# Change in Patient Characteristics Treated in Skilled Nursing Facilities (SNFs) Over Time

## Impacts on Clinical Practice & Changes in Cost

## (Preliminary Data[1])

### Research for AHCA by The Moran Company 2016-1017

The Acumen research asserts that no meaningful change has occurred in SNF patient characteristics or clinical practice over the last decade from which the data used for its research was derived[2]. In developing parameters for a revised SNF Prospective Payment System (PPS), the Acumen research further suggests that patient characteristics and the nature of clinical practice to meet patient needs in SNF can be assumed to be stable over the course of time during which the proposed SNF PPS is to be implemented. It also assumes that a one year snapshot of cost and patient characteristic data will improve payment accuracy that links payment to cost based on patient characteristics, and that such hypothesized accuracy will persist regardless of other changes in the delivery system, or new data that will become available in the near future.

Acumen does not document or explain the basis for its assumptions, and research conducted for AHCA refutes these assumptions, showing that gradual change in patient characteristics and patterns of care across Medicare has, over the last decade, and will, in the future, shift patient needs and clinical practice in the SNF setting over time. These shifts will be mirrored in changing cost in relation to changes in programs to address the needs of patients with an evolving mix of clinical characteristics and needs. In the interest of moving toward a unified post-acute payment system, the Centers for Medicare and Medicaid, implemented new assessment tools across post-acute settings, to better characterize patient characteristics for future payment reform. These data were implemented in SNF settings first in Fiscal 2017, and were not available or taken into consideration by Acumen in its research. Acumen notes it was instructed to use existing data and assume it to be of acceptable quality.

To refute Acumen's assumptions, we first look at changes in the Medicare FFS population most likely to use SNF services, using the presence of dementia diagnoses as a window into the patient population most likely to be referred for SNF care. We then also look at snapshot data from the SNF MDS 3.0 assessment instrument posted on CMS's website comparing quarter 3 for 2012 to quarter 3 for 2016 (a 4 year period) for a broader range of patient characteristics. There is no single measure of acuity or case mix in the patient population using SNF services that can represent the real change over time that warrants changes in clinical practice and associated cost. Therefore, we select patient characteristics that are known to affect clinical practice in the SNF setting to provide examples of the consistent incremental change occurring over time.

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[1] Data discussed in this document are being used to prepare a manuscript for peer reviewed publication.

[2] Of particular note is the apportionment of nursing cost between nursing and non-therapy ancillary costs by Acumen based on a relatively small sample of 10 year old data that precedes all delivery system reforms that characterize current practice.

**Medicare FFS—Change in Dementia Diagnosed Patient Utilization 2009-2015**

- Significant changes in Medicare fee-for-service (FFS) patterns of care from 2009-2015 related to introduction of Accountable Care Organizations, Bundled Payment Demonstrations, Value Based Payment for hospitals, and increased Medicare Advantage (MA) penetration, all increase pressure to decrease use of SNF, decrease SNF length of stay, and prevent hospital re-admissions. Pressure to prevent hospital re-admissions and from MA plans has resulted in considerable "re-engineering" of SNF clinical practice to manage shorter length of stay and to attract referrals from hospitals. These effects are evident most dramatically in markets with higher concentration of MA and reform programs, and may not be evident in markets largely untouched by these changes. National data dilutes the magnitude of change in the markets most affected by reforms.
    - In Medicare FFS, beneficiaries with dementia increased from 5.3% to 6.2% of all beneficiaries utilizing services, a 21.4% increase in proportion over 7 years (based on presence of dementia diagnoses in hospital and physician claims).
        - In Medicare FFS, beneficiaries with dementia had hospitalization rates (per 100 beneficiaries) nearly three times that of beneficiaries without dementia in 2009, increasing to three and a quarter times more hospitalization in 2015 while overall hospitalization rates decreased.
        - Emergency room visit rates (per 100 beneficiaries) were also nearly three times for those with dementia compared to those without dementia in 2009 and ER visit rates increased for both groups by 2015.
        - The ratio of cost of all Medicare Part A and B services for dementia patients compared to non-dementia patients increased from 174% to 177% over time, with all of the increase attributable to Part A services.
        - Dementia patients compared to non-dementia patients have significantly higher rates of most diseases and conditions common in the Medicare population. For example dementia patients are: 2.5 times more likely to have anemias, 6 times more likely to have aphasia, 2 times more likely to have artificial openings, 3 times more likely to have chronic skin ulcers, 3.5 times more likely to suffer from depression, 3.5 times more likely to have fractures, 3 times more likely to have pneumonia/influenza, 2 times more likely to have renal failure, 4 times more likely to have septicemia, and 2-3 times more likely to be hospitalized for infections.

**Medicare Dementia Diagnosed Patients Admitted to SNF 2009-2015**

- The percent of dementia hospitalizations discharged to SNF remained at 55% from 2009 to 2015, however the average length of stay (ALOS) increased for these beneficiaries from 6.4-6.7 days (or about 5%). While hospitalizations decreased for dementia patients (42.3% to 39.8%), increased ALOS indicates more complex hospitalizations for those dementia patients going to SNF. Non-dementia patients discharged to SNF increased from 18% to 20%, but with reductions in ALOS (from 6.7 to 6.4 days).

- The proportion of SNF stays for patients diagnosed with dementia increased from 32.1% to 35.6%. The proportion of beneficiaries using SNF services with dementia increased from 29.4% to 33.1%. The differences in these proportions reflect the fact that dementia patients may have multiple SNF stays in a year.
- Dementia patients in SNFs have a similar profile of co-morbidities to non-dementia patients in SNFs, but have significantly higher rates of depression, psychosis, nutritional disorders, aphasia, and infections compared to non-dementia patients. Dementia patients in SNFs are also significantly more likely to have been hospitalized prior to SNF admission for infections.

**Snapshot Comparisons of MDS Assessment Variables Quarters 3: 2012 to 2014 for SNF Admissions Based on CMS Published Data**

Patient assessments are summarized at the variable level within the MDS 3.0 by quarter from 2011 through 2016 on the CMS web-site. Comparisons are not precise, but provide a rough overview of some change trends over the 4 year period examined:

- Slightly more assessments for men.
- Slightly more assessments for blacks
- Major increase in proportion of patients identified as needing screening for serious mental illness (+12%)
- Slightly more assessments admitted from other nursing homes
- Slightly fewer assessments admitted from the community
- Slightly more assessments admitted from hospital
- Increase in proportion of patients needing mental status interview (+4%)
- Slight increases in need for technical care: indwelling catheters, external catheters, ostomies, intermittent catheterization, suctioning, tracheostomy care, ventilator/respirator, BIPAP/CPAP respiratory assist, IV medication.
- Slight increases in assessments for those needing dialysis.
- Increases in proportion of patients with cancer, septicemia, dementias, anxiety disorder, bipolar disorder, and schizophrenia.
- Slight shift in age of population with increases in disabled (31-64) and baby boom (65-74) groups.

**Conclusions**

This overview demonstrates that patient characteristics, referral patterns, and pressures from delivery system reforms are incrementally changing the mix of patients and their care needs in SNFs. SNF operators anecdotally report having opened “memory units” in their facilities to better address the needs of a gradually increasing concentration of dementia patients, with those coming in from hospitals having increasingly complex needs for medical care.

We can reasonably assume that in those markets most affected by MA and delivery system reforms, hospitals will invest more transitional care and care management resources in diversion

of Medicare FFS patients from SNFs to limit their exposure to cost under resource use measures and reform target pricing, when alternatives are available. Data shows that Home Health and Community Discharges are often not an option for dementia patients, and so we can observe incremental concentration of these patients in the setting best equipped to provide for safe and appropriate care: the nursing facility or SNF. The interactions of cognitive and psychiatric problems in the elderly and disabled patient population make it more difficult to develop safe and successful community placements. Hence, these patients will increasingly concentrate in the SNF/nursing facility setting.

Cognitive deficits, behavioral health conditions, and increasing needs for more technical care, all generate greater demands on nursing staff. The Acumen research suggests impinging on historical nursing cost as though it was adequate to meet patient needs, and as though those needs would not increase. Furthermore, it seeks to parse the nursing portion of SNF cost between nursing and non-therapy ancillaries such as drugs, based on 10 year old data that precedes all of the data discussed here, as well as all delivery system reforms initiated over the last 7 years, and continuing to unfold.

While improvements in data based on new assessment tools and other innovations may provide a better grounding to track patient characteristics in the future, as the basis for stratifying payment, the data used by Acumen was neither evaluated for adequacy, nor to support the assumptions that underlie the research.