



# Changes in Consumer Demand Following Public Reporting of Summary Quality Ratings: An Evaluation in Nursing Homes

Rachel M. Werner, R. Tamara Konetzka, Daniel Polsky

Health Services Research, February 2016, Online First

## KEY FINDINGS:

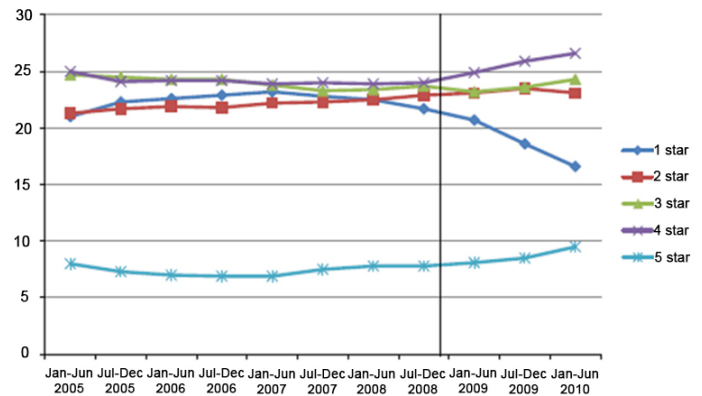
A nursing home report card that converted 12 measures of quality into a simple 5-star system significantly affected consumer demand for low- and high-scoring facilities. One-star facilities typically lost 8 percent of their market share and 5-star facilities gained more than 6 percent of their market share. These results support the use of summary measures in report cards.

## THE QUESTION

Although nursing home ratings have been publicly available since 2002, initially they had little impact on consumer choices. The original report cards in [Nursing Home Compare](#) presented consumers with a large amount of information, which can be difficult to understand. In December 2008, Medicare converted its nursing home report card to a 5-star summary rating. In this study, LDI Senior Fellows Rachel Werner and Daniel Polsky, and their colleague R. Tamara Konetzka, tested whether this change was associated with a change in consumer demand for nursing homes related to the nursing home's star rating after the summary information was released.

## THE FINDINGS

In a study of more than 16,000 nursing homes and 2.3 million admissions between 2005-2010, the authors found that the percentage of admissions to nursing homes ranked as 4 or 5 star increased beginning in early 2009, shortly after the 5-star rankings were released. Simultaneously, the percentage of admissions to 1-star nursing homes declined.



**Percent of Nursing Home Admissions in Each Star Category**  
[The vertical line represents the release of the 5-star report card in December 2008]

Source: Health Services Research, Feb 11, 2016; 1475-6773 DOI: 10.1111/1475-6773.12459

After adjusting for other variables, the researchers found that the report card was associated with a relative reduction in market share of 8 percent for 1-star facilities and an increase in market share of 6.4 percent in 5-star facilities, but relatively small changes in market share for the 2-, 3-, or 4-star facilities.

## THE IMPLICATIONS

This study is the first to document changes in consumer demand in response to a change to a summary rating system. The study was able to isolate the effect of moving to a summary measure of quality, because the detailed quality data were available for 6 years prior to the release of the summary and continued to be available on the same website.

Public and private payers are moving toward more widespread adoption of summary measures, replacing systems based on numerous individual quality metrics to ones focusing on star-based ratings. These findings suggest that the transformation of complex rating systems can help consumers incorporate the information into their decisions. Increased consumer use of public report cards may in turn provide a stronger incentive for providers to deliver high-quality (or highly rated) care.

This analysis provides important new results indicating that consumers use nursing home star ratings to choose a nursing home. Prior report cards may not have successfully conveyed the complex information required to make informed decisions in a way that is understandable to consumers. The use of summary scores may increase consumer comprehension of and response to report cards.

## THE STUDY

The authors used the 2005–2010 nursing home Minimum Data Set and Online Survey, Certification and Reporting (OSCAR) dataset to compare the relationship between nursing home demand and nursing home 5-star ratings before and after these ratings were publicly released. The study included 16,147 nursing homes and 2,316,649 nursing home admissions between 2005 and 2010, 92 percent of whom are admitted to postacute care (rather than long-term care). Compared to 1-star nursing homes, 5-star nursing homes were less likely to be part of a chain (63.5 percent of 1-star nursing homes vs. 39.2 percent of 5-star nursing homes), smaller (85 beds vs. 125 beds), more

likely to be not for profit (43.7 percent vs. 13.8 percent), had higher percent of Medicaid residents (31.8 percent vs. 16.5 percent), and slightly lower occupancy rates (82.0 percent vs. 79.7 percent).

The researchers measured each nursing home's 5-star rating in both the pre- and postreporting period, which enabled them to control for the correlation between knowledge of the nursing home market through other pathways (market learning) and report card quality. They controlled for other factors that might drive demand, including nursing home characteristics that are used as signals of quality, distance to a nursing home, and bed availability. They estimated the report card effect by testing for changes in the correlation between consumer demand and report card scores once the summary information was publicly available.

Werner RM, Konetzka RT, Polsky D. [Changes in Consumer Demand Following Public Reporting of Summary Quality Ratings: An Evaluation in Nursing Homes](#). Health Services Research, Published Online February 11, 2016 DOI: 10.1111/1475-6773.12459

## LEAD AUTHOR: DR. RACHEL M. WERNER






Rachel Werner, MD, PhD is an Associate Professor of Medicine and Associate Chief for Research in the Division of General Internal Medicine at Penn and Core Investigator with the VA HSR&D Center for Health Equity Research and Promotion (CHERP). Dr. Werner's research seeks to understand the effect of health care policies and delivery systems on quality of care. In particular, she has examined the role of quality improvement incentives on provider behavior, the organization of health care, racial disparities, and overall health care quality. She has investigated numerous unintended consequences of quality improvement incentives and was among the first to recognize that public reporting of quality information may worsen racial disparities.



**Penn LDI** LEONARD DAVIS INSTITUTE  
of HEALTH ECONOMICS

Connect With Us: [Idi.upenn.edu](http://Idi.upenn.edu)

-  • [Idi.upenn.edu/health-policysense](http://Idi.upenn.edu/health-policysense)
-  • [@PennLDI](https://twitter.com/@PennLDI)
-  • [www.youtube.com/user/LDIvideo](http://www.youtube.com/user/LDIvideo)

Colonial Penn Center  
3641 Locust Walk  
Philadelphia, PA 19104-6218  
P: 215-898-5611  
F: 215-898-0229

Since 1967, the Leonard Davis Institute of Health Economics (LDI) has been the leading university institute dedicated to data-driven, policy-focused research that improves our nation's health and health care. Originally founded to bridge the gap between scholars in business (Wharton) and medicine at the University of Pennsylvania, LDI now connects all of Penn's schools and the Children's Hospital of Philadelphia through its more than 200 Senior Fellows.

LDI Research Briefs are produced by LDI's policy team. For more information please contact Janet Weiner at [weinerja@mail.med.upenn.edu](mailto:weinerja@mail.med.upenn.edu).