Diff.                                                                      | 0.395                                                  | 0.401  | 0.33               | 0.0170               | 0.0170           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0008                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 165.31                                                 | 177.45 | 24.02              | 0.5055               | 0.5055           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0099                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 1.34                                                   | 1.00   | 0.20               | -1.7248              | -1.7248          | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | -0.2583                                           |
| Process Measure Domain Score:             |                                                                               | -0.1735                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.2085                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -0.3820                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 2.6180                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | C                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

## Additional Resources:

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 80                                                     | 80.23  | 34.14              | 0.0000               | 0.0000           | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 6.2%                             | 0.0000                                            |
|                                           | Bar Code Medication Administration (BCMA)                                     | 82                                                     | 81.87  | 30.45              | 0.0000               | 0.0000           | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 6.0%                             | 0.0000                                            |
|                                           | ICU Physician Staffing (IPS)                                                  | 65                                                     | 65.15  | 43.73              | 0.0000               | 0.0000           | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 6.9%                             | 0.0000                                            |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | 117.49                                                 | 117.49 | 6.79               | 0.0000               | 0.0000           | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 3.1%                             | 0.0000                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | 116.85                                                 | 116.85 | 13.98              | 0.0000               | 0.0000           | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 3.2%                             | 0.0000                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | 77                                                     | 77.07  | 31.61              | 0.0000               | 0.0000           | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 4.7%                             | 0.0000                                            |
|                                           | Hand Hygiene                                                                  | 74                                                     | 74.40  | 36.14              | 0.0000               | 0.0000           | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 4.9%                             | 0.0000                                            |
|                                           | H-COMP-1: Nurse Communication                                                 | 84                                                     | 90.19  | 2.51               | -2.4637              | -2.4637          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.0%                             | -0.0739                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 84                                                     | 89.91  | 2.48               | -2.3822              | -2.3822          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.0%                             | -0.0714                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 71                                                     | 81.63  | 4.36               | -2.4386              | -2.4386          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.0%                             | -0.0743                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 62                                                     | 74.42  | 4.13               | -3.0103              | -3.0103          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.1%                             | -0.0919                                           |
|                                           | H-COMP-6: Discharge Information                                               | 76                                                     | 85.25  | 3.70               | -2.4971              | -2.4971          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.0%                             | -0.0756                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.439                                                  | 0.384  | 0.40               | -0.1357              | -0.1357          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0066                                           |
|                                           | CLABSI                                                                        | 0.596                                                  | 0.651  | 0.55               | 0.0992               | 0.0992           | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | 0.0045                                            |
|                                           | CAUTI                                                                         | 0.758                                                  | 0.540  | 0.49               | -0.4414              | -0.4414          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | -0.0205                                           |
|                                           | SSI: Colon                                                                    | 0.511                                                  | 0.831  | 0.69               | 0.4652               | 0.4652           | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | 0.0158                                            |
|                                           | MRSA                                                                          | 0.278                                                  | 0.719  | 0.59               | 0.7460               | 0.7460           | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | 0.0335                                            |
|                                           | C. Diff.                                                                      | 0.395                                                  | 0.401  | 0.33               | 0.0170               | 0.0170           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0008                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 165.31                                                 | 177.45 | 24.02              | 0.5055               | 0.5055           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0099                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 1.34                                                   | 1.00   | 0.20               | -1.7248              | -1.7248          | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | -0.2583                                           |
| Process Measure Domain Score:             |                                                                               | -0.3871                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.2085                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -0.5956                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 2.4044                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | C                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

Additional Resources: 2.4044

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 15                                                     | 80.23  | 34.14              | -1.9104              | -1.9104          | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 7.9%                             | -0.1507                                           |
|                                           | Bar Code Medication Administration (BCMA)                                     | 25                                                     | 81.87  | 30.45              | -1.8675              | -1.8675          | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 7.7%                             | -0.1435                                           |
|                                           | ICU Physician Staffing (IPS)                                                  | 5                                                      | 65.15  | 43.73              | -1.3754              | -1.3754          | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 8.8%                             | -0.1212                                           |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | N/A                                                    | 117.49 | 6.79               | N/A                  | N/A              | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 0.0%                             | 0.0000                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | N/A                                                    | 116.85 | 13.98              | N/A                  | N/A              | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 0.0%                             | 0.0000                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | N/A                                                    | 77.07  | 31.61              | N/A                  | N/A              | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 0.0%                             | 0.0000                                            |
|                                           | Hand Hygiene                                                                  | 15                                                     | 74.40  | 36.14              | -1.6434              | -1.6434          | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 6.2%                             | -0.1027                                           |
|                                           | H-COMP-1: Nurse Communication                                                 | 86                                                     | 90.19  | 2.51               | -1.6678              | -1.6678          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.8%                             | -0.0640                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 86                                                     | 89.91  | 2.48               | -1.5761              | -1.5761          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.8%                             | -0.0605                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 75                                                     | 81.63  | 4.36               | -1.5206              | -1.5206          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.9%                             | -0.0594                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 69                                                     | 74.42  | 4.13               | -1.3141              | -1.3141          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.9%                             | -0.0514                                           |
|                                           | H-COMP-6: Discharge Information                                               | 80                                                     | 85.25  | 3.70               | -1.4175              | -1.4175          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.9%                             | -0.0550                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.665                                                  | 0.384  | 0.40               | -0.6972              | -0.6972          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0341                                           |
|                                           | CLABSI                                                                        | 0.229                                                  | 0.651  | 0.55               | 0.7637               | 0.7637           | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | 0.0346                                            |
|                                           | CAUTI                                                                         | 1.217                                                  | 0.540  | 0.49               | -1.3710              | -1.3710          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | -0.0638                                           |
|                                           | SSI: Colon                                                                    | 0.354                                                  | 0.831  | 0.69               | 0.6932               | 0.6932           | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | 0.0236                                            |
|                                           | MRSA                                                                          | 0.829                                                  | 0.719  | 0.59               | -0.1858              | -0.1858          | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | -0.0083                                           |
|                                           | C. Diff.                                                                      | 0.370                                                  | 0.401  | 0.33               | 0.0937               | 0.0937           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0042                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 152.54                                                 | 177.45 | 24.02              | 1.0371               | 1.0371           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0204                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 0.91                                                   | 1.00   | 0.20               | 0.4708               | 0.4708           | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | 0.0705                                            |
| Process Measure Domain Score:             |                                                                               | -0.8083                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | 0.0595                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -0.7488                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 2.2512                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | D                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

## Additional Resources:

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 100                                                    | 80.23  | 34.14              | 0.5790               | 0.5790           | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 6.2%                             | 0.0356                                            |
|                                           | Bar Code Medication Administration (BCMA)                                     | 100                                                    | 81.87  | 30.45              | 0.5955               | 0.5955           | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 6.0%                             | 0.0357                                            |
|                                           | ICU Physician Staffing (IPS)                                                  | 100                                                    | 65.15  | 43.73              | 0.7968               | 0.7968           | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 6.9%                             | 0.0548                                            |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | 120.00                                                 | 117.49 | 6.79               | 0.3702               | 0.3702           | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 3.1%                             | 0.0113                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | 120.00                                                 | 116.85 | 13.98              | 0.2251               | 0.2251           | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 3.2%                             | 0.0072                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | 100                                                    | 77.07  | 31.61              | 0.7255               | 0.7255           | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 4.7%                             | 0.0343                                            |
|                                           | Hand Hygiene                                                                  | 100                                                    | 74.40  | 36.14              | 0.7084               | 0.7084           | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 4.9%                             | 0.0345                                            |
|                                           | H-COMP-1: Nurse Communication                                                 | 86                                                     | 90.19  | 2.51               | -1.6678              | -1.6678          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.0%                             | -0.0500                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 86                                                     | 89.91  | 2.48               | -1.5761              | -1.5761          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.0%                             | -0.0472                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 75                                                     | 81.63  | 4.36               | -1.5206              | -1.5206          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.0%                             | -0.0463                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 69                                                     | 74.42  | 4.13               | -1.3141              | -1.3141          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.1%                             | -0.0401                                           |
|                                           | H-COMP-6: Discharge Information                                               | 80                                                     | 85.25  | 3.70               | -1.4175              | -1.4175          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.0%                             | -0.0429                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.665                                                  | 0.384  | 0.40               | -0.6972              | -0.6972          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0341                                           |
|                                           | CLABSI                                                                        | 0.229                                                  | 0.651  | 0.55               | 0.7637               | 0.7637           | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | 0.0346                                            |
|                                           | CAUTI                                                                         | 1.217                                                  | 0.540  | 0.49               | -1.3710              | -1.3710          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | -0.0638                                           |
|                                           | SSI: Colon                                                                    | 0.354                                                  | 0.831  | 0.69               | 0.6932               | 0.6932           | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | 0.0236                                            |
|                                           | MRSA                                                                          | 0.829                                                  | 0.719  | 0.59               | -0.1858              | -0.1858          | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | -0.0083                                           |
|                                           | C. Diff.                                                                      | 0.370                                                  | 0.401  | 0.33               | 0.0937               | 0.0937           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0042                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 152.54                                                 | 177.45 | 24.02              | 1.0371               | 1.0371           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0204                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 0.91                                                   | 1.00   | 0.20               | 0.4708               | 0.4708           | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | 0.0705                                            |
| Process Measure Domain Score:             |                                                                               | -0.0131                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | 0.0595                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | 0.0464                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 3.0464                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | B                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

## Additional Resources:

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 80                                                     | 80.23  | 34.14              | 0.0000               | 0.0000           | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 6.2%                             | 0.0000                                            |
|                                           | Bar Code Medication Administration (BCMA)                                     | 82                                                     | 81.87  | 30.45              | 0.0000               | 0.0000           | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 6.0%                             | 0.0000                                            |
|                                           | ICU Physician Staffing (IPS)                                                  | 65                                                     | 65.15  | 43.73              | 0.0000               | 0.0000           | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 6.9%                             | 0.0000                                            |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | 117.49                                                 | 117.49 | 6.79               | 0.0000               | 0.0000           | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 3.1%                             | 0.0000                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | 116.85                                                 | 116.85 | 13.98              | 0.0000               | 0.0000           | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 3.2%                             | 0.0000                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | 77                                                     | 77.07  | 31.61              | 0.0000               | 0.0000           | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 4.7%                             | 0.0000                                            |
|                                           | Hand Hygiene                                                                  | 74                                                     | 74.40  | 36.14              | 0.0000               | 0.0000           | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 4.9%                             | 0.0000                                            |
|                                           | H-COMP-1: Nurse Communication                                                 | 86                                                     | 90.19  | 2.51               | -1.6678              | -1.6678          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.0%                             | -0.0500                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 86                                                     | 89.91  | 2.48               | -1.5761              | -1.5761          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.0%                             | -0.0472                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 75                                                     | 81.63  | 4.36               | -1.5206              | -1.5206          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.0%                             | -0.0463                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 69                                                     | 74.42  | 4.13               | -1.3141              | -1.3141          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.1%                             | -0.0401                                           |
|                                           | H-COMP-6: Discharge Information                                               | 80                                                     | 85.25  | 3.70               | -1.4175              | -1.4175          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.0%                             | -0.0429                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.2%                             | 0.0116                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.4%                             | 0.0008                                            |
|                                           | Falls and Trauma                                                              | 0.665                                                  | 0.384  | 0.40               | -0.6972              | -0.6972          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 4.9%                             | -0.0341                                           |
|                                           | CLABSI                                                                        | 0.229                                                  | 0.651  | 0.55               | 0.7637               | 0.7637           | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.5%                             | 0.0346                                            |
|                                           | CAUTI                                                                         | 1.217                                                  | 0.540  | 0.49               | -1.3710              | -1.3710          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.7%                             | -0.0638                                           |
|                                           | SSI: Colon                                                                    | 0.354                                                  | 0.831  | 0.69               | 0.6932               | 0.6932           | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.4%                             | 0.0236                                            |
|                                           | MRSA                                                                          | 0.829                                                  | 0.719  | 0.59               | -0.1858              | -0.1858          | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.5%                             | -0.0083                                           |
|                                           | C. Diff.                                                                      | 0.370                                                  | 0.401  | 0.33               | 0.0937               | 0.0937           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.5%                             | 0.0042                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | 152.54                                                 | 177.45 | 24.02              | 1.0371               | 1.0371           | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 2.0%                             | 0.0204                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 0.91                                                   | 1.00   | 0.20               | 0.4708               | 0.4708           | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.0%                            | 0.0705                                            |
| Process Measure Domain Score:             |                                                                               | -0.2266                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | 0.0595                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -0.1672                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 2.8328                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | C                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

Additional Resources: 2.8328

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 15                                                     | 80.23  | 34.14              | -1.9104              | -1.9104          | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 7.9%                             | -0.1507                                           |
|                                           | Bar Code Medication Administration (BCMA)                                     | 25                                                     | 81.87  | 30.45              | -1.8675              | -1.8675          | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 7.7%                             | -0.1435                                           |
|                                           | ICU Physician Staffing (IPS)                                                  | 5                                                      | 65.15  | 43.73              | -1.3754              | -1.3754          | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 8.8%                             | -0.1212                                           |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | N/A                                                    | 117.49 | 6.79               | N/A                  | N/A              | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 0.0%                             | 0.0000                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | N/A                                                    | 116.85 | 13.98              | N/A                  | N/A              | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 0.0%                             | 0.0000                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | N/A                                                    | 77.07  | 31.61              | N/A                  | N/A              | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 0.0%                             | 0.0000                                            |
|                                           | Hand Hygiene                                                                  | 15                                                     | 74.40  | 36.14              | -1.6434              | -1.6434          | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 6.2%                             | -0.1027                                           |
|                                           | H-COMP-1: Nurse Communication                                                 | 82                                                     | 90.19  | 2.51               | -3.2597              | -3.2597          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.8%                             | -0.1252                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 85                                                     | 89.91  | 2.48               | -1.9792              | -1.9792          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.8%                             | -0.0760                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 66                                                     | 81.63  | 4.36               | -3.5861              | -3.5861          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.9%                             | -0.1400                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 64                                                     | 74.42  | 4.13               | -2.5257              | -2.5257          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.9%                             | -0.0987                                           |
|                                           | H-COMP-6: Discharge Information                                               | 78                                                     | 85.25  | 3.70               | -1.9573              | -1.9573          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.9%                             | -0.0759                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.4%                             | 0.0121                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.5%                             | 0.0009                                            |
|                                           | Falls and Trauma                                                              | 0.652                                                  | 0.384  | 0.40               | -0.6649              | -0.6649          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 5.1%                             | -0.0339                                           |
|                                           | CLABSI                                                                        | 1.144                                                  | 0.651  | 0.55               | -0.8929              | -0.8929          | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.7%                             | -0.0422                                           |
|                                           | CAUTI                                                                         | 0.622                                                  | 0.540  | 0.49               | -0.1659              | -0.1659          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.8%                             | -0.0080                                           |
|                                           | SSI: Colon                                                                    | 2.922                                                  | 0.831  | 0.69               | -3.0362              | -3.0362          | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.5%                             | -0.1075                                           |
|                                           | MRSA                                                                          | 1.318                                                  | 0.719  | 0.59               | -1.0127              | -1.0127          | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.7%                             | -0.0473                                           |
|                                           | C. Diff.                                                                      | 0.198                                                  | 0.401  | 0.33               | 0.6213               | 0.6213           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.7%                             | 0.0289                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | N/A                                                    | 177.45 | 24.02              | N/A                  | N/A              | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 0.0%                             | 0.0000                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 0.92                                                   | 1.00   | 0.20               | 0.4198               | 0.4198           | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.6%                            | 0.0654                                            |
| Process Measure Domain Score:             |                                                                               | -1.0338                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.1316                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -1.1654                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 1.8346                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | F                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

## Additional Resources:

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 100                                                    | 80.23  | 34.14              | 0.5790               | 0.5790           | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 6.2%                             | 0.0356                                            |
|                                           | Bar Code Medication Administration (BCMA)                                     | 100                                                    | 81.87  | 30.45              | 0.5955               | 0.5955           | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 6.0%                             | 0.0357                                            |
|                                           | ICU Physician Staffing (IPS)                                                  | 100                                                    | 65.15  | 43.73              | 0.7968               | 0.7968           | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 6.9%                             | 0.0548                                            |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | 120.00                                                 | 117.49 | 6.79               | 0.3702               | 0.3702           | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 3.1%                             | 0.0113                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | 120.00                                                 | 116.85 | 13.98              | 0.2251               | 0.2251           | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 3.2%                             | 0.0072                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | 100                                                    | 77.07  | 31.61              | 0.7255               | 0.7255           | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 4.7%                             | 0.0343                                            |
|                                           | Hand Hygiene                                                                  | 100                                                    | 74.40  | 36.14              | 0.7084               | 0.7084           | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 4.9%                             | 0.0345                                            |
|                                           | H-COMP-1: Nurse Communication                                                 | 82                                                     | 90.19  | 2.51               | -3.2597              | -3.2597          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.0%                             | -0.0977                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 85                                                     | 89.91  | 2.48               | -1.9792              | -1.9792          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.0%                             | -0.0593                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 66                                                     | 81.63  | 4.36               | -3.5861              | -3.5861          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.0%                             | -0.1093                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 64                                                     | 74.42  | 4.13               | -2.5257              | -2.5257          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.1%                             | -0.0771                                           |
|                                           | H-COMP-6: Discharge Information                                               | 78                                                     | 85.25  | 3.70               | -1.9573              | -1.9573          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.0%                             | -0.0593                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.4%                             | 0.0121                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.5%                             | 0.0009                                            |
|                                           | Falls and Trauma                                                              | 0.652                                                  | 0.384  | 0.40               | -0.6649              | -0.6649          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 5.1%                             | -0.0339                                           |
|                                           | CLABSI                                                                        | 1.144                                                  | 0.651  | 0.55               | -0.8929              | -0.8929          | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.7%                             | -0.0422                                           |
|                                           | CAUTI                                                                         | 0.622                                                  | 0.540  | 0.49               | -0.1659              | -0.1659          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.8%                             | -0.0080                                           |
|                                           | SSI: Colon                                                                    | 2.922                                                  | 0.831  | 0.69               | -3.0362              | -3.0362          | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.5%                             | -0.1075                                           |
|                                           | MRSA                                                                          | 1.318                                                  | 0.719  | 0.59               | -1.0127              | -1.0127          | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.7%                             | -0.0473                                           |
|                                           | C. Diff.                                                                      | 0.198                                                  | 0.401  | 0.33               | 0.6213               | 0.6213           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.7%                             | 0.0289                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | N/A                                                    | 177.45 | 24.02              | N/A                  | N/A              | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 0.0%                             | 0.0000                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 0.92                                                   | 1.00   | 0.20               | 0.4198               | 0.4198           | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.6%                            | 0.0654                                            |
| Process Measure Domain Score:             |                                                                               | -0.1891                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.1316                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -0.3207                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 2.6793                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | C                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

## Additional Resources:

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.

## Appendix D

April 2025

| Measure Domain                            | Measure                                                                       | Enter Your Hospital's Score Here (Do NOT Leave Blanks) | Mean   | Standard Deviation | Z-Score <sup>1</sup> |                  | Inputs to Weighting Individual Measures <sup>2</sup> |             |        |                                           | Weight <sup>3</sup> |                                  | Weighted Measure Score (Modified Z-Score x Final) |
|-------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------|--------------------|----------------------|------------------|------------------------------------------------------|-------------|--------|-------------------------------------------|---------------------|----------------------------------|---------------------------------------------------|
|                                           |                                                                               |                                                        |        |                    | Original Z-Score     | Modified Z-Score | Evidence                                             | Opportunity | Impact | Number of Component Measures <sup>4</sup> | Standard Weight     | Final Weight (N/A redistributes) |                                                   |
| Process/Structural Measures               | Computerized Physician Order Entry (CPOE)                                     | 80                                                     | 80.23  | 34.14              | 0.0000               | 0.0000           | 2                                                    | 1.43        | 3      | 1                                         | 6.157%              | 6.2%                             | 0.0000                                            |
|                                           | Bar Code Medication Administration (BCMA)                                     | 82                                                     | 81.87  | 30.45              | 0.0000               | 0.0000           | 2                                                    | 1.37        | 3      | 1                                         | 6.000%              | 6.0%                             | 0.0000                                            |
|                                           | ICU Physician Staffing (IPS)                                                  | 65                                                     | 65.15  | 43.73              | 0.0000               | 0.0000           | 2                                                    | 1.67        | 3      | 1                                         | 6.881%              | 6.9%                             | 0.0000                                            |
|                                           | Safe Practice 1: Culture of Leadership Structures and Systems                 | 117.49                                                 | 117.49 | 6.79               | 0.0000               | 0.0000           | 1                                                    | 1.06        | 2      | 1                                         | 3.056%              | 3.1%                             | 0.0000                                            |
|                                           | Safe Practice 2: Culture Measurement, Feedback, & Intervention                | 116.85                                                 | 116.85 | 13.98              | 0.0000               | 0.0000           | 1                                                    | 1.12        | 2      | 1                                         | 3.178%              | 3.2%                             | 0.0000                                            |
|                                           | Total Nursing Care Hours per Patient Day                                      | 77                                                     | 77.07  | 31.61              | 0.0000               | 0.0000           | 2                                                    | 1.41        | 2      | 1                                         | 4.729%              | 4.7%                             | 0.0000                                            |
|                                           | Hand Hygiene                                                                  | 74                                                     | 74.40  | 36.14              | 0.0000               | 0.0000           | 2                                                    | 1.49        | 2      | 1                                         | 4.877%              | 4.9%                             | 0.0000                                            |
|                                           | H-COMP-1: Nurse Communication                                                 | 82                                                     | 90.19  | 2.51               | -3.2597              | -3.2597          | 1                                                    | 1.03        | 2      | 1                                         | 2.998%              | 3.0%                             | -0.0977                                           |
|                                           | H-COMP-2: Doctor Communication                                                | 85                                                     | 89.91  | 2.48               | -1.9792              | -1.9792          | 1                                                    | 1.03        | 2      | 1                                         | 2.997%              | 3.0%                             | -0.0593                                           |
|                                           | H-COMP-3: Staff Responsiveness                                                | 66                                                     | 81.63  | 4.36               | -3.5861              | -3.5861          | 1                                                    | 1.05        | 2      | 1                                         | 3.048%              | 3.0%                             | -0.1093                                           |
|                                           | H-COMP-5: Communication about Medicines                                       | 64                                                     | 74.42  | 4.13               | -2.5257              | -2.5257          | 1                                                    | 1.06        | 2      | 1                                         | 3.052%              | 3.1%                             | -0.0771                                           |
|                                           | H-COMP-6: Discharge Information                                               | 78                                                     | 85.25  | 3.70               | -1.9573              | -1.9573          | 1                                                    | 1.04        | 2      | 1                                         | 3.028%              | 3.0%                             | -0.0593                                           |
| Outcome Measures                          | Foreign Object Retained                                                       | 0.000                                                  | 0.014  | 0.05               | 0.2755               | 0.2755           | 1                                                    | 3.00        | 2      | 1                                         | 4.208%              | 4.4%                             | 0.0121                                            |
|                                           | Air Embolism                                                                  | 0.000                                                  | 0.002  | 0.06               | 0.0348               | 0.0348           | 1                                                    | 3.00        | 1      | 1                                         | 2.405%              | 2.5%                             | 0.0009                                            |
|                                           | Falls and Trauma                                                              | 0.652                                                  | 0.384  | 0.40               | -0.6649              | -0.6649          | 2                                                    | 2.05        | 3      | 1                                         | 4.894%              | 5.1%                             | -0.0339                                           |
|                                           | CLABSI                                                                        | 1.144                                                  | 0.651  | 0.55               | -0.8929              | -0.8929          | 2                                                    | 1.85        | 3      | 1                                         | 4.536%              | 4.7%                             | -0.0422                                           |
|                                           | CAUTI                                                                         | 0.622                                                  | 0.540  | 0.49               | -0.1659              | -0.1659          | 2                                                    | 1.91        | 3      | 1                                         | 4.654%              | 4.8%                             | -0.0080                                           |
|                                           | SSI: Colon                                                                    | 2.922                                                  | 0.831  | 0.69               | -3.0362              | -3.0362          | 2                                                    | 1.83        | 2      | 1                                         | 3.400%              | 3.5%                             | -0.1075                                           |
|                                           | MRSA                                                                          | 1.318                                                  | 0.719  | 0.59               | -1.0127              | -1.0127          | 2                                                    | 1.82        | 3      | 1                                         | 4.489%              | 4.7%                             | -0.0473                                           |
|                                           | C. Diff.                                                                      | 0.198                                                  | 0.401  | 0.33               | 0.6213               | 0.6213           | 2                                                    | 1.81        | 3      | 1                                         | 4.474%              | 4.7%                             | 0.0289                                            |
|                                           | PSI 4: Death rate among surgical inpatients with serious treatable conditions | N/A                                                    | 177.45 | 24.02              | N/A                  | N/A              | 1                                                    | 1.14        | 2      | 1                                         | 1.966%              | 0.0%                             | 0.0000                                            |
|                                           | CMS Medicare PSI 90: Patient safety and adverse events composite              | 0.92                                                   | 1.00   | 0.20               | 0.4198               | 0.4198           | 1                                                    | 1.20        | 2      | 10                                        | 14.974%             | 15.6%                            | 0.0654                                            |
| Process Measure Domain Score:             |                                                                               | -0.4027                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Outcome Measure Domain Score:             |                                                                               | -0.1316                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Process/Outcome Domains - Combined Score: |                                                                               | -0.5342                                                |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Normalized Numerical Score:               |                                                                               | 2.4658                                                 |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |
| Hospital Safety Grade (Letter Grade):     |                                                                               | C                                                      |        |                    |                      |                  |                                                      |             |        |                                           |                     |                                  |                                                   |

Additional Resources: 2.4658

<sup>1</sup>Please refer to the 'Calculating Z-scores' section of the methodology document for more details.<sup>2</sup>Please refer to the 'Weighting Individual Measures' section of the methodology document for more details.<sup>3</sup>Please refer to the 'Dealing with Missing Data' section of the methodology document for more details.<sup>4</sup>Please refer to the 'Number of Component Measures' section of the methodology document for more details.