EMILY S. ELLIOTT
DIRECTOR

COMMONWEALTH OF VIRGINIA

Department Of Human Resource Management

James Monroe Building
101 N. 14th Street, 12th Floor
Richmond, Virginia 23219
Tel: (804) 225-2131
(TTY) 711

August 23, 2019

The Honorable S. Chris Jones, Chairman, House Appropriations Committee
The Honorable Thomas K. Norment, Jr., Co-Chairman, Senate Finance Committee
The Honorable Emmett W. Hanger, Jr., Co-Chairman, Senate Finance Committee
The Honorable Keyanna Conner, Secretary of Administration

Subject: Musculoskeletal Bundled Payment Pilot Program

The attached is a follow up report pursuant to Item 475, G.7 of Chapter 1, 2018 Special Session I, Virginia Acts of Assembly.

Please contact me if there are any questions.

Sincerely,

Emily S. Elliott

Enclosures

Commonwealth of Virginia Musculoskeletal Bundled Payment Pilot Program Overview

August 12, 2019

Budget Amendment HB5001
Item 475, G.7.

"The Department of Human Resources Management shall develop and implement a pilot program beginning on July 1, 2017 for a single payment per episode for all services and costs spanning multiple providers across multiple settings for musculoskeletal injury claims to the maximum extent possible. The results of this pilot program, to include changes in return-to-work following injury times and costs of single payment per episode versus traditional payment per visit claim payments, shall be reported to the Governor, the Chairmen of the House Appropriations Committee and the Senate Finance Committee by August 1, 2018."

Budget Amendment HB5001
Item 475, G.7.

In compliance with this budget amendment, the Department of Human Resource Management (DHRM) submitted a report on the Musculoskeletal (MSK) Bundled Payment Pilot Program in August 2018. However, at that point, the duration of the pilot period had been relatively short, and limited credible data were compiled. The report did not provide a clear determination as to whether bundling was effective. In an effort to better assess the effectiveness of the pilot program, DHRM continued the study and prepared this is additional updated report, which addresses data through June 30, 2019.

What are Bundled Payments?

- Single payments per episode for all services and costs spanning multiple providers across multiple settings are typically referred to as bundled payments.
- These entail a holistic approach to reimbursement for a member's care.
  - For this pilot, a specialist serves as the "Quarterback."
  - Quality & Cost Focus - All the care related to a specific condition or procedure comes into play –this pilot includes knee and hip replacements.
  - Because the Quarterback has an incentive and the necessary line of sight to focus on key factors (e.g., comprehensive care plan; site of services; and high quality, low cost providers), bundled payments may provide a better approach to improve quality and lower costs.

Bundles - Retrospective

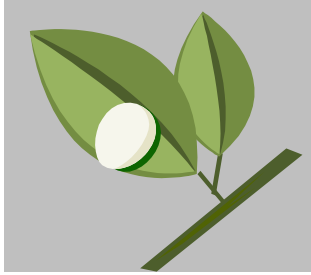
- A bundle benchmark target price is established for the total episode cost. This pilot program's benchmark target price is proprietary to Anthem and cannot be disclosed in this report.
- An administrative provider is identified who agrees to the bundle benchmark target price.
- All providers are paid under their normal Fee For Service reimbursement arrangements; including date of procedure; follow up; and services related to complications, revisions and readmissions related to the bundle episode that begins on the procedure day and is 90 days in duration.
- Each measurement period is six (6) months. After the measurement period, a retrospective evaluation of cost and quality is performed to review actual costs compared to the benchmark target price.
- This pilot has an upside only risk methodology, which allows the administrative provider to receive a financial incentive if performance is favorable relative to benchmark target price.
    - Anthem and the Department of Human Resource Management will continue to evaluate opportunities to improve the pilot, including the potential of adding a downside risk arrangement if it appears to be warranted.
- Quality metrics must be met before any financial incentive is applied.

Bundles - Prospective

- The administrative provider is identified and a bundle rate is determined based on historical costs for all providers for members who meet the established bundle criteria.
- Payment is made to the administrative provider when a claim is submitted.
- No other providers are paid directly by the plan. It is the administrative provider's responsibility to reimburse other providers for services they have performed on those members who meet the established bundle criteria.

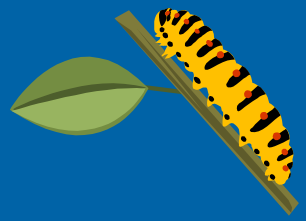
Both retrospective and bundled models provide value by shifting from a volume-driven system to one where providers are focused on managing care in a holistic fashion and held accountable to delivering high quality, coordinated and patient centered care.

Bundled Payment Evolution



Fee for Service (FFS)

No incentive to optimize episodic cost of care – pay as you go with no holistic view of episodic costs



Bundles – Retrospective

FFS with bundle cost targets and back-end reconciliation

Bundles – Prospective

Upfront single payment for the entire bundle – FFS out of the picture

State Employee Knee and Hip Replacement Bundled Payment Pilot

- The current pilot, effective July 1, 2017, is a **Retrospective** Episode Bundle Model where the desired outcome is to reduce cost and provide high quality services for members. It is expected that holding the administrative provider accountable to a benchmark will incent him or her to work with high quality low costs providers in the most appropriate settings to service members.

- This retrospective model is the optimal way to initially approach providers in order to gain trust and a sense of comfort surrounding this type of reimbursement. Based on results, prospective bundling will be considered as a long term strategy.

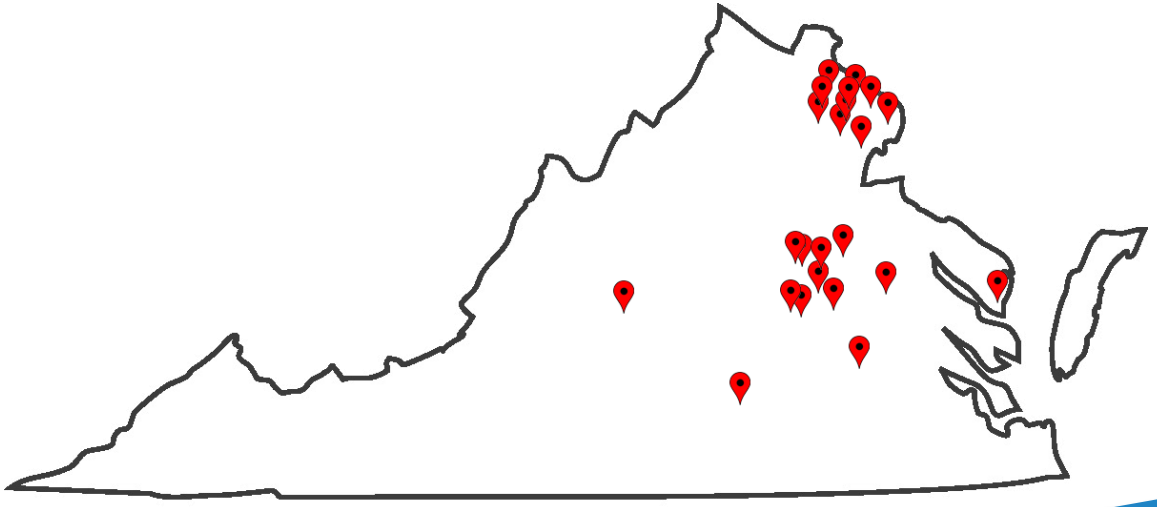
- Additional details:
  - The model includes a quality gate (a minimum quality threshold that must be met to earn an incentive) based on the following metrics to ensure high quality care has been provided:
    - Readmissions Rate
    - Complications Rate
    - Revisions Rate
  - Performance is evaluated based on the Target Price benchmark and adjustments to an established case rate (the reimbursement rate that the Quarterback is paid for services).
    - The Target Price benchmark is the historical cost budgeted for covered bundled services, against which the administrative provider is measured for cost savings during a measurement period in order to receive a financial incentive.
    - This is based on all provider costs associated with those members who meet the bundle criteria.
    - The benchmark and case rates are determined by reviewing 24 months' worth of data.
  - Quarterly reporting is provided by Anthem to the administrative provider to include quality and financial data.

Pilot Criteria

- **Episode Period:** The length of time that a patient falls within the bundle program. For example, a total knee replacement has an episode period of 90 days. These 90 days begin on the date of admission for an inpatient stay for the index procedure (the day surgery was performed) and continues until the 90 days are complete. This includes all services for this member that are related to the index procedure (the knee replacement).
- **Continuous Enrollment**: The patient must be covered for the entire Episode Period as an active enrollee with COVA Care or Cova HDHP.
- **Age Criteria**: The patient must be age eighteen (18) or older on the first day of the Episode Period.
- **Primary Coverage**: The patient's Health Benefit Plan cannot be a secondary plan under applicable Coordination of Benefit (COB) rules to another insurance carrier plan which provides primary coverage.
- **Diagnosis Criteria**: The patient must have a specific principal diagnosis (by ICD-10 designation) for an acute inpatient hospital admission to perform a knee or hip replacement.
- **Volume Criteria**: In order for the study results to be statistically valid, there must be a minimum of 30 qualifying Episode cases during a six (6) month Episode Period. Anthem's healthcare analytics team determined this threshold for the financial and quality metric values.

Anthem Partnered with Orthopedic Group

- For this pilot, Anthem has partnered with a prominent orthopedic group that is an expert in orthopedic and therapy care.
- More than 100 physicians, 22 office locations, MRI facilities, outpatient surgery centers and physical therapy clinics are being utilized in this pilot program.
- The group is primarily located in Richmond, Lynchburg, and northern Virginia.
- Effective Date: July 1, 2017.



Timeline

Measurement Period	Measurement Period Start	Measurement Period Completed	Episode Period Run-Out Completed	Claims Run-Out Period
First Measurement Period	7/1/2017	12/31/2017	3/31/2018	6/30/2018
Second Measurement Period	1/1/2018	6/30/2018	9/30/2018	12/31/2018
Third Measurement Period	7/1/2018	12/31/2018	3/31/2019	6/30/2019

Measurement Period: The six month measurement period for the bundle program.

Episode Period Run-Out: Beginning the first day the measurement period ends, this is the length of time by which an episode is defined. This was established in order to accommodate an episode that begins as late as the last day of the measurement period. For example, if an episode began December 31, a claim incurred on March 31 would be a part of that episode.

90 Day Claims Run-Out: Beginning the first day after the episode period ends, this is the lag period that occurs between a claims incurred date and paid date.

Continued Evaluation of Measurement Periods: Following the completion of the initial six month measurement period, additional measurement periods of six months will be evaluated by Anthem as the pilot program continues.

Retrospective Bundle Pilot Program

Commonwealth of Virginia Results

Total Knee Replacement (TKR) Cost Summary

BUNDLED:
COVA members whose orthopedic surgical provider is in Anthem Episode Bundle Payment (EBP) Program – TKR

Time Period	Actual Allowed	Actual Avg Allowed	Case Count
07/01/2017- 12/31/2017	$1,189,615	$37,175	32
01/01/2018 – 06/30/2018	$1,994,253	$36,259	55
07/01/2018 – 12/31/2018	$878,935	$36,622	24
Weighted Average		**$36,602**	

NON-BUNDLED:
COVA members whose orthopedic surgical provider is NOT in Anthem EBP Program – TKR

Time Period	Actual Allowed	Actual Avg Allowed	Case Count
07/01/2017- 12/31/2017	$2,896,916	$38,117	76
01/01/2018 – 6/30/2018	$3,769,801	$36,959	102
07/01/2018 – 12/31/2018	$2,657,787	$33,222	80
Weighted Average		**$36,141**	

Actual Allowed: The allowed amount by Anthem that was paid to a provider for health care services.
Actual Avg Allowed: The average of the actual allowed charges per episode.

Total Hip Replacement (THR) Cost Summary

BUNDLED: COVA members whose orthopedic surgical provider is in Anthem EBP Program – THR			
Time Period	**Actual Allowed**	**Actual Avg Allowed**	**Case Count**
07/01/2017- 12/31/2017	$886,117	$35,445	25
01/01/2018 – 06/30/2018	$825,677	$34,403	24
07/01/2018 – 12/31/2018	$916,194	$36,648	25
Weighted Average		**$35,513**	

NON-BUNDLED: COVA members whose orthopedic surgical provider is NOT in Anthem EBP Program – THR			
Time Period	**Actual Allowed**	**Actual Avg Allowed**	**Case Count**
07/01/2017- 12/31/2017	$2,078,700	$36,468	57
01/01/2018 – 06/30/2018	$2,862,315	$38,164	75
07/01/2018 – 12/31/2018	$2,192,444	$36,541	60
Weighted Average		**$37,153**	

Actual Allowed: The allowed amount by Anthem that was paid to a provider for health care services.
Actual Avg Allowed: The average of the actual allowed charges per episode.

Cost Sensitivity to Outliers

BUNDLED: COVA members whose orthopedic surgical provider is in Anthem EBP Program – THR		
Time Period	**Case Count**	**Actual Avg Allowed**
07/01/2018 – 12/31/2018	25	$36,648
07/01/2018 – 12/31/2018	24	$35,690 ↓

Reflects removal of one high cost episode that had $59,638 in facility costs for a readmission

NON-BUNDLED: COVA members whose orthopedic surgical provider is NOT in Anthem EBP Program – THR		
Time Period	**Case Count**	**Actual Avg Allowed**
07/01/2018 – 12/31/2018	60	$36,541
07/01/2018 – 12/31/2018	59	$37,018 ↑

Reflects removal of one low cost episode that had only $5,361 for facility cost for the index procedure

Actual Avg Allowed: The average of the actual allowed charges per episode.

Post-Surgical Results

Total Hip Replacement (THR), Total Knee Replacement (TKR) Episode Structure

Admit Date through Discharge Date

Episode Index Period

Episode Index Period Includes:

- Physician Costs for Surgery, Anesthesia, Radiology.
- Hospital Costs for Surgery and care administered during stay.

90 days after Surgical Discharge

Episode Post-Index Period

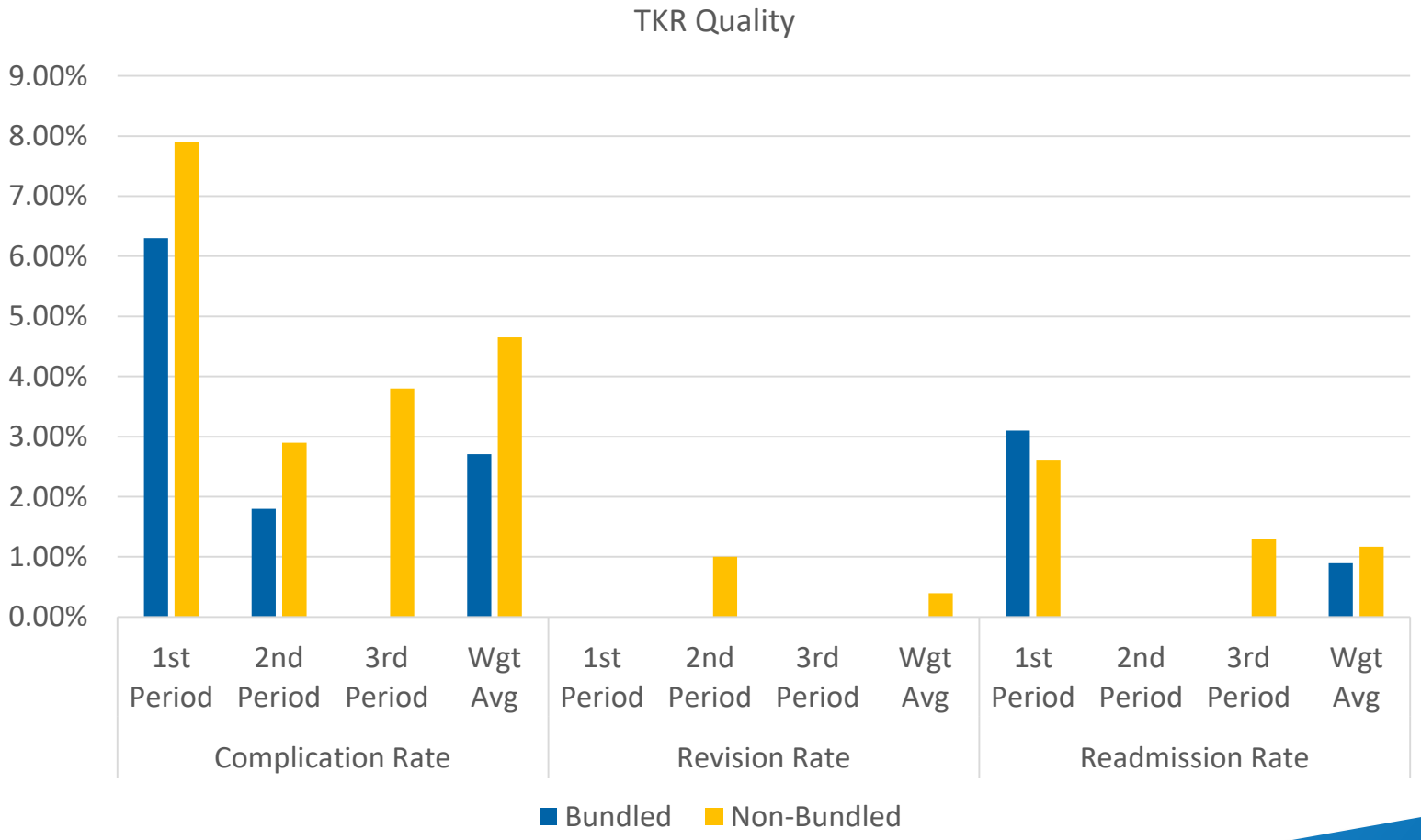
Episode Post-Index Period Includes:

- Physician and Hospital costs for relevant care such as Expected Physical Therapy, Radiology, Rehabilitation, Specialist/Primary Care Physician follow-up visits.
- Complications, Revisions and Readmissions in the 90 day post-surgical (Index) period could potentially impact return to work.

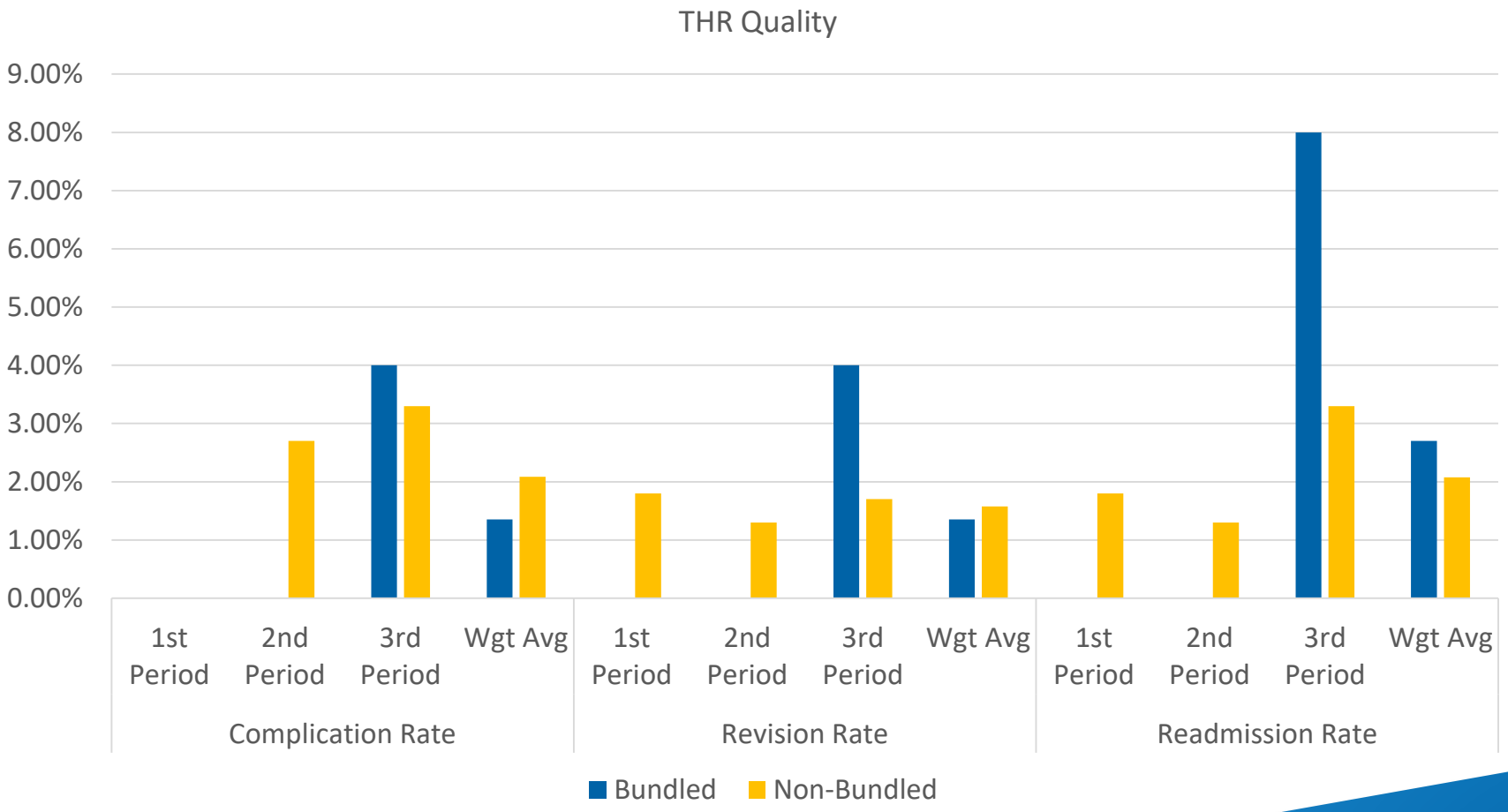
Post-Surgical Definitions

- **Complication**: An undesirable and unexpected result of surgery. For example, postoperative fever or wound infection.
- **Revision**: A subsequent surgery performed to replace or compensate for a failed implant of a previous surgery.
- **Readmission**: An episode when a patient who has been discharged from a hospital is admitted again within a specified time interval. The readmission has to be related to the index procedure to be included in the episode period.

Post-Surgical Results Total Knee Replacement (TKR)



Post-Surgical Results Total Hip Replacement (THR)



Post-Surgical Sensitivity to Individual Cases

Similar to cost, the smaller the number of cases in a performance period, the more sensitive the rate is to one episode including a complication, readmission, or revision.

# of Cases	Impact of One Case on Post-Surgical Score
24	4.17%
25	4.00%
32	3.13%
55	1.82%
57	1.75%
75	1.33%
76	1.32%
80	1.25%
102	0.98%

Return to Work Metrics

- Due to multiple and often inaccessible personnel management systems, and privacy concerns, leave data is only accessible for a small subset of total EBP and non-EBP group participants. Consequently, this data is statistically invalid, which limits the ability to evaluate whether the retrospective bundling model has an impact on return to work time. A small EBP group cohort for total knee replacements averaged 391 absence hours following surgery, vs. an average of 337.3 absence hours for a small non-EBP group cohort. No leave data is accessible for EBP group hip replacement patients. A small non-EBP group cohort of total hip replacement patients averaged 249.3 absence hours following surgery.
- Regardless of a member's participation in the bundle payment program, there is no benefit change impacting the member, such as a reduction in cost sharing. Therefore, there is no incentive for a member's behavior change.
- The primary purpose of bundle programs is to control costs, not shorten the time for a member returning to normal activity or work.

Conclusions and Limitations

- Initial Findings
  - For the 18 month review period, the average expense for the Total Knee Replacement pilot group ($36,602) was not materially different than for the non-pilot group ($36,141)
  - For the 18 month review period, the average expense for the Total Hip Replacement pilot group ($35,513) was not significantly different than the non-pilot group ($37,153).
- These findings vary by measurement period and it is too soon for the data to demonstrate conclusive findings.
- Due to small sample size, initial findings range from not credible to minimally credible.
  - Data are highly volatile; despite long tails in data being removed from findings presented here, deeper dives revealed that removing outliers entirely can shift the performance to draw different conclusions.
- Ongoing evaluation will be needed to account for:
  - Low volume specific to state employees;
  - Lack of risk adjustment within program; and
  - Mid-2018 change in Anthem's TKR and THR outpatient rates in Virginia leading to seven more outpatient locations (see next slide)

Next Steps

- Continue to study pilot for longer period of time
- Remain focused on retrospective bundling until conclusive outcomes of cost and quality impact are determined
- Move providers to new retrospective bundles contracts that take advantage of outpatient locations
  - Shift in site of service is greatest opportunity for efficiency
  - New contract further incents steerage to outpatient/ASC settings
    - Across the last three measurement periods, only 2% of THR and 1% of TKR were performed in outpatient/ASC
  - New contract makes lump sum payment every six months during which target is exceeded