

2016

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## Recommended Citation

Tsmasiros, Georgia, "Bundle vs. Non-Bundle: Looking at Differences in Care and Outcomes at a Skilled Nursing Facility" (2016).  
*Capstone Projects 2015-Present*. 11.  
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# Bundle vs. Non-Bundle: Looking at Differences in Care and Outcomes at a Skilled Nursing Facility

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## Abstract

The Centers for Medicare and Medicaid Services (CMS) introduced the Bundled Payments for Care Improvement Initiative (BPCI) in 2013 in an effort for consumers to have higher quality and more coordinated care. This research compared the care and outcomes of four individuals with bundled payment insurance plans and four non-bundle insured individuals with the same diagnosis, accessing rehabilitation services at a skilled nursing facility. The results show no observable differences between the outcomes of individuals with a bundled insurance plan and individuals without a bundled insurance plan. The financial implications are negative for healthcare agencies participating in BPCI who must successfully treat individuals within the CMS standardized Estimated Length of Stay (ELOS). These results are limited due to the small sample size observed and the lack of financial data available. The application of bundled insurance plans to the older adult population is discussed with recommendations for future research on this topic to observe a larger sample size.

## Background

United Methodist Homes (UMH) Elizabeth Church Manor (ECM) is a skilled nursing facility located in Binghamton, NY. ECM offers rehabilitation services and long-term care to older adults (age 60+), and access public and private insurance.

ECM began participating in the BPCI program in July, 2015. The four cases (diagnoses) observed in this research are:

- Aftercare following hip replacement surgery
- Enterocolitis due to clostridium difficile
- Hemiplegia and hemiparesis following cerebral hemorrhage
- Pneumonia

## Objectives

Using grounded theory, this research sought to identify a pattern or trend in the care of older adults with and without bundled payment insurance plans. Data compared included each individual's:

- Admitting diagnosis
- Comorbid diagnoses
- Length of stay (length of treatment)
- Outcomes

## Methods

1. IRB approval
2. List of bundle payment insured and matching non-bundle payment insured consumers who accessed rehabilitation services from ECM
3. Summarize each individual's episode using:
  - Patient Review Instrument, for admitting diagnosis
  - List of diagnoses, for comorbidities
  - Diet restrictions during rehabilitation
  - Brief Interview for Mental Status (BIMS) scores, to note changes in cognitive function during rehabilitation
  - Therapy evaluations
  - Therapy discharge summaries
  - Medical doctor discharge summaries (if there was one)
4. Convert ICD-9 diagnoses to ICD-10
5. Identify each case's Diagnosis Related Group (DRG) and Estimated Length of Stay (ELOS)
6. Compare and analyze data

## Results

Length of Therapy Treatment				
	Diagnosis	CMS Bundle ELOS	Bundle	Non-Bundle
Case 1	Aftercare following joint replacement surgery	8-9 days	15	59
Case 2	Enterocolitis due to Clostridium Difficile	12-15 days	4	32
Case 3	Hemiplegia and Hemiparesis	12-15 days	49	18
Case 4	Pneumonia	12-14 days	10	37

Percent of Goals Met		
Case 1		
	Bundle	Non-Bundle
Speech Therapy	75%	100%
Occupational Therapy	100%	20%
Physical Therapy	100%	25%
Case 2		
	Bundle	Non-Bundle
Speech Therapy	0%	80%
Occupational Therapy	0%	100%
Physical Therapy	13%	78%
Case 3		
	Bundle	Non-Bundle
Speech Therapy	100%	80%
Occupational Therapy	100%	60%
Physical Therapy	100%	25%
Case 4		
	Bundle	Non-Bundle
Speech Therapy	67%	50%
Occupational Therapy	0%	83%
Physical Therapy	13%	38%

Individual Outcomes		
Case 1	Bundle	Discharged home with recommendations for outpatient therapy services
	Non-Bundle	Discharged to reside at ECM long-term
Case 2	Bundle	Re-hospitalized before passing away
	Non-Bundle	Discharged to prior living environment (assisted living facility) with exercise recommendations
Case 3	Bundle	Discharged home with recommendations for outpatient therapy services
	Non-Bundle	Discharged home at request of family, with 24 hour care
Case 4	Bundle	Discharged to reside at ECM long-term
	Non-Bundle	Discharged to reside at ECM long-term

## Conclusions

- No observable differences in treatment and outcomes of bundle insured and non-bundle insured individuals.
- Two of the four bundle insured individuals completed therapy within ELOS, however only one was successful.
- One non-bundle insured individual was treated within ELOS.
- Financially, ECM faces negative implications for not successfully treating bundle payment insured consumers within ELOS.
- Bundle payment insurance plans may not be financially conducive for healthcare providers of older adult population.
- Results are limited, and therefore not generalizable, due to small sample size.
- Financial implications are based on researcher's understanding of BPCI guidelines regarding rewards and penalties; researcher did not have access to ECM BPCI financial agreement.

## Citations

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## Acknowledgements

The completion of this project would not have been possible without the guidance and support of the following individuals:

Dr. Pamela Mischen, Faculty Supervisor  
 Vicki Ollerenshaw, Site Supervisor  
 Victoria Morabito, Site Administrator

Additional recognition goes to Binghamton University, the College of Community and Public Affairs, the Department of Public Administration, and the Department of Social Work, where the researcher has obtained her academic experience.

Thank you