The VNAA Vulnerable Patients Study
Identifying Patient Characteristics that are Associated with Underpayment to Home Health Providers

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History and Context for the VNAA Study

- Concerns about Medicare reimbursement for certain groups of patients were shared by a number of VNAA member agencies
- An earlier pilot study of patients served by 9 VNAs revealed that greater clinical complexity and social vulnerabilities were associated with losses
- Policymakers and others expressed their desires for a more rigorous investigation of the issue
- VNAA wanted to be sure they could provide direction to the CMS Vulnerable Patient Study
Purpose of the VNAA Study

- Understand how potential changes to Medicare payment policies may compromise access to care for certain patient populations due to insufficient reimbursement for their needs
- Identify characteristics of patients that tend to be associated with underpayment to home healthcare agencies
- Help inform CMS, MedPAC and Congress about patient characteristics that drive vulnerability

Identifying Vulnerable Populations

- The concept of a **vulnerable population** is used to define a group whose health and well-being is susceptible to social and environmental challenges due to limited resources.
- Issues facing vulnerable populations:
  - Ensuring access to care and coverage for services
  - Maintaining healthcare quality
  - Addressing unmet healthcare needs
  - Higher hospital readmission rates are observed among low SES groups.

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1 Mechanic & Tanner (*Health Affairs*, 2007); 2 Coffey (*MCRR*, 2012); 3 MedPAC (2012)
Vulnerability among Home Health Patients

- Previous research has shown that home healthcare patients tend to have characteristics associated with vulnerable populations:
  - 22% of Medicare episodes are provided to patients over the age of 85
  - 42% of Medicare episodes are provided to patients who have two or more chronic conditions
  - 36% of Medicare episodes are provided to patients who have mild or moderate cognitive impairment

 ¹ Murtaugh et al (Journal for Healthcare Quality, 2009)

Research Aims

- Examine whether clinical complexity and other patient characteristics are associated with inadequate Medicare reimbursement
  - We hypothesize that clinical complexity and social vulnerability (i.e. low socioeconomic status) are negatively associated with Medicare reimbursement relative to cost
- Identify the characteristics of vulnerable patients that drive service utilization (e.g. skilled nursing) which leads to costs that are not adequately reimbursed
Responding To A Question Posed by Policy Makers

- If there is higher utilization of services by vulnerable patients, does it make a difference?
- We will present some preliminary findings to address this issue.

VNAA Vulnerable Patient Conceptual Model

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Data and Methods

- Stratified random sample of 50 VNAA-member non-profit Medicare-certified home healthcare agencies
  - Stratified based on U.S. region and agency size
- Agencies were asked to collect the following:
  - OASIS for all Medicare episodes ending in 2011
  - Medicare claims for all episodes ending in 2011
  - Chart reviews for 100 randomly selected episodes ending in 2011
- Complete matched data collected from 26 agencies

Supplemental Data

- Community characteristics measured at zip-code level
  - 2011 Median Household Income
  - 2011 Population per Square Mile (Density)
  - 2011 Diversity Index
- CMS Cost Reports (2011)
- CMS Medicare Provider of Services File (2009)

¹ ESRI (2012)
### VNAA Members Participating in the Study

![Map of the United States showing the distribution of study agencies across regions.](image)

**Characteristics of Study Agencies**

<table>
<thead>
<tr>
<th>Study Agencies (N=26)</th>
<th>% (N) or Mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>U.S. Census Region</strong></td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>54% (14)</td>
</tr>
<tr>
<td>Midwest</td>
<td>23% (6)</td>
</tr>
<tr>
<td>South</td>
<td>8% (2)</td>
</tr>
<tr>
<td>West</td>
<td>15% (4)</td>
</tr>
<tr>
<td><strong>Program Participation</strong></td>
<td></td>
</tr>
<tr>
<td>Medicare Only</td>
<td>4% (1)</td>
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<tr>
<td>Medicare and Medicaid</td>
<td>96% (25)</td>
</tr>
<tr>
<td><strong>Length of Medicare Program Participation</strong></td>
<td></td>
</tr>
<tr>
<td>Agencies Participating Since Program Inception</td>
<td>69% (18)</td>
</tr>
<tr>
<td>Average Length of Participation Years (Mean ± SD)</td>
<td>42.7 ± 4.9</td>
</tr>
</tbody>
</table>

Source: HHA Cost Reports, Medicare 2009 POS File
Examining Episode Reimbursement and Cost

- Explore associations between patient characteristics and episode reimbursement relative to costs
  - Social vulnerability (e.g. socioeconomic status)
  - Clinical complexity
  - Needs for functional assistance
- Multivariate mixed-effects model with HIPPS code included as a random effect
  - Method takes into account how episodes are grouped under the current payment system
Main Findings

- We found that Medicare Home Health PPS episodes for patients with the following characteristics tended to have significantly lower reimbursement relative to cost:
  - Communities with lower median household incomes
  - Poorly controlled chronic conditions (e.g. hypertension)
  - Post-acute, clinically complex admissions
  - Treatments including respiratory, IV, and infusion
  - Serious or frail overall status
  - Presence of higher stage pressure ulcers
  - Urinary and bowel incontinence
  - The absence of caregiver assistance for ADL, IADL, medication administration, and/or medical procedures

Chronic Conditions and Medicare Margin

Episodes of care for patients with poorly controlled chronic conditions tend to have significantly lower margins. The reference group includes episodes where the chronic condition is not present.
Pressure Ulcers and Margin

Episodes of care for patients with more severe pressure ulcers tend to have significantly lower margins.

The reference group includes episodes where a pressure ulcer is not present.

Availability of Caregiver Assistance

The lack of caregiver assistance with ADL, IADL, medication administration, and/or medical procedures is associated with significantly lower reimbursement margin.

The reference group includes episodes where assistance is not needed.
Using predicted values from the multivariate model, episodes were ranked according to vulnerability. Approximately 40% of the most vulnerable episodes have negative reimbursement margins.

Who are the Vulnerable Patients?

Compared to the least vulnerable patients, the most vulnerable patients are more likely to live alone, reside in lower income communities, be clinically complex, and to have two or more prior hospitalizations.

* Based on vulnerability ranking. These differences are statistically significant at p < .001.
Who are the Vulnerable Patients? (continued)

Compared to the least vulnerable patients, the most vulnerable patients are more likely to have skin lesions or open wounds, and not to have caregiver assistance for ADL, IADL, and medication administration.

* Based on vulnerability ranking. These differences are statistically significant at p < .001

Additional Findings

- Vulnerable patients tend to receive more skilled nursing and less therapy services.
- Many characteristics of vulnerable patients are positively associated with the number of skilled nursing visits:
  - Poorly controlled chronic conditions
  - Post-acute, clinically complex admissions
  - Intravenous/infusion/nutrition therapies
  - Serious/frail overall status
  - Problematic pressure ulcers
  - Urinary and bowel incontinence
  - Absence of caregiver assistance for medical procedures.
Pressure Ulcers and Service Utilization

Episodes of care for patients with more severe pressure ulcers tend to receive more skilled nursing visits and fewer therapy visits compared to episodes for patients with less severe pressure ulcers.

Caregiver Assistance with Medical Procedures

Episodes of care for patients who do not have a caregiver who can provide assistance with medical procedures tend to have greater levels of skilled nursing utilization and fewer therapy visits.
Medicare Home Health PPS episodes for the most vulnerable patients tend to receive more skilled nursing and less therapy services compared to episodes for the least vulnerable patients.

Home Health Utilization and Patient Outcomes

- Patients who receive more **skilled nursing services**:
  - Are 1.12 times more likely to record improvement in their ulcers\(^1\)
  - Are 1.14 times more likely to improve managing injectable meds\(^1\)
- Patients who receive more **physical therapy services**:
  - Are 1.42 times more likely to improve in their number of ADLs\(^2\)
  - Are 1.07 times more likely to improve in their level of pain\(^2\)
  - Are 1.06 times more likely to improve managing injectable meds\(^2\)

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\(^1\) compared to patients with nursing utilization levels less than or equal to the 75\(^{th}\) percentile of all episodes

\(^2\) compared to patients with physical therapy utilization levels less than or equal to the 50\(^{th}\) percentile of all episodes
Summary

- Medicare Home Health PPS episodes for clinically complex patients tend to have significantly greater costs relative to reimbursement
  - 40% of episodes for the most vulnerable patients have costs that exceed reimbursement
- Clinically complex patients with limited caregiver assistance tend to receive greater nursing utilization
  - Episodes for the most vulnerable patients tend to receive more skilled nursing and less therapy services

Policy Implications
Goal of Study

Document Underpayments for Vulnerable Patients

The goal of the VNAA – VNSNY study is to guide the Centers for Medicare and Medicaid Services (CMS) in the fulfillment of Section 3131 (d) of the Affordable Care Act (ACA) and to impact all payment adjustments including rebasing and case mix. VNAA was the force behind getting this study and payment demonstration included in the ACA. Congressional staff have indicated they have a strong interest in vulnerable patients and the nonprofit delivery system, but needed more research-driven data.

Leadership

Member Engagement and Financial Support

Leadership: Without the VNAA/VNSNY study, we would not have the research to lobby CMS to adjust variables to recognize that:
1) certain factors are recognized but undercompensated;
2) other factors need to be recognized and compensated;
3) the interaction of diagnoses builds clinical complexity and must be considered as a significant driver of costs.

Member Engagement: Board and Policy Council were the driving forces behind the study. Volunteers served on a steering committee to help guide research. Most important, VNAA members, who were randomly selected, agreed to provide “blinded” patient information and financial data essential.

Financial Support: Community Health Accreditation Program (CHAP) provided financial support to make the study possible. VNSNY provided in-kind contribution of research expertise.
ACA Section 3131(d)
Requirements

ACA requires an assessment of home health agency (HHA) costs associated with providing ongoing access to care for low-income beneficiaries, those in medically underserved areas, and those with varying levels of severity of illness.

CMS will consider whether severity of illness and access to care can be measured by factors such as:

- Population density;
- Variations in costs of providing care to dual-eligibles;
- The presence of severe or chronic diseases as potentially measured by multiple episodes; and,
- Poverty status.

CMS must complete the study with an accompanying report recommending legislative and administrative action to Congress no later than March 1, 2014.

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ACA Section 3131(d)
Requirements

ACA Section 3131 (d) will examine:

1. Possible refinements to the Home Health Prospective Payment System (HH PPS) for services that require additional or fewer resources
2. Probable payment changes to reflect resources involved with providing access to home health services for these target populations
3. Potential revisions to outlier payments for the most seriously ill or resource-intensive beneficiaries
4. Operational challenges, implications, and any potential vulnerabilities that a revised payment system may have on CMS and/or HHAs

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ACA Section 3131(d)
TEP, MedPAC, Congress

Technical Expert Panel: Established by CMS to conduct Sect 3131 (d) study.
- Bob Wardwell, former top CMS Home Health and Hospice Official, VNAA
  Senior Policy Advisor
- Penny Feldman, Ph.D. Senior VP for Research and Evaluation, VNSNY
- Keith Lind, JD, MS, Senior Policy Advisor, AARP, VNAA Board Member

VNAA representatives have strongly advocated that the VNAA-VNSNY findings must be considered.

CMS, MedPAC, Congress: VNAA has been pro-active and conducted multiple comprehensive briefings over the past several years for policymakers.

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CMS Providers & Doctors Survey
L&M Policy Research

Survey:
- In 2013 CMS survey sent to random sample of 1,075 home health agencies and 510 referring physicians.
- Provider survey asks about the challenges experienced in accepting or caring for patients and the factors driving those challenges including the face-to-face requirement.
- Physician survey is very similar but focuses on challenges doctors experience in referring and admitting patients to home health.

L & M Policy Research:
- In 2011, L & M completed a comprehensive literature review and is providing consulting support the Section 3131 (d) study. VNAA has kept L & M up to date on findings of pilot (2010) and larger study (2012).
Home Health Rebasing
VNAA Study Used to Lobby CMS

- VNAA- VNSNY Study Used to Impact Rebasing
  - Beginning in CY 2014, Medicare will begin rebasing the HH PPS.
  - Rebasing will reflect changes in an episode including: number of visits, mix of services, intensity of services, average cost of providing care and other factors at the discretion of CMS.
  - Adjustment must be phased in over a four-year period in equal increments to be fully implemented by CY 2017.
  - Rebasing adjustment shall not exceed 3.5% during each year of the phase-in.
  - VNAA has lobbied CMS on characteristics of the VNAA-VNSNY pilot (2010) and study (2012) to identify characteristics of vulnerable patients.

Rebasing
MedPAC to Study Impact on Patients, Quality

ACA also calls for the Medicare Payment Advisory Commission ("MedPAC") to conduct a study on the rebasing adjustments to determine how such adjustments:

1. impact Medicare beneficiaries' access to care;
2. impact patient quality outcomes;
3. affect the number of home health agencies and
4. affect each type of HHA, including rural agencies, urban agencies, for-profit agencies and nonprofit agencies. Report must be delivered no later than January 1, 2015.
Key Policy Findings
Some Characteristics are Under-Reimbursed

The following clinical characteristics are factored into the payment system, but are not adequately reimbursed:

- Infusion, IV, parenteral/enteral nutrition therapies
- Wounds and skin lesions
- The stage of the most problematic pressure ulcer
- Bowel incontinence

Key Policy Findings
Some Characteristics are Not Reimbursed

These characteristics, which also drive up costs, are not currently factored into the current payment system:

- The symptom control rating of each diagnosis (i.e. poorly controlled vs. well controlled)
- Clinically complex post-acute and community admissions
- Serious or frail overall status
- Absence of caregiver assistance with ADLs, IADLs, medical procedures, and medication administration
Other Findings of Interest

- **Low-income patients**: Have higher cost but dual eligible status (Medicare/Medicaid) is not a consistent predictor because of the wide variability in state eligibility, reimbursement, and services. Need a more sophisticated way to identify low-income status.

- **High Cost Patients**: Patients who require additional nursing visits (poorly controlled chronic conditions, incontinence, certain kinds of treatments) are more costly.

- **Caregiver**: Study shows importance of caregiver and that it may be possible to link lack of caregiver with a specific group of patients who need more skilled nursing care.

Policy Implications

- **Adequate Margins**: The removal of an adequate margin through rebasing, case mix creep cuts, productivity cuts and the sequester will harm the most vulnerable patients.

- **Patient/Reimbursement Balance**: The opportunity for agencies to serve a unbiased cross-section of all patients is being removed by aggressive, selective admissions policies by an increasing number of for-profit agencies.

- **Vulnerable Patients**: The study demonstrates that there are high cost, vulnerable patients (with specific conditions) who are eligible for Medicare but will lose access to home health if reimbursement cuts are too deep.
The Road Ahead
Vulnerable Patient Study and More on Rebasing

- **Cost Reports:** February 2012 progress report on the CMS Vulnerable Patient Study provided to the Technical Expert Panel (TEP) indicated that less than half of the cost reports that were filed for 2010 were considered accurate enough to be included in their analysis. CMS must go beyond just looking at cost reports.

- **VPS Factors:** Current PPS case mix system must be refined to better predict the relative cost of different cases by considering both new OASIS-C variables as well as measures of low income at the zip-code level and the impact of the absence of a caregiver.

- **New Elements:** Rebasing must consider costs associated with the use of telemedicine, HIT, and compliance requirements such as OASIS, HHCAHPS, face-to face, therapy reassessment, HIPAA, and ICD-10 coding.

What Else?

- **Audits:** VNAA members and staff recently met with GAO to express strong concern regarding Medicare audit practices for both home health and hospice. Issues included: 1) undefined requests for information; 2) poor communication from contractors; 3) lack of responsiveness; 4) lack of quality control; 5) lack of training for auditors; 6) a high number of inappropriate denials and 7) few options to resolve other than appealing to an Administrative Law Judge for appeals. Many audit denials are overturned on appeal but time, effort and money are wasted.

- **Improvement Standard:** Under a January 2013 legal settlement, the determining issue regarding Medicare coverage is whether the skilled services of a health care professional are needed, not whether the Medicare beneficiary will "improve." The settlement covers skilled nursing facility care, home health care, and out-patient therapy services.
What Can You Do?
Get Engaged. Come to Sept. 18-19 Policy Forum

Advocacy:
- Educate your Representatives and Senators about the vulnerable patients that you serve. Be sure to share your nonprofit mission as well as the challenges that you face.

Public Policy Leadership Conference:
- Plan to attend the Public Policy Leadership Conference in Washington, DC on Sept. 18 and 19

Get Engaged:
- Read Member Update every week.
- Participate in all Member Policy Briefing Calls
- Share your insights with VNAA

Questions

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