

Moving Beyond Quality: Strategic Responses of Nursing Homes to Nursing Home Compare

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Public Reporting of Health Care Quality

- Capitalizing on market forces to change the incentive structure that health care providers face is intuitively more efficient than regulating or mandating quality.
- The ACA relies heavily on market-based reforms such as public reporting and value-based purchasing to maintain and encourage quality while holding down costs.

Motivation for Public Reporting

- Market failure in health care – asymmetric information – leads to less than optimal quality.
 - Difficult for consumers to judge quality
 - Little incentive for providers to compete on quality
- Public reporting is intended to improve quality.
 - Giving consumers information needed to shop on quality
 - Giving providers incentive to compete on quality

Nursing Home Compare

- Launched November 12, 2002
- 6 states launched as pilot in April 2002
 - CO, FL, MD, OH, RI, WA
- Publicly release quality information:
<http://www.medicare.gov/NHCompare>
- All Medicare- and Medicaid-certified NHs
 - 17,000 nursing homes
 - Reporting for NHs with >20-30 qualifying assessments
- 10 quality measures: 4 post-acute, 6 chronic care
- Staffing, inspections

Nursing Home Search (Step 2 of 2)

There is **1** nursing home available within Zip Code 22202.

- Select one or more Nursing Homes and click "Next Step" at the **bottom of the page**.
- Click on the "Select All" button to view all of the Nursing Homes in this area.

Nursing Homes

Select All	Name: Address: Phone Number: Date of Last Change of Ownership:	Medicare Participation	Total Number Certified Beds	Type of Ownership	Located in a Hospital?	<u>Continuing Care Retirement Community?</u>	Resident & Family Councils
<input type="checkbox"/>	POTOMAC CENTER GENESIS ELDERCA 1785 HAYES STREET ARLINGTON, VA 22202 (703) 920-5700	Yes	240	For profit - Corporation	No	No	Resident

Search Results for the selected nursing homes within Zip Code 22202

Nursing Home Summary

Information in the Nursing Home database should be interpreted carefully and used in conjunction with other sources, as well as a visit to the nursing home. We suggest you use our [Nursing Home Checklist](#) to help evaluate the nursing homes you visit, or contact your long-term care ombudsman or State Survey Agency before making a decision. The phone number for the long-term care ombudsman or State Survey Agency in your area can be found in the [Helpful Contacts](#) section of this website.

About the Nursing Home	Quality Measures	Total Number of Health Deficiencies Fire Safety Deficiencies	Nursing Staff Hours per Resident per Day	CNA Hours per Resident per Day
POTOMAC CENTER GENESIS ELDERCA 1785 HAYES STREET ARLINGTON, VA 22202 (703) 920-5700 Mapping/Directions View all information about this nursing home	Information for 19 of the 19 quality measures is available	24 Health Deficiencies 5 Fire Safety Deficiencies	1 hour 28 minutes	2 hours 3 minutes
			Total Number of Residents: 192	

- Percent of Long-Stay Residents Given Influenza Vaccination During the Flu Season **NEW!**
- Percent of Long-Stay Residents Who Were Assessed and Given Pneumococcal Vaccination **NEW!**
- Percent of Long-Stay Residents Whose Need for Help With Daily Activities Has Increased
- Percent of Long-Stay Residents Who Have Moderate to Severe Pain
- Percent of High-Risk Long-Stay Residents Who Have Pressure Sores
AND
Percent of Low-Risk Long-Stay Residents Who Have Pressure Sores
- Percent of Long-Stay Residents Who Were Physically Restrained
- Percent of Long-Stay Residents Who are More Depressed or Anxious
- Percent of Low-Risk Long-Stay Residents Who Lose Control of Their Bowels or Bladder
AND
Percent of Long-Stay Residents Who Have/ Had a Catheter Inserted and Left in Their Bladder
- Percent of Long-Stay Residents Who Spend Most of Their Time in Bed or in a Chair
- Percent of Long-Stay Residents Whose Ability to Move About in and Around Their Room Got Worse
- Percent of Long-Stay Residents With a Urinary Tract Infection
- Percent of Long-Stay Residents Who Lose Too Much Weight

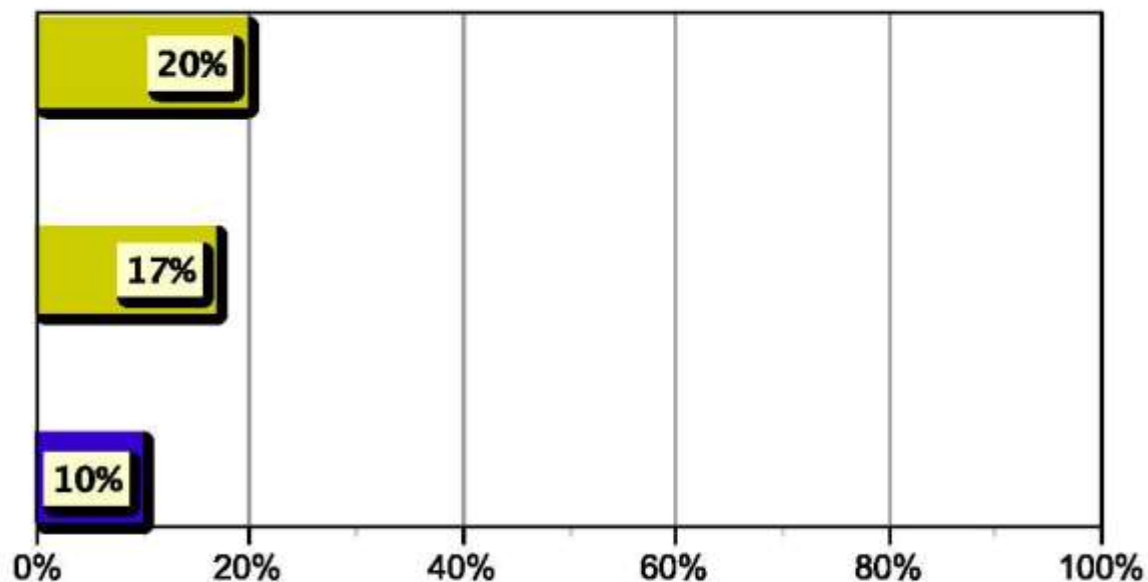
- Percent of Short-Stay Residents Given Influenza Vaccination During the Flu Season **NEW!**
- Percent of Short-Stay Residents Who Were Assessed and Given Pneumococcal Vaccination **NEW!**
- Percent of Short-Stay Residents With Delirium
- Percent of Short-Stay Residents Who Had Moderate to Severe Pain
- Percent of Short-Stay Residents With Pressure Sores

Percent of Short-Stay Residents Who Had Moderate to Severe Pain

THIS IS THE AVERAGE FOR ALL THE NURSING HOMES IN UNITED STATES

THIS IS THE AVERAGE FOR ALL NURSING HOMES IN THE STATE OF VIRGINIA

POTOMAC CENTER GENESIS ELDERCA



Existing evidence on Nursing Home Compare

- Quality: small, inconsistent improvements
 - long-stay residents (Mukamel, Weimer et al. 2008)
 - post-acute residents (Werner, Konetzka et al. 2009)
- Some evidence of financial gain by high-scoring facilities (Park et al., 2010)
- Market share: little effect
 - Among long-stay residents, no discernible effect on market share (Grabowski and Town 2011)
 - Among post-acute residents, statistically significant but small effect of quality ratings for pain control on market share (Werner and colleagues 2012)

Provider Response to Public Reporting: Multiple Responses Possible

- Providers may increase quality
- Providers may change price
 - Before quality reporting, price and quality may be only loosely correlated
 - After public reporting, high-quality firms may increase price and low-quality firms may decrease price
- Demand for high-quality providers may be rationed if capacity is constrained (e.g., health, education).

Research Questions

- Do high-quality nursing homes raise prices for self-pay patients after public reporting?
- Do high-quality nursing homes attract more profitable patients (Medicare) and, if capacity constrained, crowd out the less profitable ones (Medicaid)?

Conceptual Framework

- Nursing home markets are monopolistically competitive
 - Many buyers and sellers
 - Products differentiated by quality
 - Asymmetric information
- Before public reporting, demand is relatively inelastic wrt quality
- Public reporting increases the precision with which consumers observe sellers' quality (Dranove and Satterthwaite 1992)
 - Increased precision increases elasticity of demand wrt quality

- Providers choose level of quality where marginal cost of providing quality = marginal benefit
 - Marginal benefit likely to be higher for increase in Medicare residents
 - If capacity-constrained, little benefit from improving quality --- increase price instead
- Sellers' equilibrium level of quality increases? Overall market share of high-quality homes increases? Unclear.

Data (1999-2005)

■ Minimum Data Set

- All Medicare- and Medicaid-certified nursing homes
- Detailed clinical data used for care planning
- Source to calculate quality measures for Nursing Home Compare
- Used to calculate quality measures over study period, both pre and post.

■ OSCAR

- Facility-level covariates (e.g., beds, ownership, occupancy)
- Patient by-payer counts.

■ Pennsylvania and California state Nursing Home Surveys

- Price for self-pay patients.

Summary Statistics

Variables	Mean (Standard Deviation)
Utilization and facilities characteristics	National Sample (quarterly data)
Medicaid county share	18.9(25.5)
Medicare county share	17.9 (26.1)
Total number of residents/patients	91.2 (60.3)
Medicaid census	60.6 (49.2)
Medicare census	10.3 (12.3)
Percent Medicaid	62.1 (24.5)
Percent Medicare	14.2 (19.4)
Government facility	0.06
Not-for-profit facility	0.28
For-profit facility	0.66
Number of beds	105.9 (66.5)
Self-Pay Price	State Sample (Annual Data)
Self pay price, semiprivate room (Penn)	276(183)
Self pay price, private room (Penn)	249(161)
Self pay price (California)	208(222)

Quality Measures

- Focus on clinical quality measures as reported in NHC
 - re-created for pre- and post-reporting periods
 - keep homes that report at least 6 measures
- For each measure, calculate z-score relative to other nursing homes in the county
- Calculate average z-score over all reported measures for each nursing home

Empirical Strategy: Facility-Fixed Effects Models

$$Y_{j,t} = \beta_0 + \beta_1 QM_{j,t-1} * Post_t + \beta_2 QM_{j,t-1} + \beta_3 X_{j,t} + \lambda_t + \eta_j + \varepsilon_{j,t}$$

- $Y_{j,t}$: outcome in NH j in year t (self-pay price, Medicare or Medicaid county share).
- $QM_{j,t}$: composite QMs for NH j in year t , lagged 1 quarter.
- X_{it} : control variables: beds, ownership (gov't, non-for-profit, for-profit).
- T_{it} : set of time dummies
- η_j : set of nursing home fixed effects

Price Results

(Coefficient on QM*Post-NHC)

	California	Pennsylvania: Semi-private room	Pennsylvania: Private room
Pooled	-4.37* (2.258)	-0.44 (1.742)	-1.94 (2.094)
Non-Capacity- Constrained	2.05 (2.533)	4.51* (2.584)	-0.02 (3.066)
Capacity- Constrained	-8.68* (4.935)	-4.53** (2.110)	-1.72 (2.657)

Utilization Results

(Coefficient on QM*Post-NHC)

	Medicaid Market Share	Medicare Market Share	Total Market Share
Pooled	0.13** (0.064)	-0.28** (0.123)	0.18*** (0.055)
Non-Capacity- Constrained	0.14* (0.082)	-0.16 (0.158)	0.23*** (0.070)
Capacity- Constrained	0.14 (0.101)	-0.54*** (0.194)	0.11 (0.085)

Summary of Findings

- High quality nursing homes were able to raise price after quality disclosure
 - Effect is stronger among capacity constrained NHs.
- Overall, high quality NHs seem to gain Medicare market share and to decrease Medicaid market share.
 - Effect is small.

Policy Implications

- Public reporting needs to be implemented and evaluated within the broader context of profitability incentives.
- Policymakers should expect heterogeneous response to public reporting.
- The overall welfare consequences of public reporting systems is ambiguous when multiple responses are considered.

Next Steps

- Robustness Checks / Sensitivity Analyses
 - Market definition
 - Combining quality measures
 - Use of staffing and deficiencies
 - Separating out Post-Acute v LTC quality
- New admissions vs census (data challenge)