

ICSI Postoperative Opioid Prescribing Improvement Story

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From 2017 to 2020 the ICSI MN Health Collaborative has worked on a postoperative opioid prescribing initiative outlined in the **ICSI Postoperative Opioid Prescribing Toolkit**. To accompany the Toolkit, we've prepared the **ICSI Postoperative Opioid Prescribing Improvement Story** in which we describe our collaborative approach, our methods and, our results.

Throughout the course of this work, surgeons and their teams pulled together to reach agreement on postoperative opioid prescribing goals. As the group worked together, it became easier to focus on improvements toward those community standards by sharing what worked well and the approaches used to address common problems.

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Special Acknowledgements

The **ICSI Postoperative Opioid Prescribing Improvement Story** would not be possible without the insights and practices shared by our community. We are grateful for their eagerness to collaborate on this important topic.

A special thanks to the organizations who have contributed to this effort:

Allina Health
CentraCare Health
Essentia Health
HealthPartners Health Plan and Care Group
Hennepin Healthcare

M Health Fairview / University of MN Physicians
North Memorial Health
Sanford Health
Tria Orthopedics
Twin Cities Orthopedics

NOTE: How to cite this document: Dvorkin, J, Hansen A, Hadzic S, Neely C. ICSI Postoperative Opioid Prescribing Initiative. ICSI. Minneapolis, Minnesota. 2020. (Available at www.icsi.org)

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The Story Behind Getting Started

In 2017 ICSI convened the MN Health Collaborative, a group of providers and leaders from health-care organizations working together to address major health topics affecting Minnesota communities today. CEOs within the collaborative selected opioid addiction as one of several key healthcare issues in need of improvement.

The overall goal of this work is to ensure patient safety by giving only the number of opioids necessary for effective pain management.

Additional goals for the Postoperative Opioid Prescribing Initiative include:

- › Reduced exposure to harmful effects of opioids.
- › Prevention of transition from acute to chronic opioid use.
- › Reduced extra unused pills in the community.

This work began at the request of our member organizations, who wanted to work together on safer postoperative opioid prescribing standards. The goal was to help reduce the large variation among surgeons when prescribing for identical procedures and to resolve a lack of evidence and/or guidance for improving postoperative opioid prescribing. Postop prescribing for patients who have not previously received an opioid has been shown to lead to poor side effects and/or a higher risk of long-term opioid use.

Minnesota surgeons wanted to develop a more patient-centered, procedure-specific approach based on available literature, community data, and expert consensus. **ICSI's MN Health Collaborative** recommendations provide guidance for opioid prescribing practices, as risky, long-term

opioid use often begins with treatment of acute postoperative pain. (*Alan, 2012; Bicket, 2017; Hill, 2017; Hooten, 2015, Shah, 2017*).

An analysis of the first episode of opioid use among commercially insured, opioid-naïve, cancer-free adults found the likelihood of chronic opioid use rises given one or more of the following conditions:

- › Each additional day of opioid supplied beyond the third day.
- › A second opioid prescription (or refill).
- › 700 morphine milligram equivalents (MME) or higher cumulative dose.
- › Prescriptions for long-acting opioids or tramadol.
- › An initial 10 or 30-day supply (*Shah, 2017*).

For patients hospitalized for neoplasm, acute pain, chronic pain at admission, or surgery during their hospitalization, chronic opioid use one-year post discharge was more common among patients with opioid prescription (4.1%) compared to those without (1.3%). Opioid receipt was associated with increased odds of chronic opioid use (AOR = 4.90, 95% CI 3.22-7.45) and greater subsequent opioid refills (AOR = 2.67, 95% CI 2.29-3.13) one-year post discharge compared to no opioid receipt. (*Calcaterra, 2016*). Studies also show a potential for misuse and diversion with the majority of patients keeping their unused opioids rather than disposing of them after surgery (*Harris, 2013; Bartels, 2016; Bates, 2011*).

Our goal therefore was to reduce the prescribing variation while allowing surgeons to identify the best range for given procedures.

Our Improvement Process

The Postoperative Opioid Prescribing Initiative workgroup included surgeons and other clinicians, as well as key operational support for improvement. Clinical and operational leads from participating organizations met monthly, focusing on project goals, methods, and sharing best practices together.

The group also shared methods used to engage surgeons and their teams within their own organizations on these efforts.

An important component of our work includes gathering feedback from participating organizations. At the end of the effort we focused on two primary questions to gather this important feedback:

- › What was the most helpful aspect of working together in the MN Health Collaborative on postop prescribing?
- › What top three actions did you implement that had the most impact on postop opioid prescribing?

“ Organizational feedback about collaboration:

Sharing best practices with one another:

“With regard to the benefits of being part of this group for me it has been the ability to have discussion with other leaders in the state who have been working on this important aspect of surgery.”

“Hearing about other organization’s experiences was helpful.”

“It also helped to hear what projects are underway in other large healthcare systems.”

“Sharing of information in an open forum where the focus was on improving patient care. There was

no competition at the table; genuine interest in collaboration to share information in a forum where we we’re all working for the same goal and mission. The dialog from different patient care venues/ pathways was incredible and all groups were moving progress along in unique and inspiring ways.”

“ Organizational feedback on top implementation strategies:

Engage leadership and develop an internal improvement team:

“Strong leadership to facilitate improvement work, including the dyad of a physician champion and an operational leader.”

“For all practices, medical and surgical, we imbedded opioid prescribing improvement into the division annual plans so this remained a priority year over year.”

“Collaborative team work with our partners from performance excellence, surgery/medical staff, nursing and pharmacy.”

“Committing to showing improvement – once we captured small wins of decreasing prescribing at the procedure level; the docs wanted to see how far they could go. They continued to add procedures to the list and even included hospital cases. They wanted to ensure they were appropriately matching patient need, community expectations with reducing waste and creating consistency amongst their peers.”

“Continue to reach out to other surgical specialties across the enterprise to implement the Opioid Safety Initiative.”

“Enlisted a group of providers to craft prescribing guidelines for spine.”

Determining Morphine Milligram Equivalents (MME) Goals

A key barrier to determining the best MME to prescribe right after surgery is the lack of evidence to support guidelines. Several organizations have performed patient follow-up interviews to ask how many pills of their discharge prescription they actually took. Based on their answers, they reset their standard orders to that new, lower amount. However, their sample sizes tend to be small and have a limited amount of common procedures included. This makes it difficult to apply those findings to our larger needs. This knowledge left us with the task of reaching consensus on a new method to set MME goals.

Version 1.0: A Tiered Approach

Initially the group modified tiered approaches to prescribing used by Mayo, University of Minnesota School of Dentistry and Essentia Health. Tiers were basically MME “buckets” or tiers consisting of zero routine opioids, 100, 200, 300, and 400 MME. Surgeons determined the tier in which common procedures would be placed, and the goal was not to exceed the recommended tier. Surgeons were also asked to select the right tier for similar procedures.

Some groups found this to be very successful and have continued to use this method today. However, after testing the tiering model, most surgeons felt that the goals were still too high. With less than 30 procedures, it also required a long process to reach consensus on the proposed tiers. While the tiers moved us in the right direction, organizations wanted to quickly include more procedures and more specialties, including procedure-specific goals.

Version 2.0: A Benchmark Approach

Since the majority of the groups wanted more procedure-specific guidance, we turned to health

plan data to identify other alternatives. We worked with HealthPartners Health Plan and Care Group, a regional health plan with 1.8 million insured members, to understand the current local prescribing claims data. This data was available annually and gave us the ability to compare individual organizations to the larger community. The claims data provided more detail than the organizations could measure.

Because the HealthPartners Health Plan and Care Group claims data represented such a large population, the surgeons were comfortable using that data in comparison with their own internal data, and as a guide to determine the new goals, or benchmarks. By group consensus, the 25th percentile (1st quartile) MME from claims data was chosen as the new benchmark for each procedure. The MME in the 1st quartile represented a 30-40% decrease from current prescribing data. This is the benchmark at which 25% of patients who received an opioid prescription received that MME or less. It was also agreed that each September the current 25th percentile would be used as the benchmark for the coming year.

Version 3.0: More Options

In late 2019 all participating organizations had selected a specific benchmark process. One organization selected the Minnesota state levels (set at 100 MME for minor and 200 MME for major procedures). Another organization continued with the initial tiered approach. The rest of the participants used the overall MN Health Collaborative goals as their chosen benchmarks. The key was to pick something to improve and to get started. As we can see from the data included within this document, every organization that used focused improvement efforts saw gradual decreases in the mean MME prescribed.

“ Organizational feedback about collaboration:

“Having the benchmark MME identified at the procedure level was the most helpful. It gave our surgeons and teams benchmarks that had some rigor and rationale applied to the process that gave us legitimacy to ask for improvement. Prior

to that we relied on academic literature, which was often non-existent, incomplete, irregular or slightly outdated.”

“Creating benchmarks was the biggest assist we had with this ICSI work.”

“Reaching agreement on postop prescribing benchmarks was very helpful.”

Our Work Method

The initial workgroup was focused on the overall topic of acute opioid prescribing. They reviewed available literature and guidelines, eventually making the recommendation to use no more than 100 MME of a short-acting opioid if needed for acute pain. The call to action was focused on ambulatory care (primary and specialty), urgent care, emergency departments, and dental practices. (For more information on this work refer to the **ICSI Opioid Prescribing Improvement Guide** and the Acute Non-Surgical Call to Action on the **ICSI website**.) It became apparent that postoperative prescribing required a unique, more nuanced approach and the workgroup's focus and membership shifted to surgical specialties and their teams. We discovered in the course of our work that surgical teams don't often have quality improvement opportunities that allow them to work with external peers, so they were very engaged.

Organizational Goals & Strategies

Each organization was asked to select their process for determining benchmarks or MME goals, and the procedures they intended to focus on. (The work they did in their organizations included the various implementation recommended strategies identified in the **ICSI Postoperative Opioid Prescribing Toolkit**.) Organizations began at different places, as some had been working on improvements of this nature in postop for a year already, and others were just beginning. We met them where they were, asking them to pick something and get started.

This effort shows that picking even one procedure and focusing on it will lead to safer opioid prescribing and build capacity for change.

“ Organizational feedback about collaboration:

Accountability to one another:

“ICSI did a great job of coaching us through and holding us accountable to implementing best

practices for acute pain and post-operative prescribing. Often we get so distracted with our day-to-day, that we don't focus enough time and energy on this important work.”

“It helped us to have a more defined timeline in which to get things accomplished.”

“ICSI was very organized and kept the meetings running very efficiently.”

“ Organizational feedback on top implementation strategies:

Assure your EMR workflows support the change:

“Modification of order sets and prescribing opioid parameters in the EMR.”

“Providing all specialties with all of the benchmarks, not just picking some from each specialty. We did this by creating a sheet that separated by specialty, and then put in the benchmarks for individual surgery, ALONG WITH individual prescription amounts for different opioids (example 12 oxycodone tabs). We changed our EPIC bundles to reflect this work, outlining MME amounts in all of the same day surgery order sets. This allowed them to look at different MME amounts when ordering.”

“We used an opioid taper protocol when discharging patients that forced review of how we were prescribing at discharge and now have a protocol”.

Provide information and training to the teams:

“We initiated a specialty opioid education program.”

“Regular presentations at surgery department meetings.”

“We took the time to mine data, take it to the departments at the procedure level to each MD Chair to either celebrate performance or give targets for improvement.”

“Routine review/sharing of this data with key stakeholders at various committees to affect change.”

“We met individually with many teams to give them their benchmark information, and allow them to ask questions, give feedback, etc.”

“Providers could see where they compared and what partners to talk to about why others prescribing patterns were lower than theirs.”

“Reaching out to individual providers with education.”

Collaborative Specialty Cohort (Orthopedics, Spine and Podiatry)

In September, 2019 MN Health Collaborative members wanted to pull together similar specialties to focus on selected procedures, with the goal of sharing best practices and addressing specific barriers. In response, ICSI facilitated a four month cohort to include spine, orthopedics and podiatry specialties. The larger group of specialists and operational leads from the participating organizations continued to participate in the cohort meetings by recruiting and supporting specialists.

The additional benefit we discovered is that the cohort model included independent surgical groups who practiced in multiple facilities within our participating organizations. This sparked dialogue about differences in systems and protocols between facilities, and how all participants can work together to improve care.

This specialty cohort was selected because over 80% of patients undergoing orthopedic, podiatry and spine surgical procedures receive an opioid

prescription for pain management postoperatively, and the MME doses ranked as some of the highest within our data set.

Patients undergoing orthopedic and spine surgeries are at an increased risk of opioid misuse. Among patients who underwent an outpatient neurosurgical or orthopedic procedure, one study found 14.7% reported misuse (defined as using opioids without a prescription, in greater amounts, or longer than prescribed) far exceeding the national prevalence of opioid misuse of 1.9% amongst US adults. (Mason, 2016)

This cohort was very successful in both decreasing the mean MME prescribed as well as decreasing the number of patients who exceeded the cumulative 700 MME threshold that placed them at increased risk of chronicity as noted in the 2017 Shah study. Results are displayed in Graphs 1-27.

Documenting Our Work

There was a desire to document the shared best practices for implementation so that leaders could apply them within their organizations, at their own pace. Initially, the MN Health Collaborative used a Call-to-Action format with clinical and implementation recommendations as well as current MME benchmarks by procedure, updated annually. This document format was retired and replaced by the current **ICSI Postoperative Opioid Prescribing Toolkit** in 2020. By documenting tested implementation strategies for managing postop pain and opioids, organizations could start improvements when they were ready, and add more as they were able. This became especially helpful when meetings were limited by the impacts of COVID-19.

Measurement Strategies

Our most significant barrier was acquiring enough valid data to inform a desirable goal for MME, and to understand progress over time.

Claims Data

Data from HealthPartners, a member of the MN Health Collaborative with 1.8 million insured members, provided us with local prescribing claims information. The data included procedure volumes, initial discharge prescription rates, MME by quartiles, and cumulative MME over 45 days. As explained earlier the 25th percentile (first quartile) provided the MME benchmarks that would be used for prescribing goals.

Organizational Data

Most of our collaborative members were included in the claims data, so we felt that our improvement efforts would be reflected in the data. However, the claims data also includes information on organizations that were not part of this effort, which may or may not have been working on postoperative prescribing. To better understand the impact of this initiative, we encouraged individual collaborative organizations to obtain their own data.

Nine of our participating groups were able to submit retrospective data on the mean MME for the procedures they selected to improve. We also asked them for qualitative data related to the effectiveness of the workgroups, as well as implementation activities that led to their success.

Systems did encounter barriers concerning EMR data during this work including:

- › Most groups could not get EMR data initially, and therefore did chart audits.
- › Not everyone was able to submit data.
- › Groups used existing definitions to create data, which led to variation.
- › Data was only provided on procedures the organizations selected to improve.
- › There wasn't enough data to provide an adequate comparison between groups.

“Organizational feedback on top implementation strategies:

Develop a measurement plan:

“Sharing procedure specific peer to peer data with surgery groups for review.”

“System-wide postop prescribing guidelines for major and minor surgical procedures.”

“Data collection and quarterly distribution to providers.”

“Aligning our internal data systems to report on actionable data. This was no small feat and took a lot of resources.”

“Routine data collection that is organized and focused.”

“Transparent provider prescribing with patient consumption reports – the reports were consistent, timely and open for discussion/debate/dialog when released.”

“Patient testimonials requesting fewer opioids – the patient voice had the biggest impact.”

“Each surgeon team would survey their postoperative patients to determine how many opioid pain pills they took following surgery. Results will be reviewed with our group to determine survey results and decrease prescribing habits to match with amount of pills typically consumed.”

“Data sharing & regular reporting to clinic groups.”

“Standardizing and reviewing numbers of narcotics for my standard procedures.”

Measuring the Risk of Chronic Opioid Use

Due to the risks identified earlier, the recommended practice is to monitor patients closely during the postoperative pain period. Prescribers are asked to avoid prescribing in excess of 700 MME (cumulatively) in order to reduce the risk of chronic opioid use and other opioid-related harms during this critical period. This was one of the additional data points available through claims data and was measured by retrieving all opioid prescriptions following the surgical procedure discharge date up to 45 days. Again, it's important to note that both patients taking intermittent or long-term opioids and patients who are opioid naïve were included in this data.

The workgroup members used the cumulative MME data as a proxy measure for unintended consequences such as changes to patient risks related to opioid use. Claims data was used to identify prescribing practices that placed patients at potentially higher risks of chronicity, including:

- › A high rate of opioid prescriptions.
- › Higher initial doses of opioids on discharge.
- › Potential need for refills creating a high cumulative MME.

As a result of these efforts, the number of patients who exceeded 700 cumulative MME within 45 days decreased significantly. This is likely due to the following assumed conditions:

- › Initial doses on discharge were smaller.
- › There may have been fewer refills given and/or they were reduced in quantity.
- › Patients on opioids before surgery for pain management may not have needed additional postoperative opioids prescribed.

While it is true that prescribers may have been giving high dose refills, this was not measured. However, our data leads us to believe that was not the case.

If the trend in the rate of patients with a cumulative ≥ 700 MME within 45 days postoperatively had continued at the 2016 claims data rate, a total of 3,392 fewer patients would have been put at risk in 2019. Most of the decrease in >700 MME (94%) came from orthopedic, podiatry and spine surgeries alone, with 3,202 fewer patients placed at this risk.

Measuring Unintended Consequences

As we progressed through the improvement process we stressed the need to continually monitor changes that affect our patients. Groups were also asked to monitor unintended consequences, such as early complaints of unmanaged pain. All groups that monitored reported that there were no changes related to early contact for unmanaged pain (e.g., calls, ED, UC, refill requests before postop visit). This information was obtained via the following methods:

- › At least two groups had resources to formally follow-up with patients and report outcomes including function, pain control, opioid use, and disposal.
- › Other groups did chart audits or made phone calls postop to get periodic feedback.

There was concern that surgeons might prescribe the initial discharge postop MME at the recommended amount, and then provide an early refill that wasn't being counted or measured. However, claims data showed that the number of patients who hit that cumulative risk threshold decreased significantly over the life of the project. This suggests that the prescribers were not increasing refill amounts in response to less initial quantities.

“Organizational feedback about collaboration:

Data sharing:

“The ability to share data on postoperative opioid prescribing and see data from the other health systems.”

“The data sharing and postop prescribing benchmarks. Sharing these blinded data motivated prescribers to change practice.”

“Comparing our results to others was also a benefit, we could see what we were doing well and where we could improve based on work done elsewhere.”

“Creating common metrics allowed us to use data, and advise surgeons that this was being done across the entire Collaborative.”

“To hear other system’s strategies for systematic reduction, EMR suggestions, and being able to compare our ortho department with other ortho groups in the Twin Cities.”

Graphic Results

Minnesota community claims data (2016-2019) was provided to the MN Health Collaborative by HealthPartners Health Plan and Care Group. Please see the data specifications, exclusions, and the benchmark goals in the **ICSI Postoperative Opioid Prescribing Toolkit 2020**.

Here are some overall characteristics of the data displayed on the following pages:

- › This data represents the initial postoperative opioid prescription quantities and includes patients who were both opioid naive and those who were not.
- › Claims data includes the following specialties: cardiology, gastroenterology, nephrology/urology/gynecology, orthopedics, podiatry, spine, and otolaryngology.
- › The four-month cohort group included: orthopedics, podiatry, and spine from September 2019 to December 2019.
- › We chose to focus on the metric of MME for safety reasons. When we started, some groups were measuring pills or the number of days prescribed, however, there was no clear amount known without calculating the MME. We discovered that physicians (and EMR's) don't routinely use that measure so the learning curve was steep at the point of care.
- › The number of opioids prescribed for pain management postoperatively was measured by using the weighted mean MME (weighted mean MME is the mean MME, adjusted for the number of opioid prescriptions, over the number of procedures).

Key outcomes:

The following graphs include both the claims data and data that organizations provided retrospectively to demonstrate the overall changes as well as the success of organizations that focused on

specific procedures during this initiative. We also provide the claims data showing the rate of opioid prescribing and the number of patients who received >700 MME cumulative dose within the first 45 days postop to demonstrate the decrease in risk to patients over time.

Notable outcomes from 2016-2019 claims data:

- › Overall (including all specialties) the mean MME prescribed steadily decreased by 44%.
- › Procedures included in the four-month cohort for orthopedics, spine, and podiatry also decreased MME significantly:
 - › Orthopedics 45%
 - › Podiatry 33%
 - › Spine 52%
- › Overall, the number of patients who were not at risk due to cumulative doses >700 MME is 3,392. With the cohort specialties alone representing 94%, which is 3,202 patients.

How to read the graphs:

Timeline:

- › 2016 – Represents baseline for this initiative, although some organizations began this work earlier.
- › 2017 – Postoperative collaboration has begun.
- › 2019 – Is the last year claims data is reported (some organizations reported 2020 data).

Example Graph 1: This claims data demonstrates the steady change in the rate of patients receiving an opioid prescription over time. Our goal is not to eliminate opioids postoperatively. Patient-centered decisions are encouraged, and not everyone wants or needs an opioid.

Example Graph 2: This claims data represents the initial mean MME prescribed on discharge over time. This measure is a primary endpoint of the work.

Example Graph 5: This claims data shows the percent of patients who received ≥ 700 cumulative MME within 45 days of postoperative discharge. A decrease in this percentage represents fewer patients who are at potential risk of remaining on opioids at one year postop.

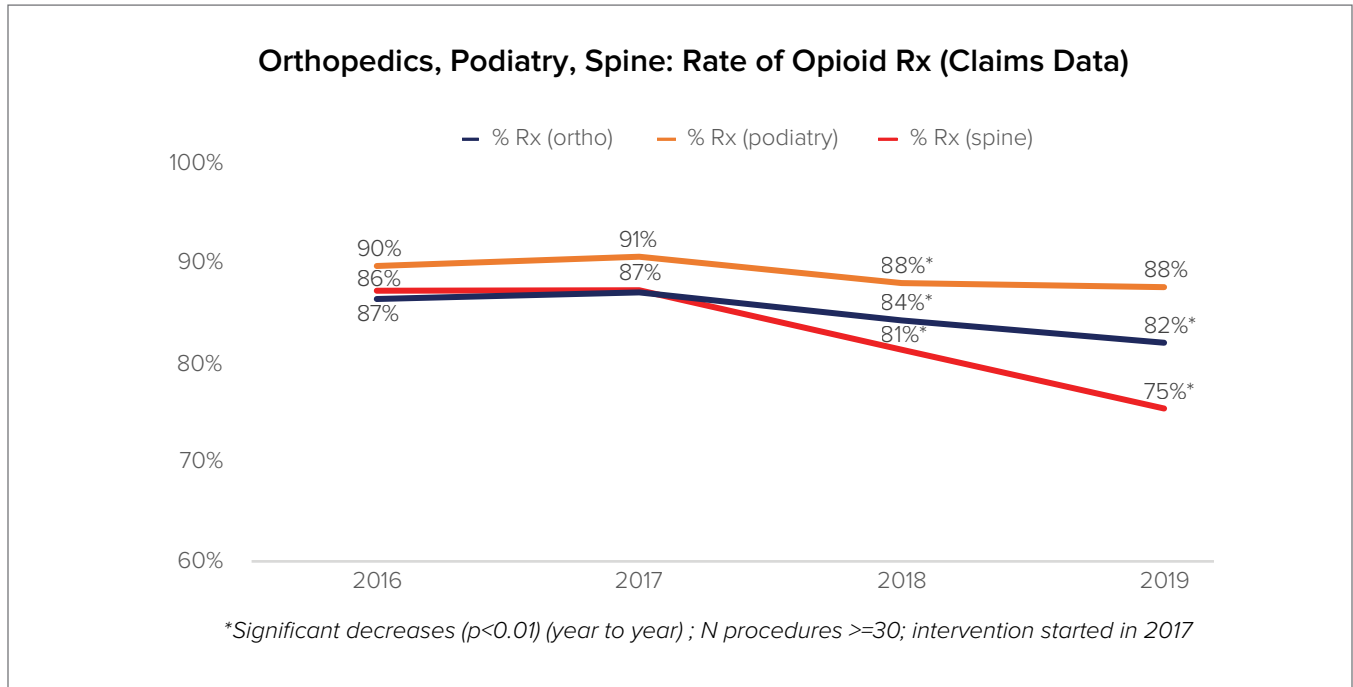
Example Graph 6: This claims data shows the gradual change in the mean MME over time as it relates to the gradually changing 25th percentile used as a goal MME. It demonstrates the intentional decrease vs. abrupt changes in practice. It also shows how the community is doing compared to the collaborative goal. This data includes claims from all of the participating organizations as well as many

other groups. It is not directly comparative to the individual organizational data in the other graphs.

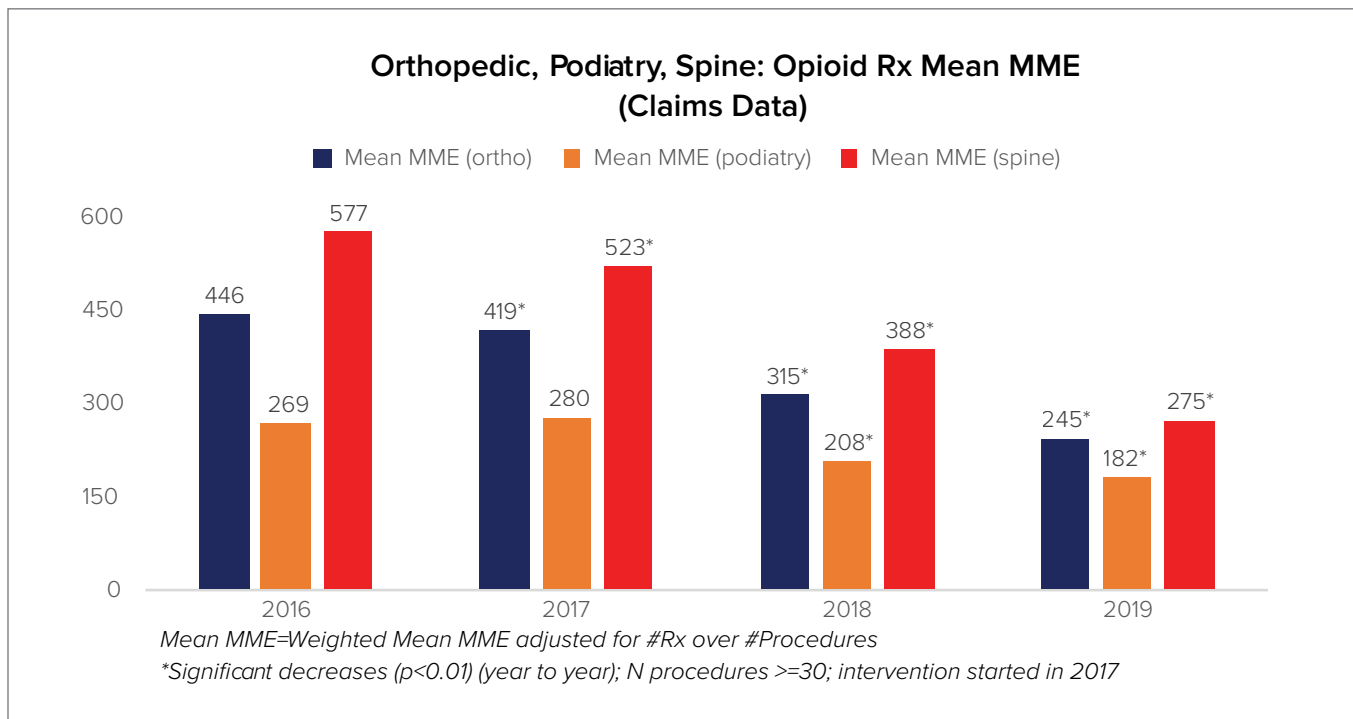
Example Graph 7: This run chart is blinded individual organizational data showing the mean MME at discharge compared to the 25th percentile. The collaborative goal MME was set each September starting in 2018, using the 2017 25th percentile goal. Prior to that date, the tiering method was used for setting goals (see above) for about 30 procedures. Organizations started their work at different times during the collaborative and they selected improvement techniques that best fit their needs. Some organizations improved faster or at a greater rate than the overall community claims data.

The orthopedic, spine and podiatry bundle of surgeries were a focus for the groups and improvement is seen below from the claims data showing a decrease in opioid prescriptions, and a decrease in the mean MME over time. (Graphs 1-27)

Graph 1

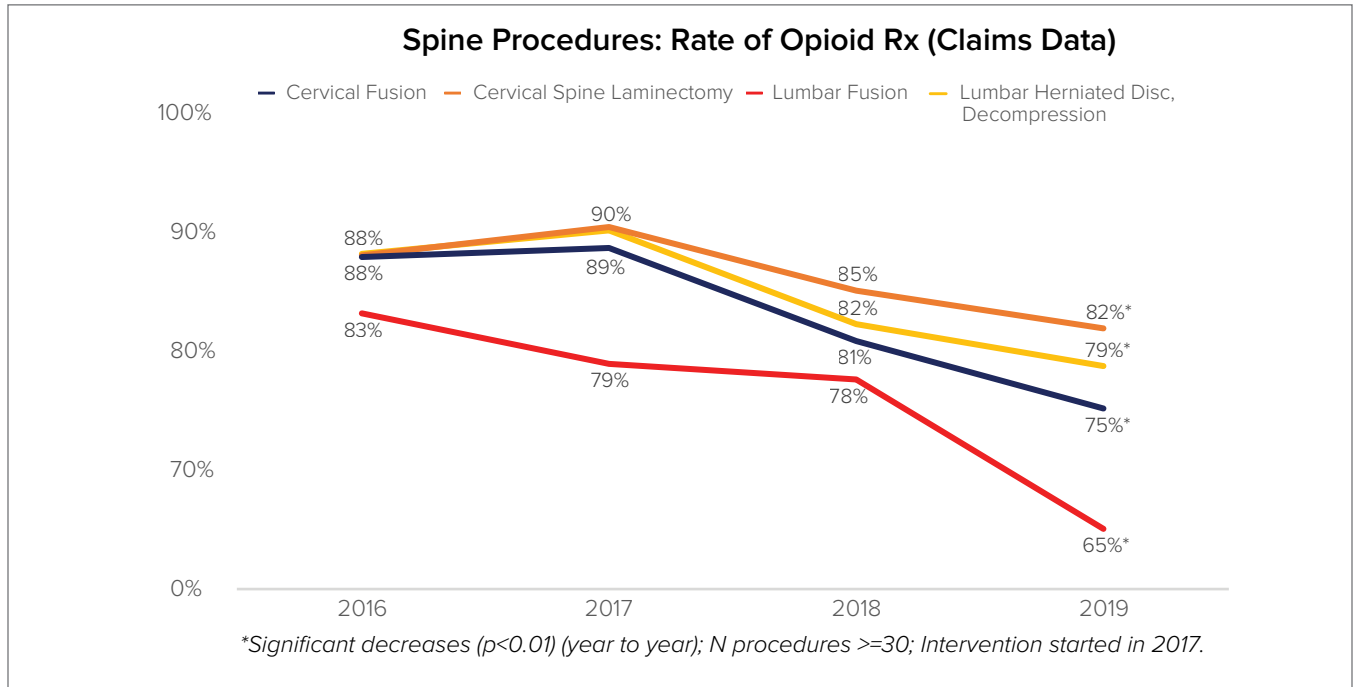


Graph 2

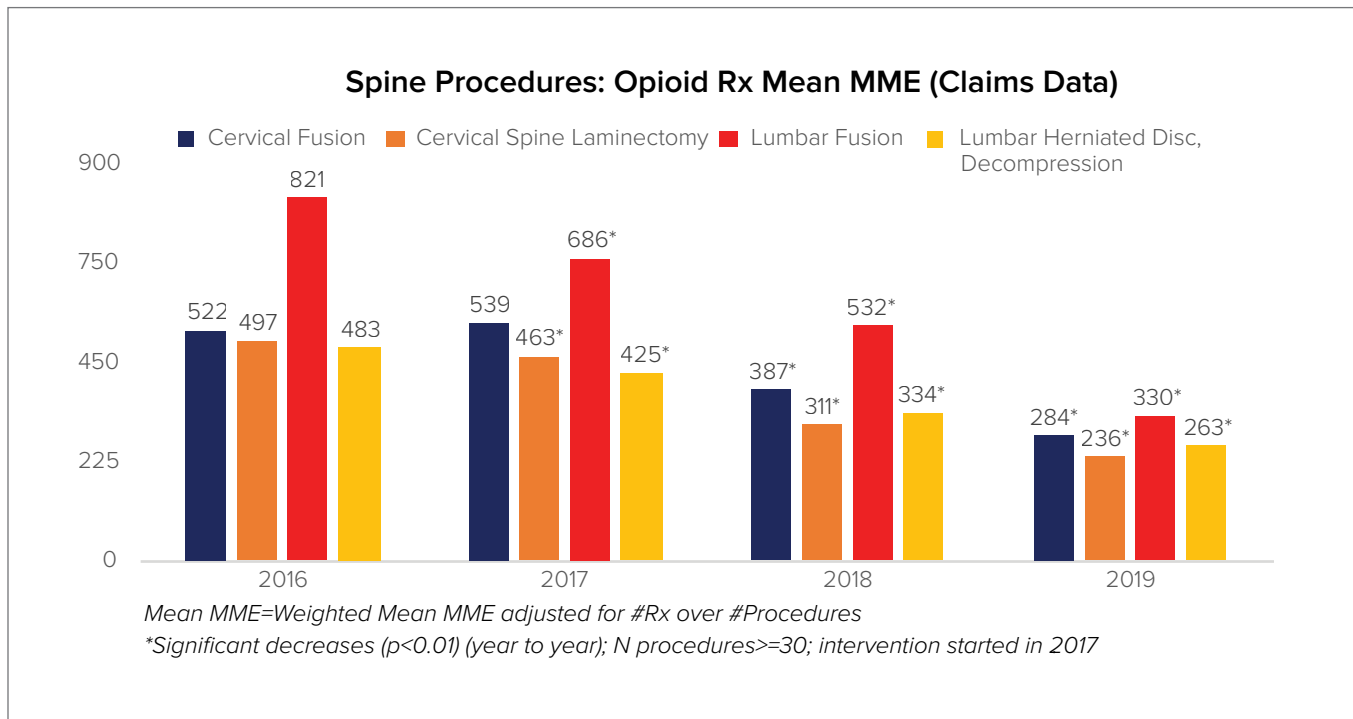


Spine surgeries had the highest level of improvement during this initiative.

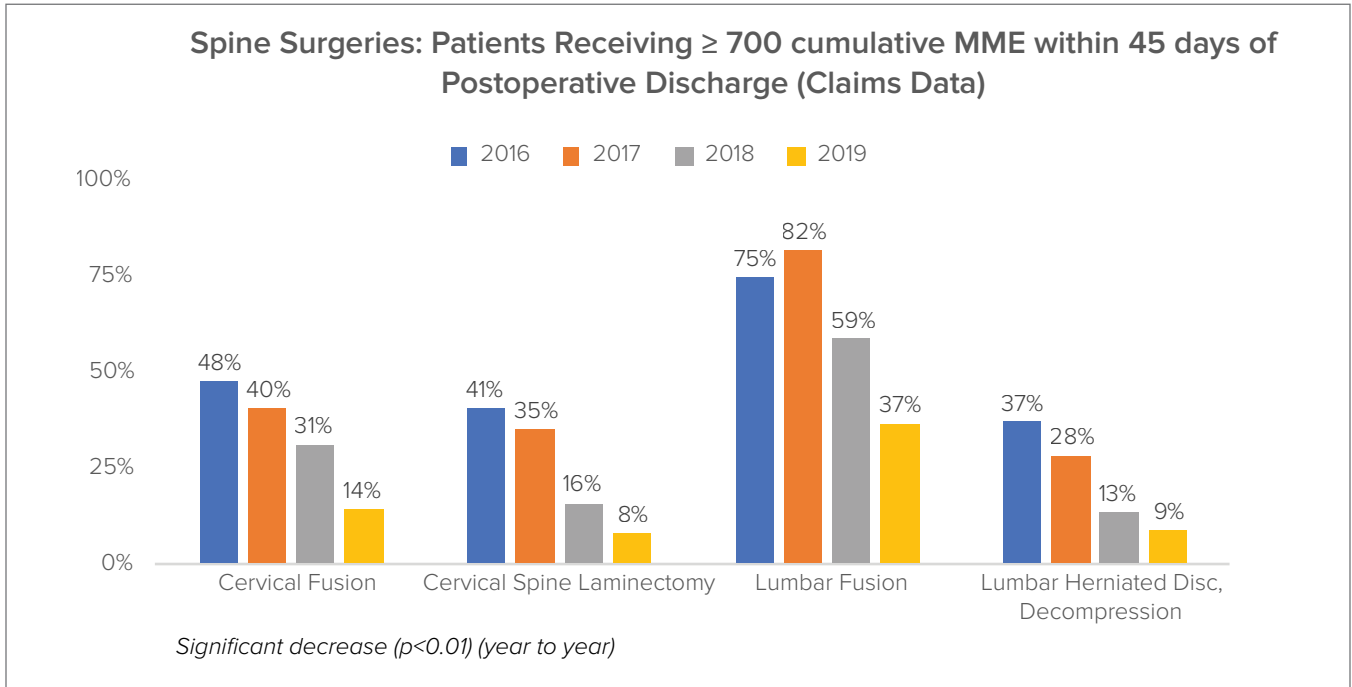
Graph 3



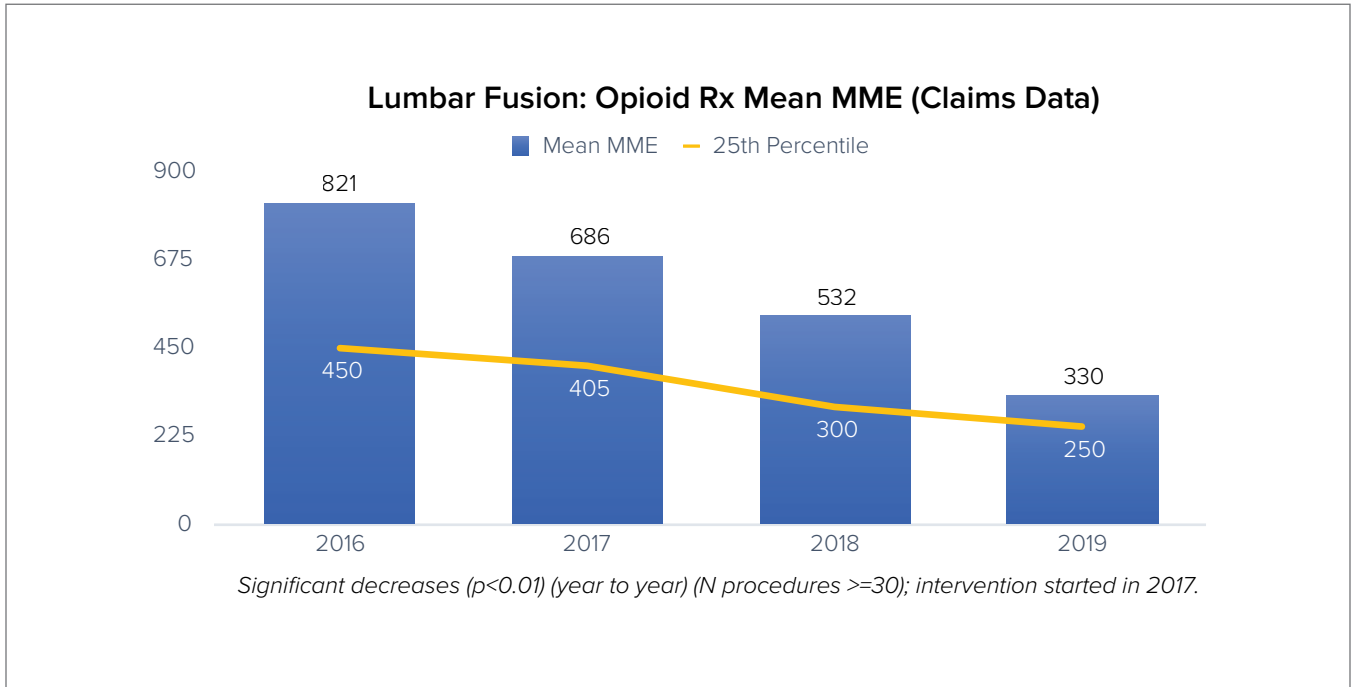
Graph 4



Graph 5

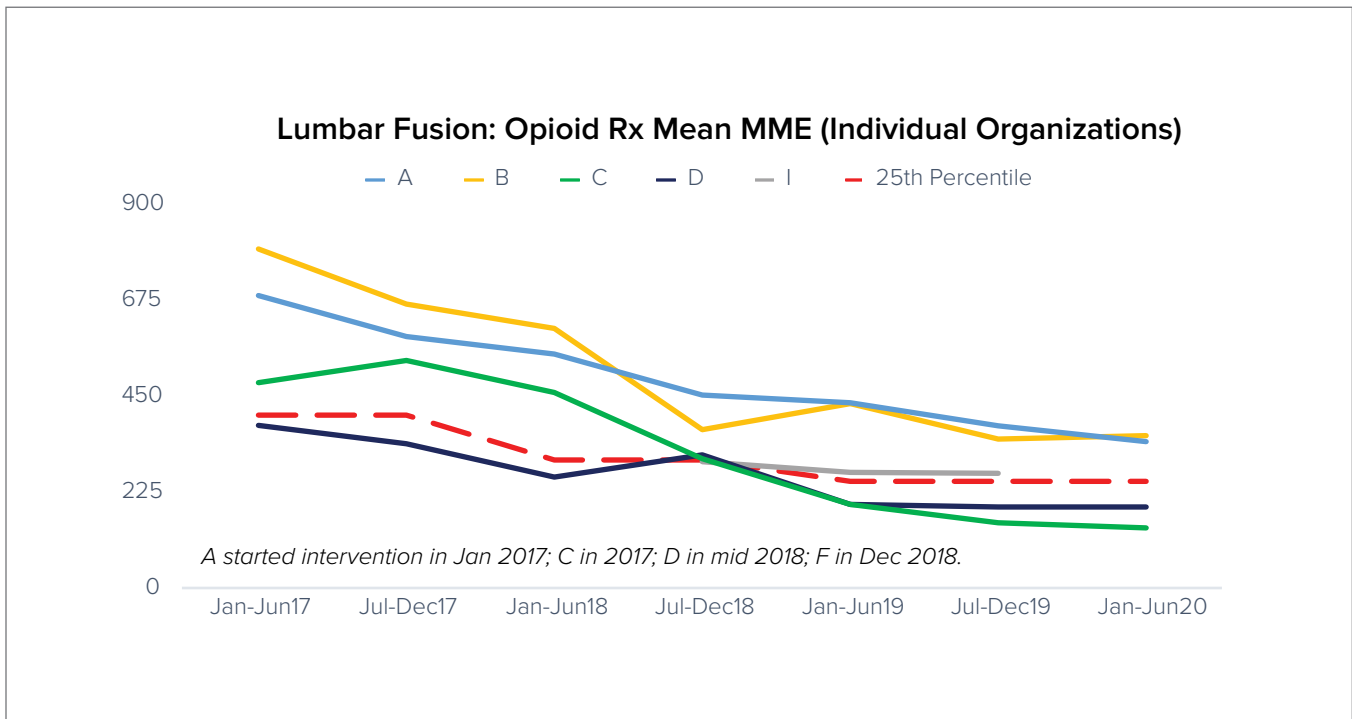


Graph 6

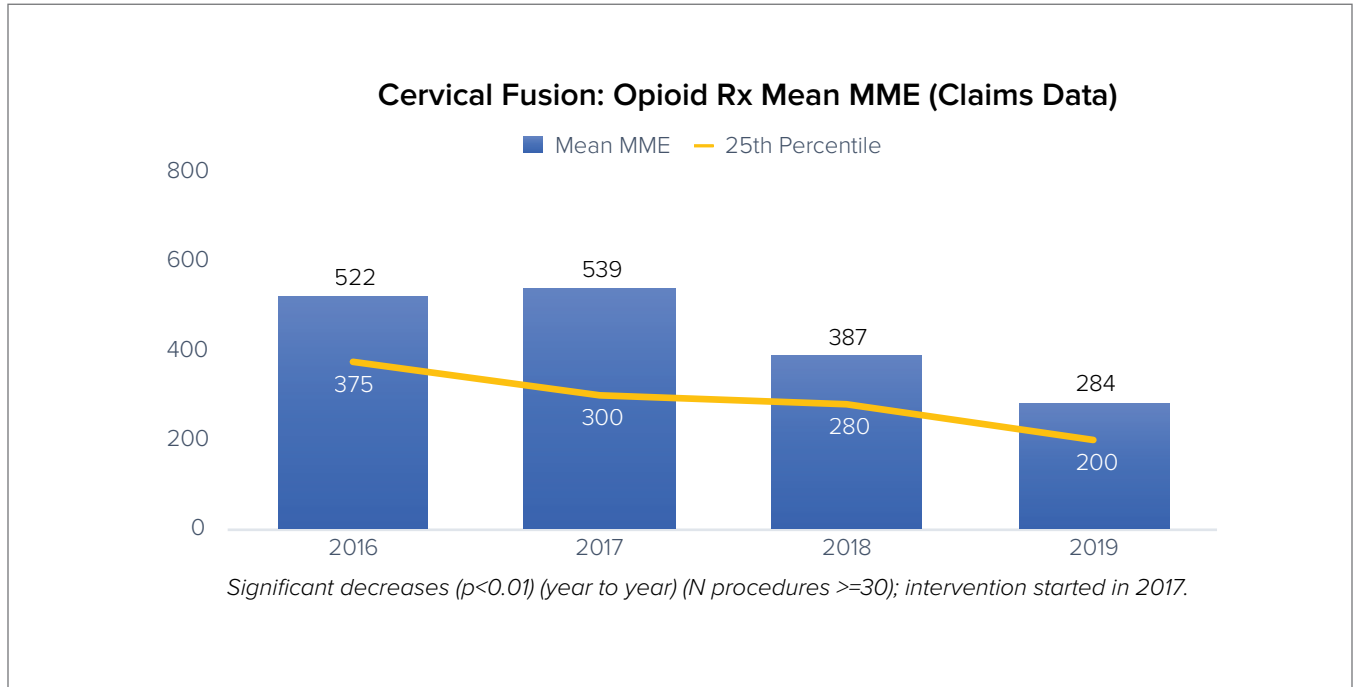


Overall claims data showed a dosage decrease of 60% for Lumbar Fusion. Organization C was able to achieve a dosage decrease of 71%.

Graph 7

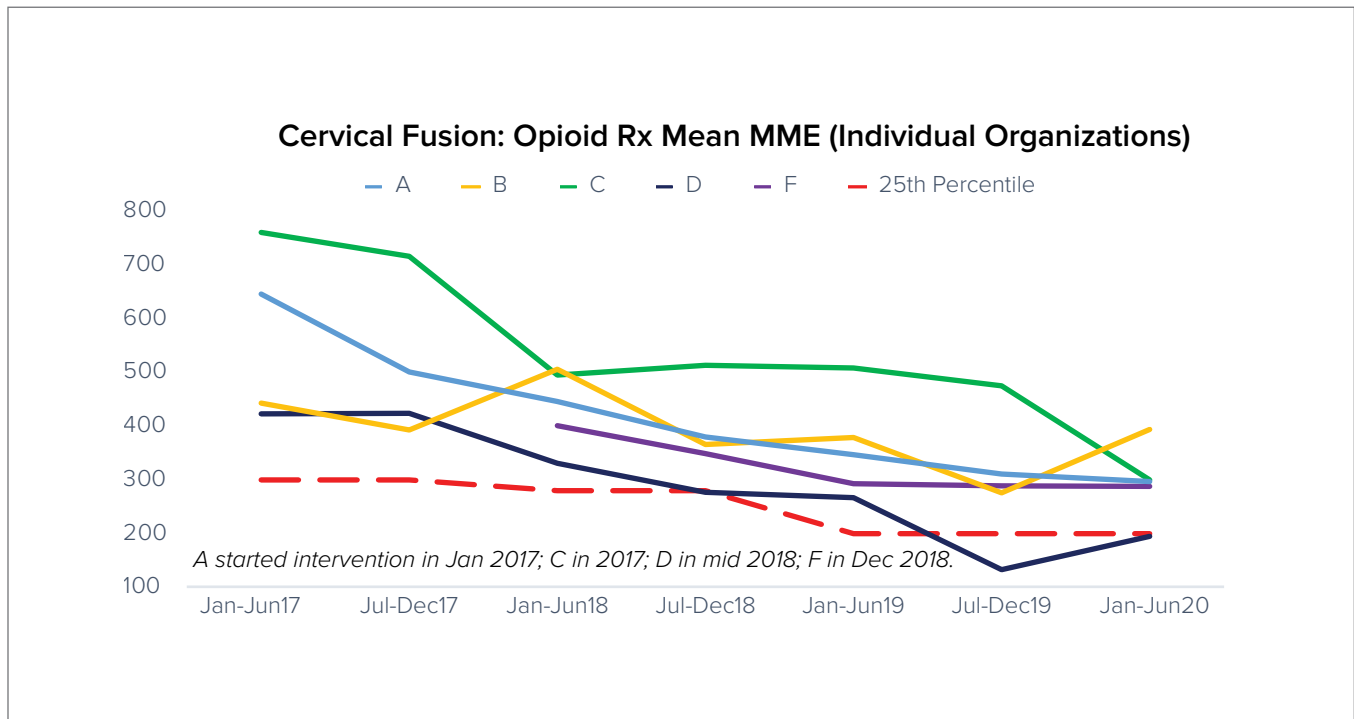


Graph 8

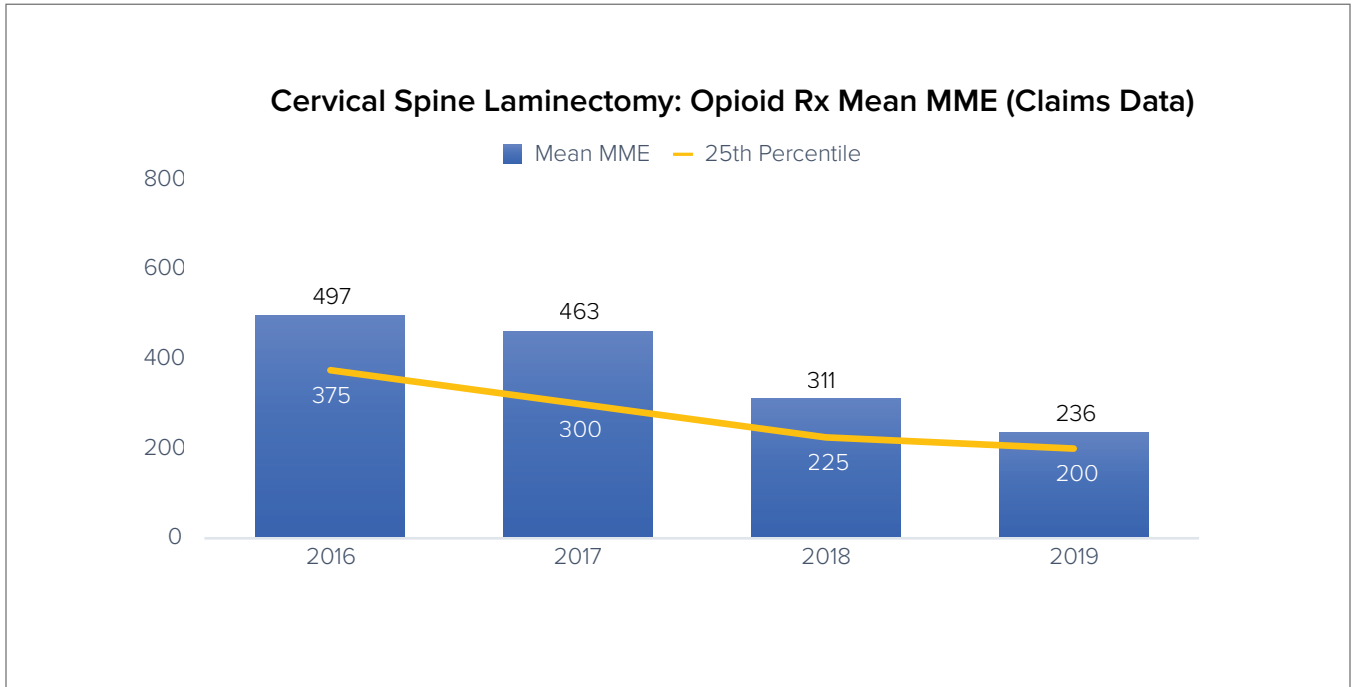


Overall claims data showed a dosage decrease of 46% for cervical fusion. Organization C achieved a 61% decrease in dose.

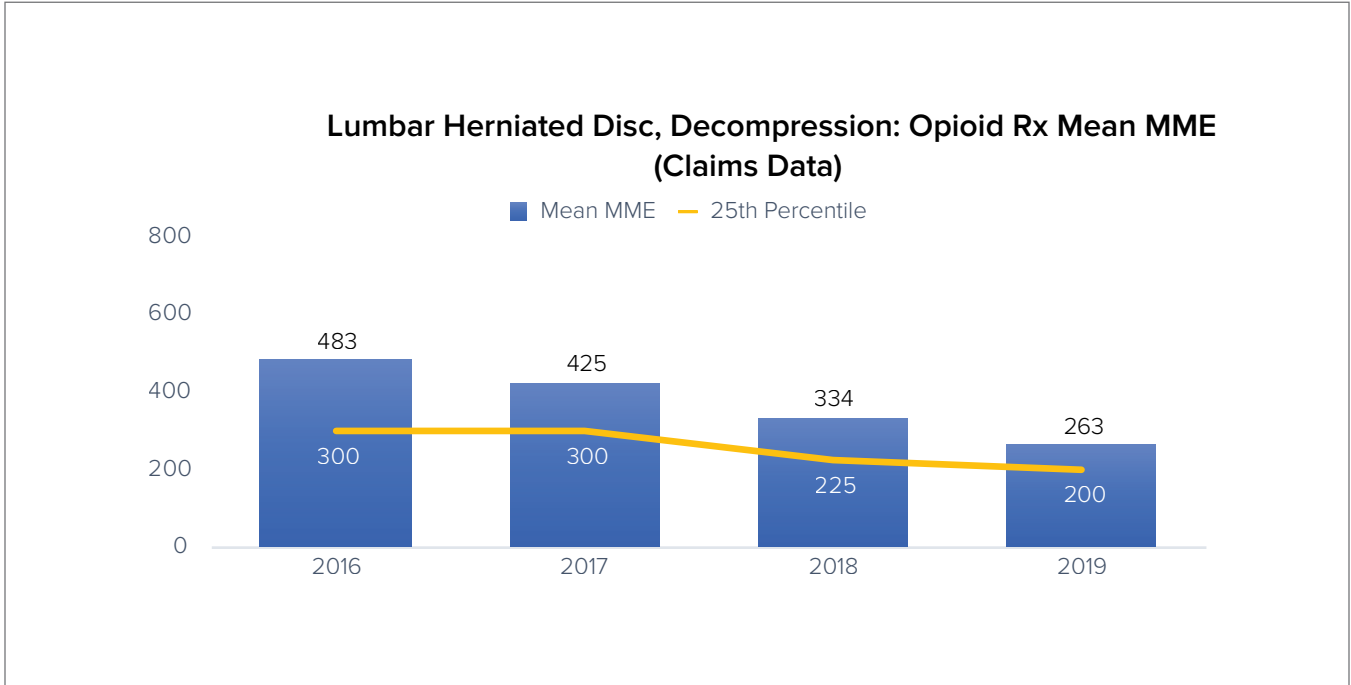
Graph 9



Graph 10

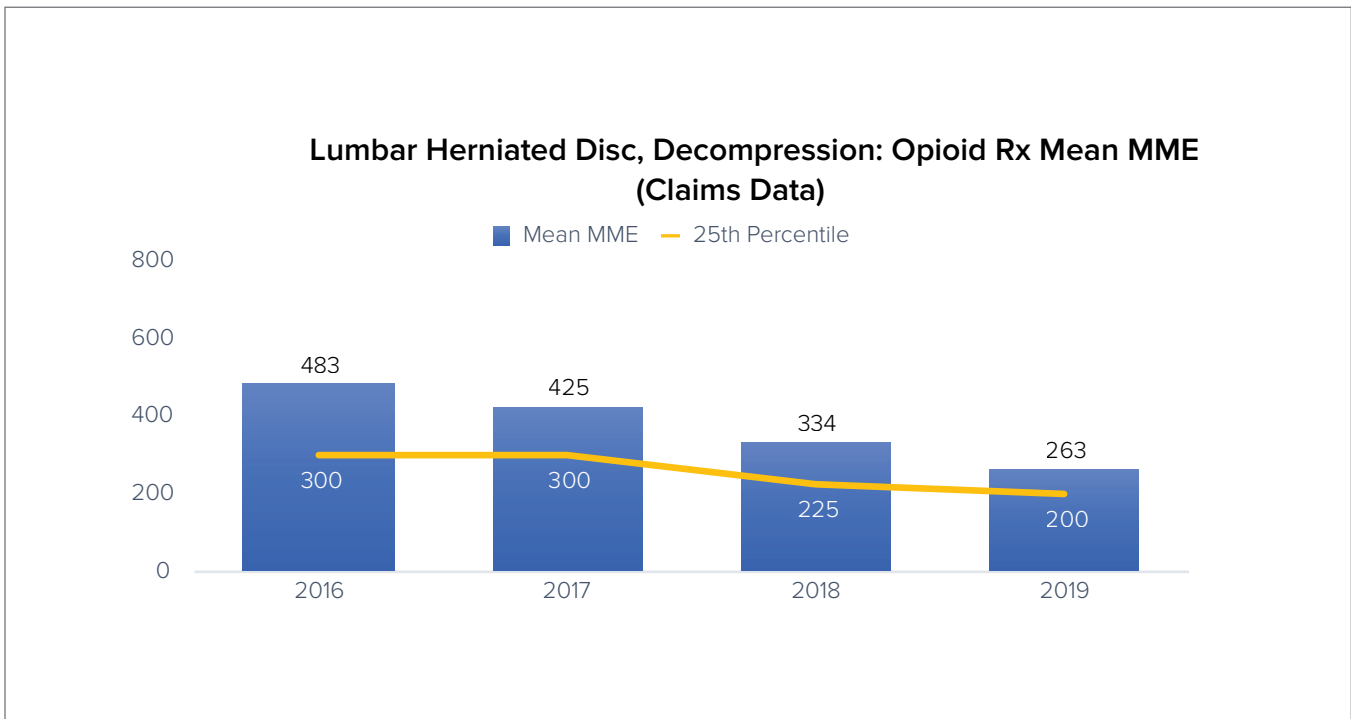


Graph 11



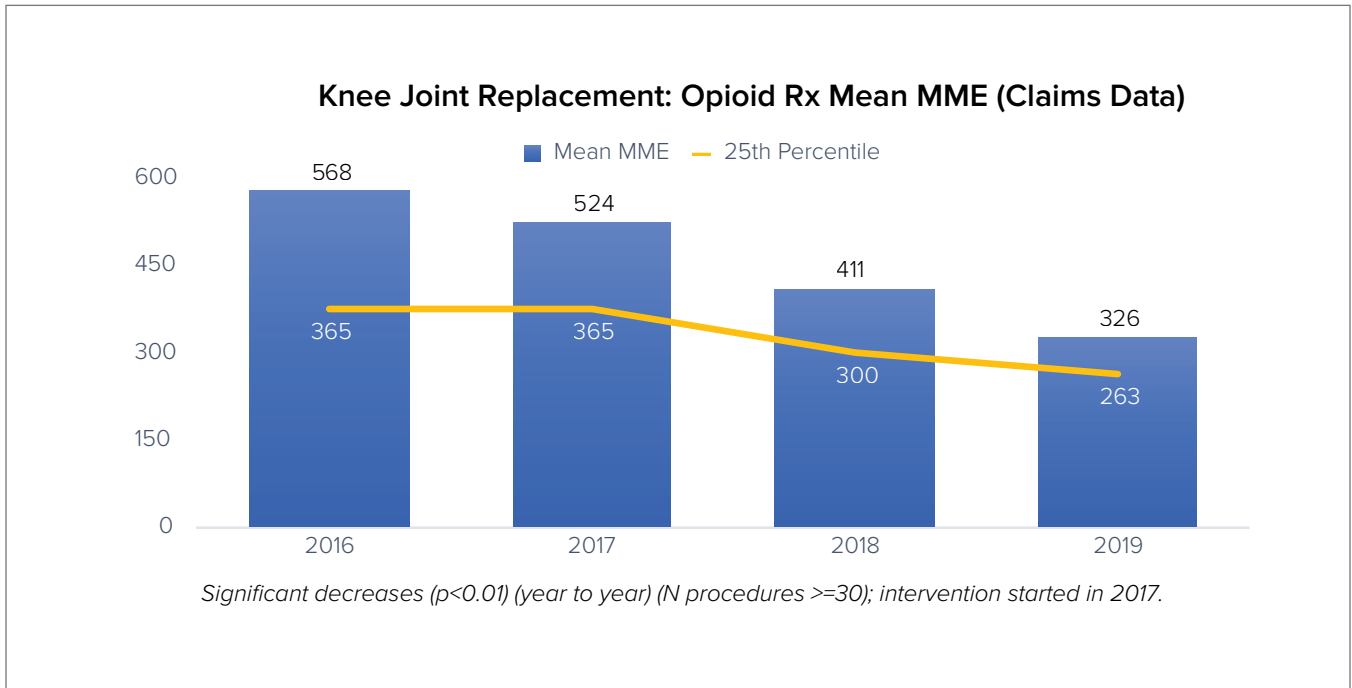
Overall claims data showed a dosage decrease of 46% for lumbar herniated disc decompression. Organization A was able to decrease doses by 52%.

Graph 12



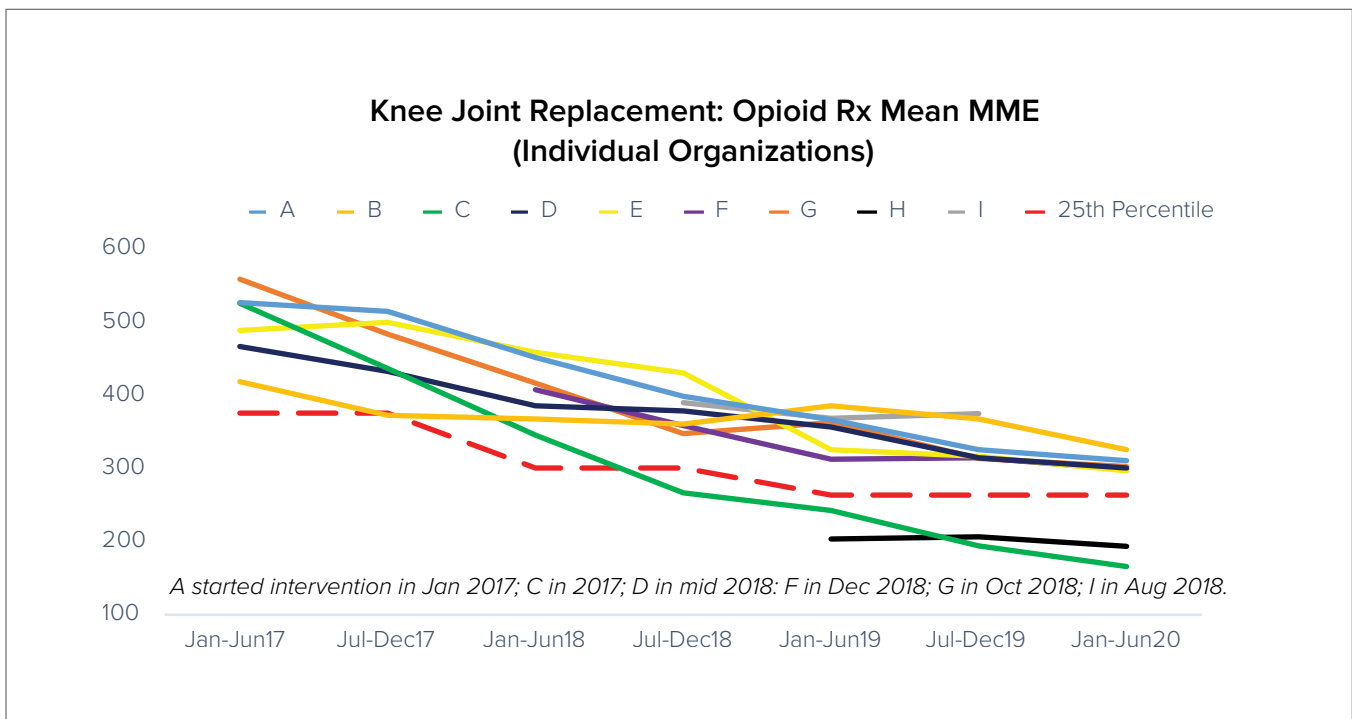
Orthopedic joint replacement surgeries in particular showed the same improvement, plus a decrease in the number of patients put at higher risk with cumulative MME.

Graph 13

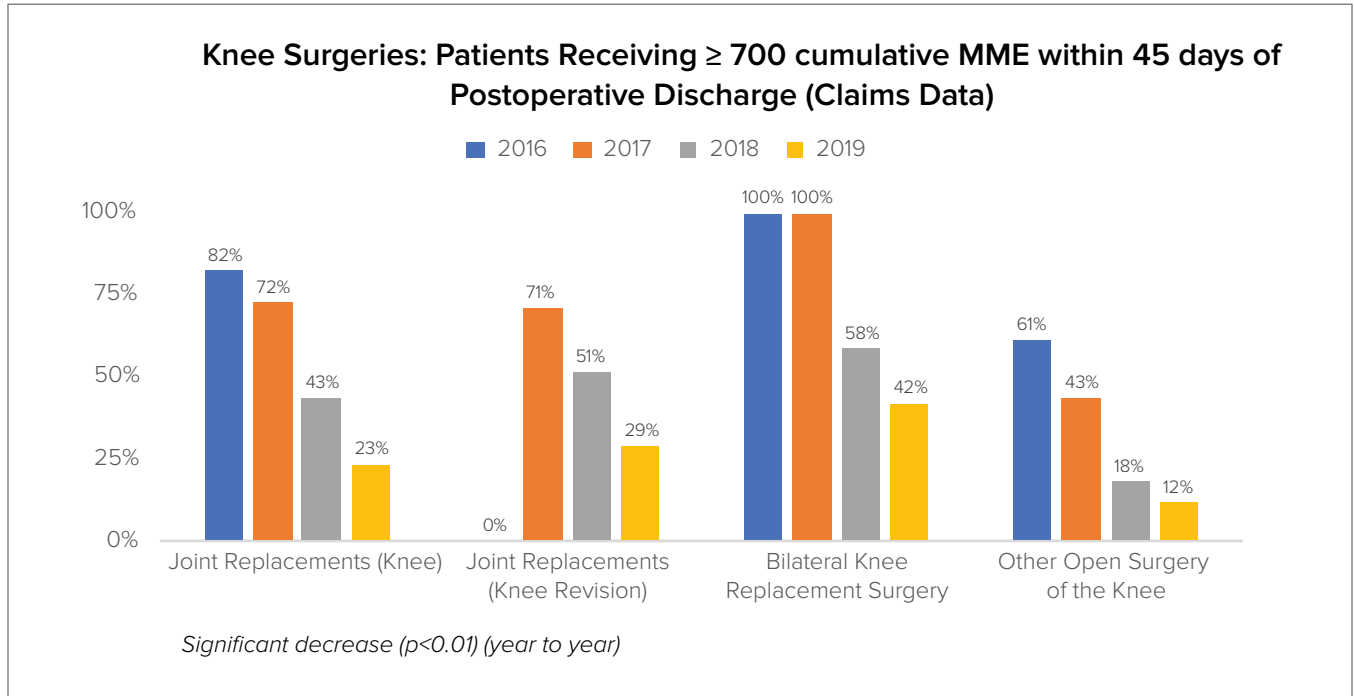


Overall claims data showed a dosage decrease of 43% while organization C decreased doses by 68%.

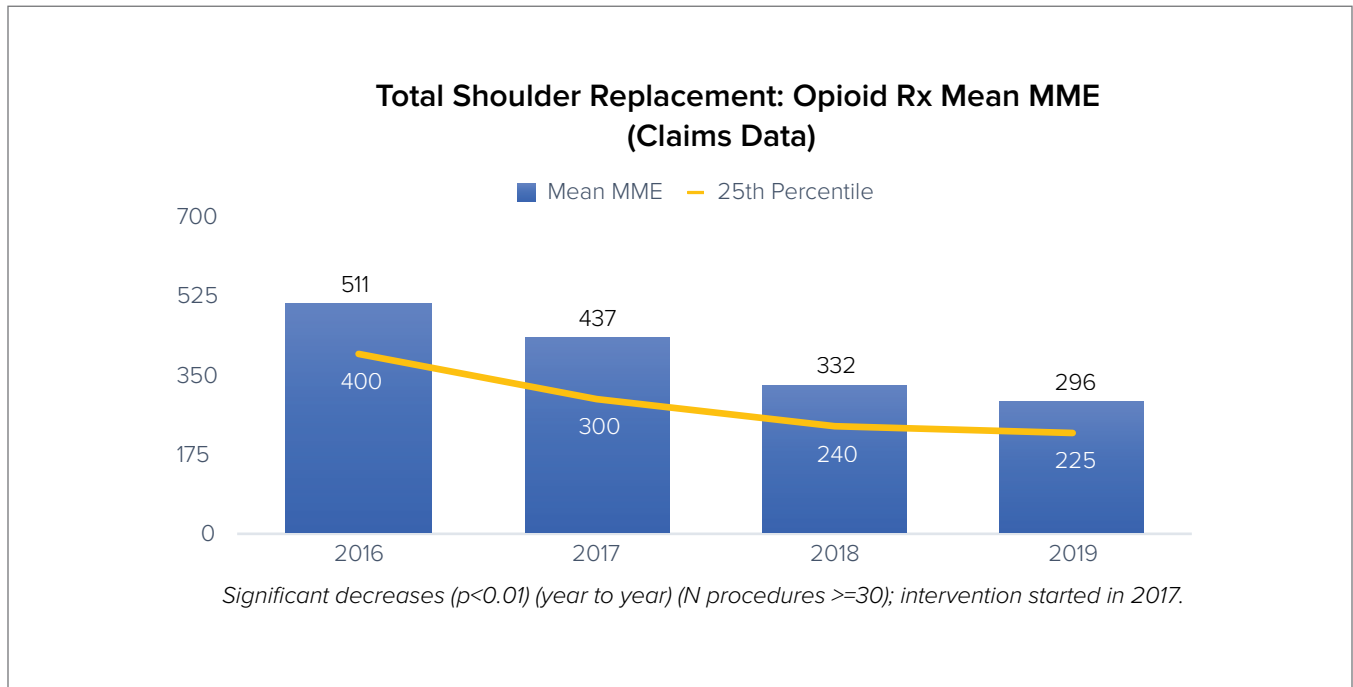
Graph 14



Graph 15

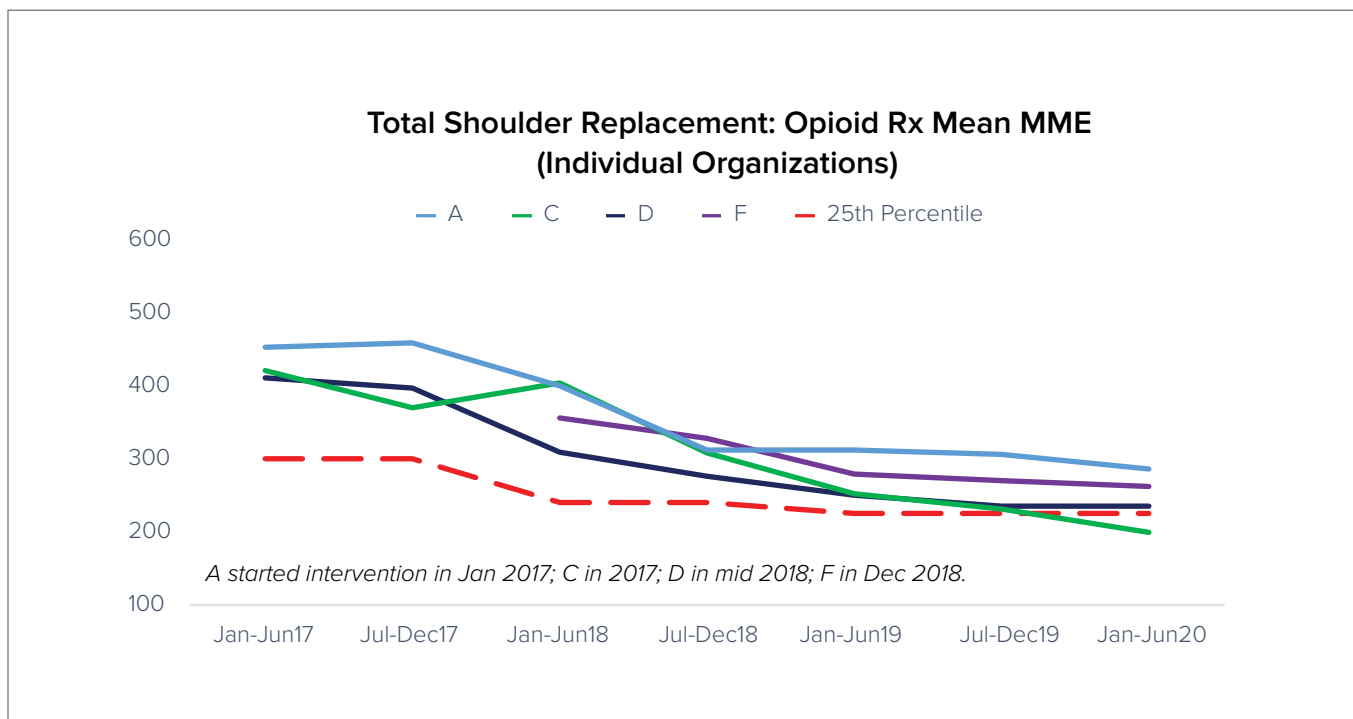


Graph 16

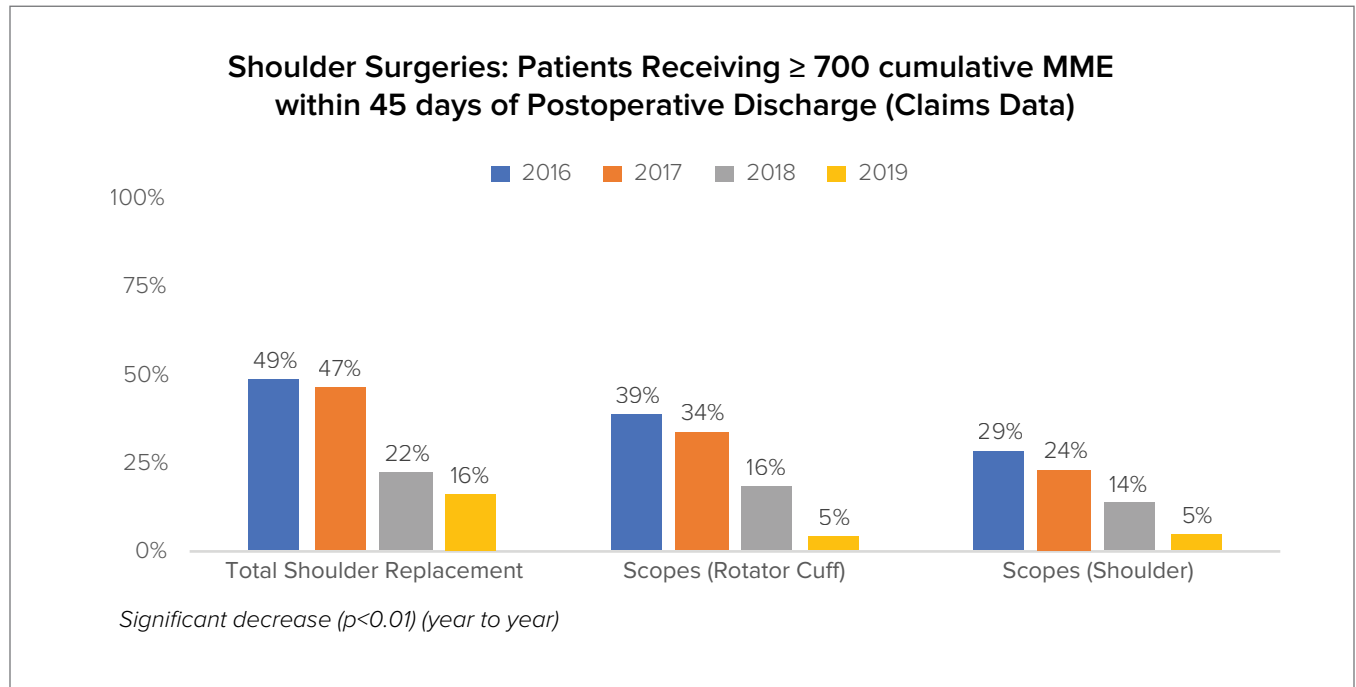


Overall claims data showed a dosage decrease of 42% with the largest decrease in dose by organization C at 53%.

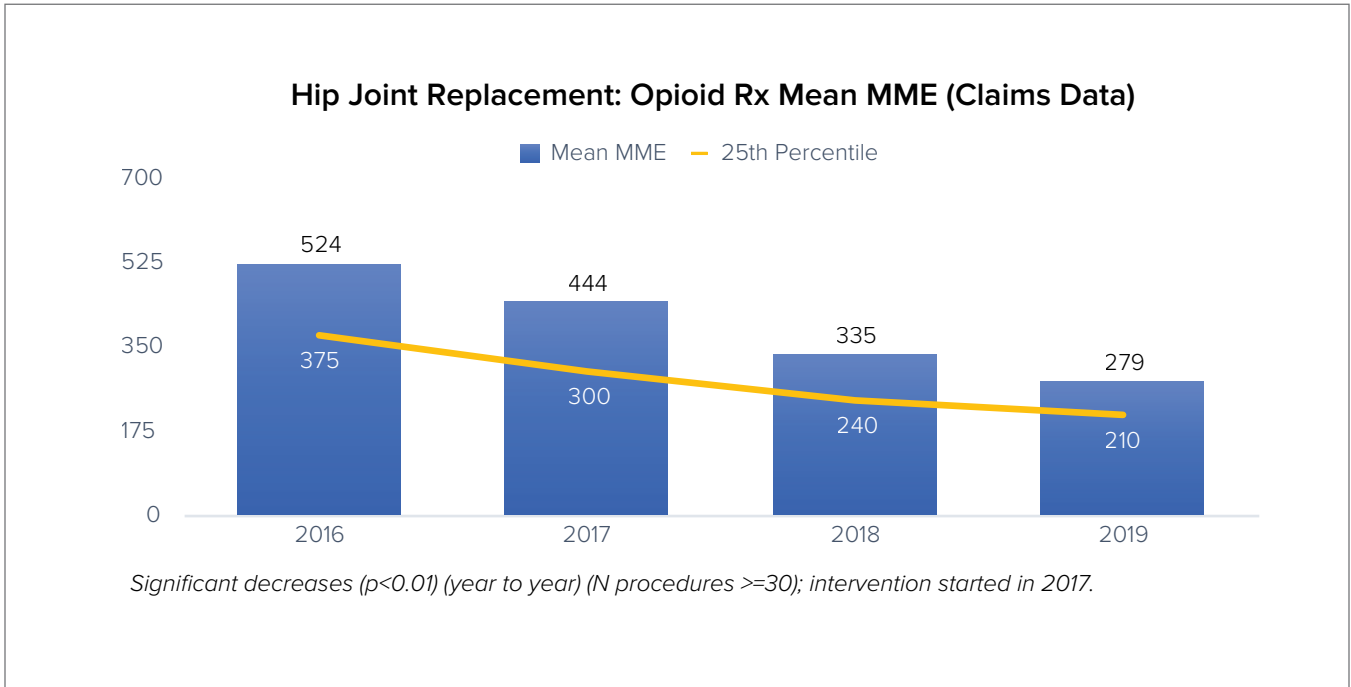
Graph 17



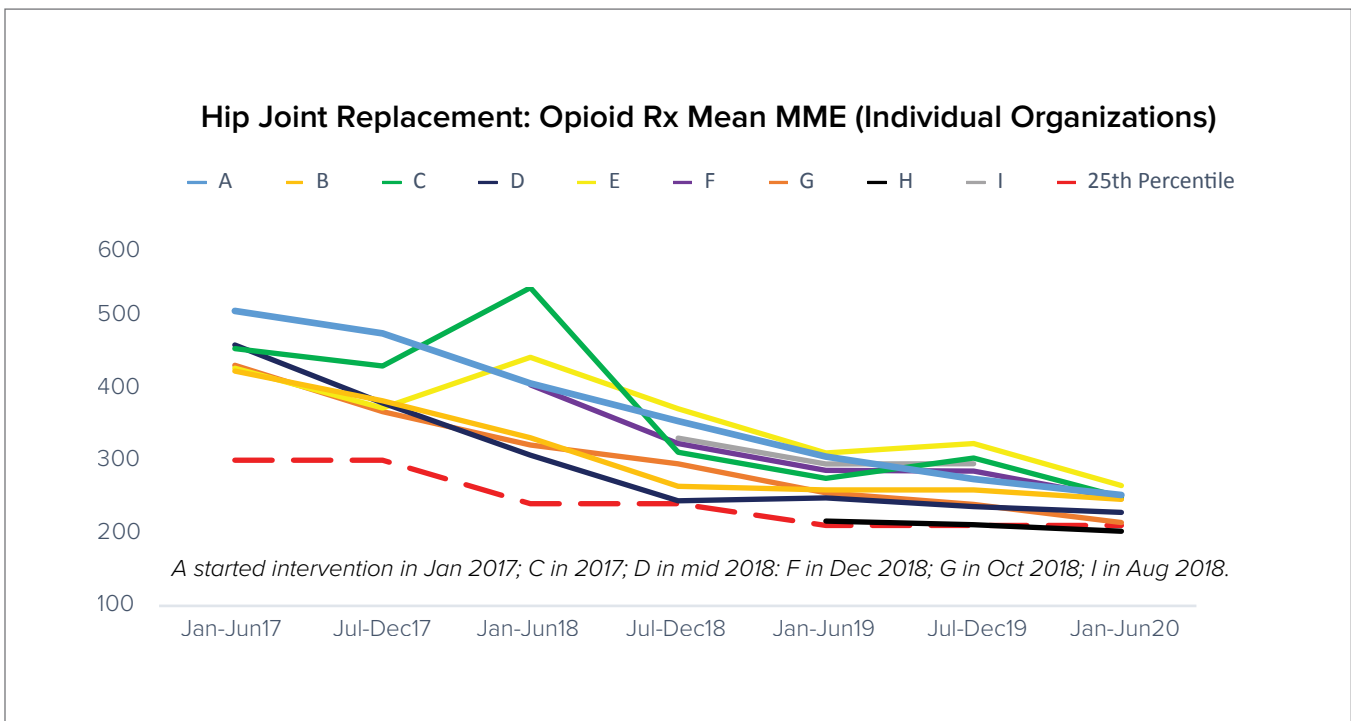
Graph 18



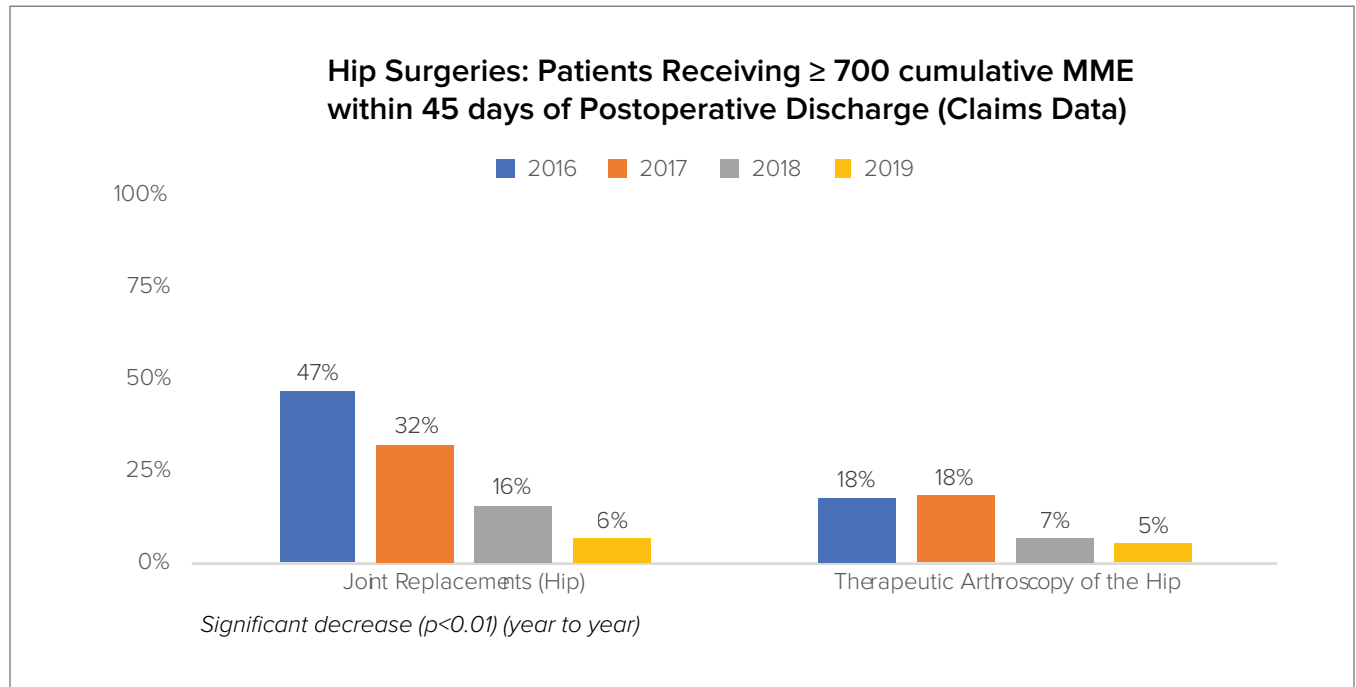
Graph 19



Graph 20

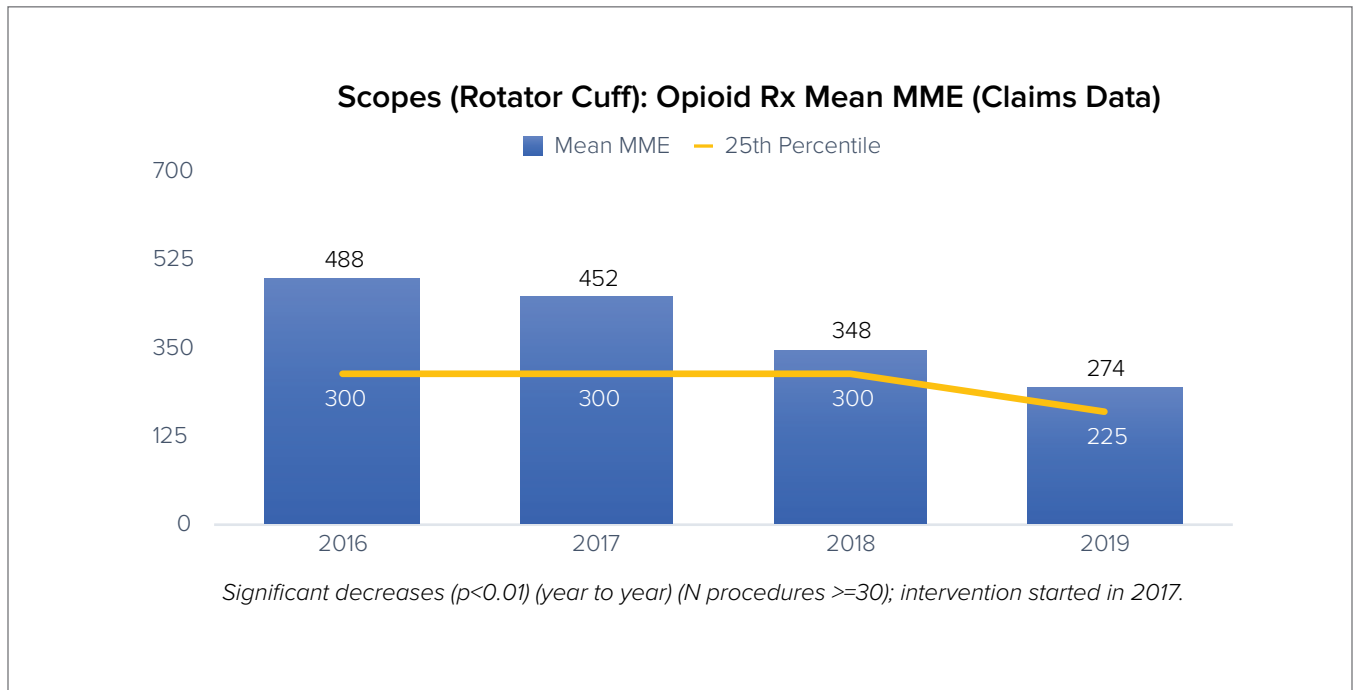


Graph 21



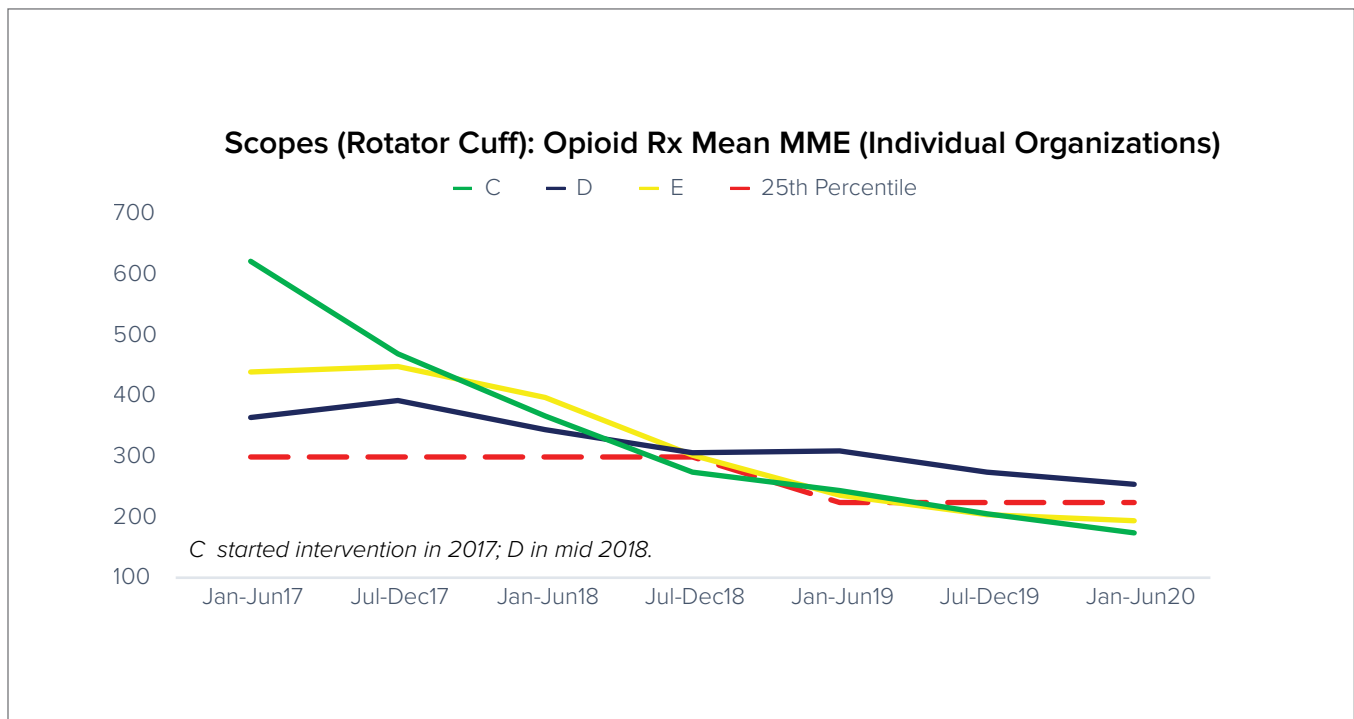
Other orthopedic procedures:

Graph 22

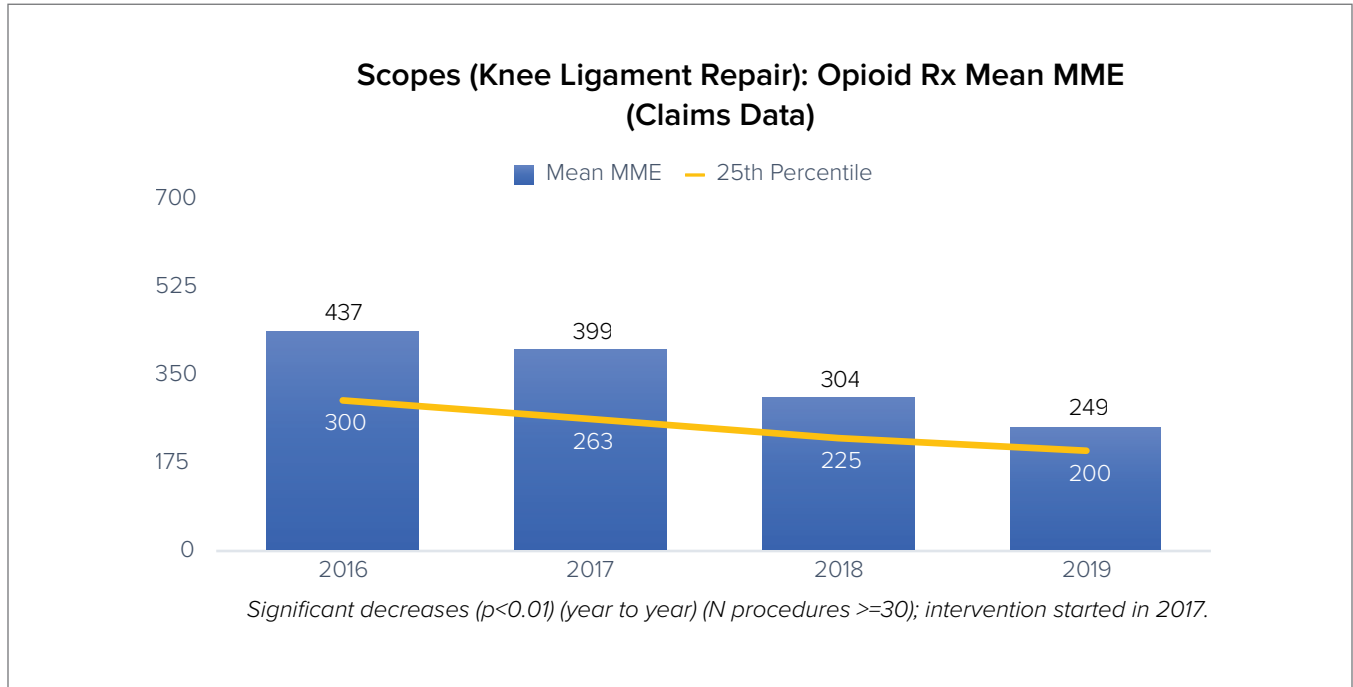


Overall claims data showed a dosage decrease of 44%. Individual organizations combined decreased doses by 56%. Organization C had the largest decrease of 72%.

Graph 23

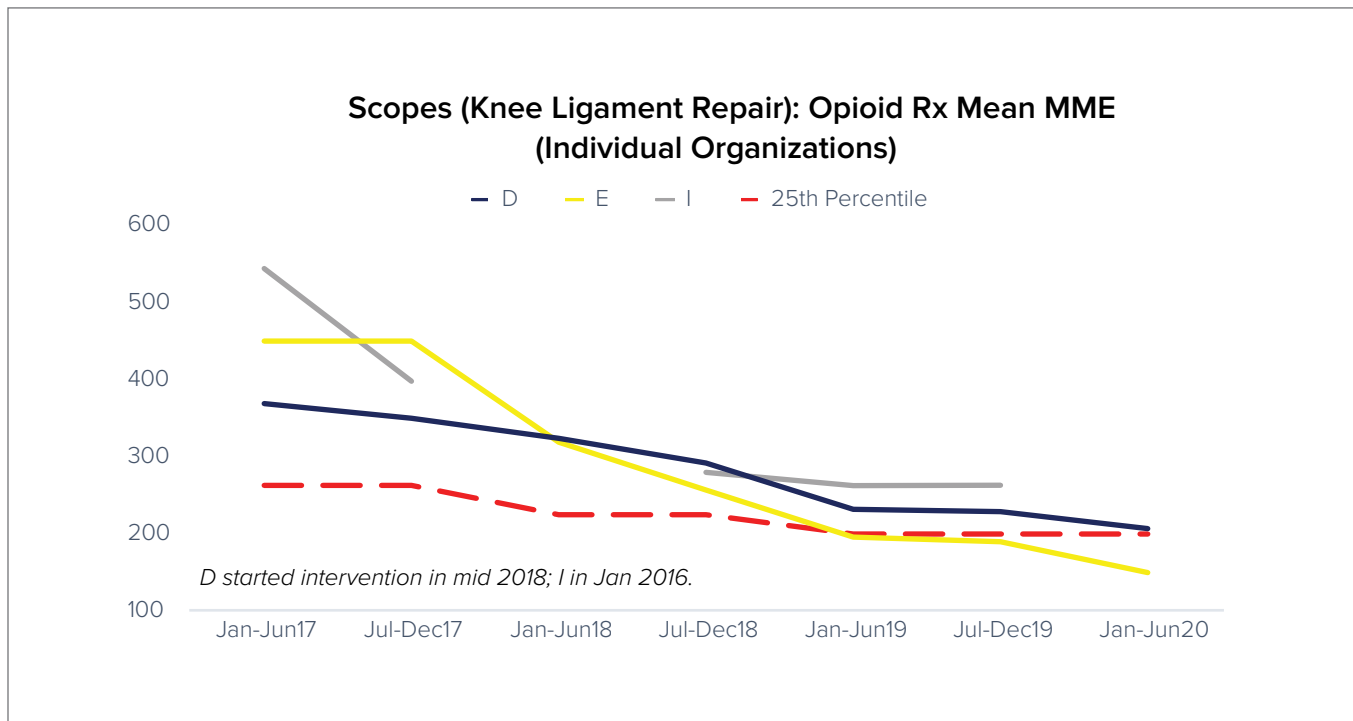


Graph 24

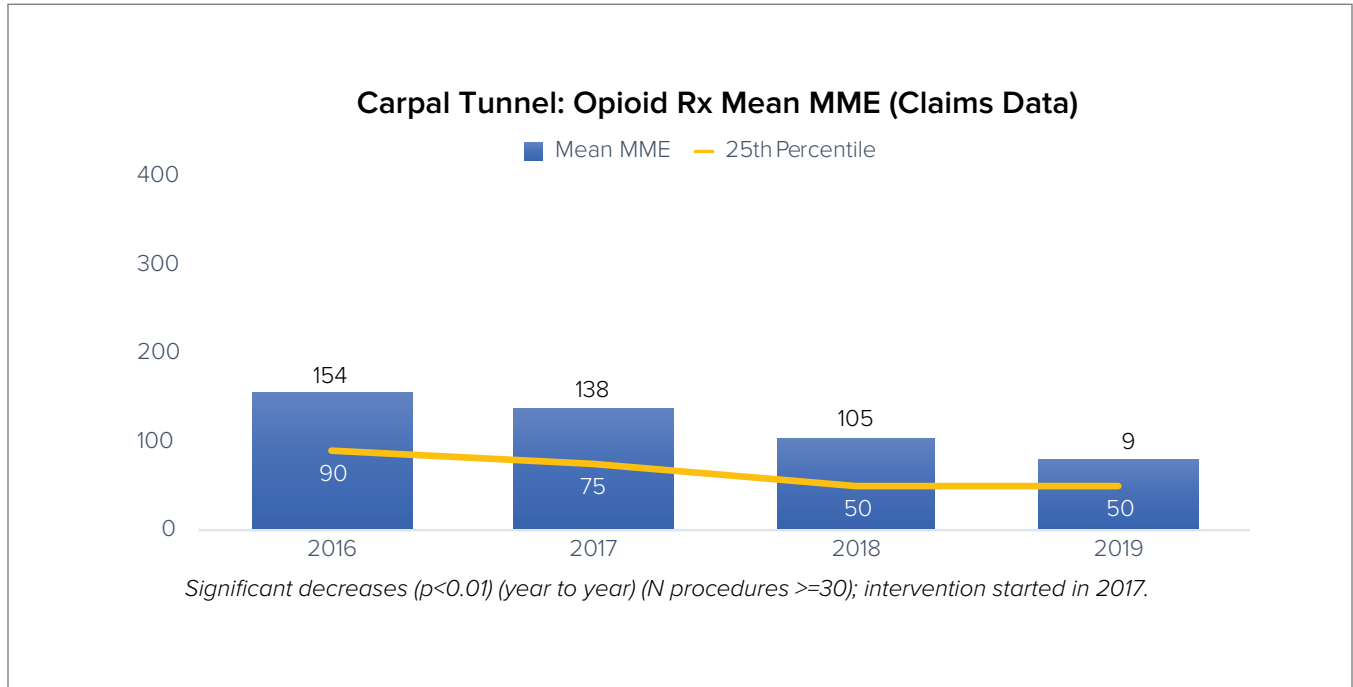


Overall claims data showed a dosage decrease of 43%; individual organizations combined decreased by 54%; and organization E had the largest decrease of 67%.

Graph 25

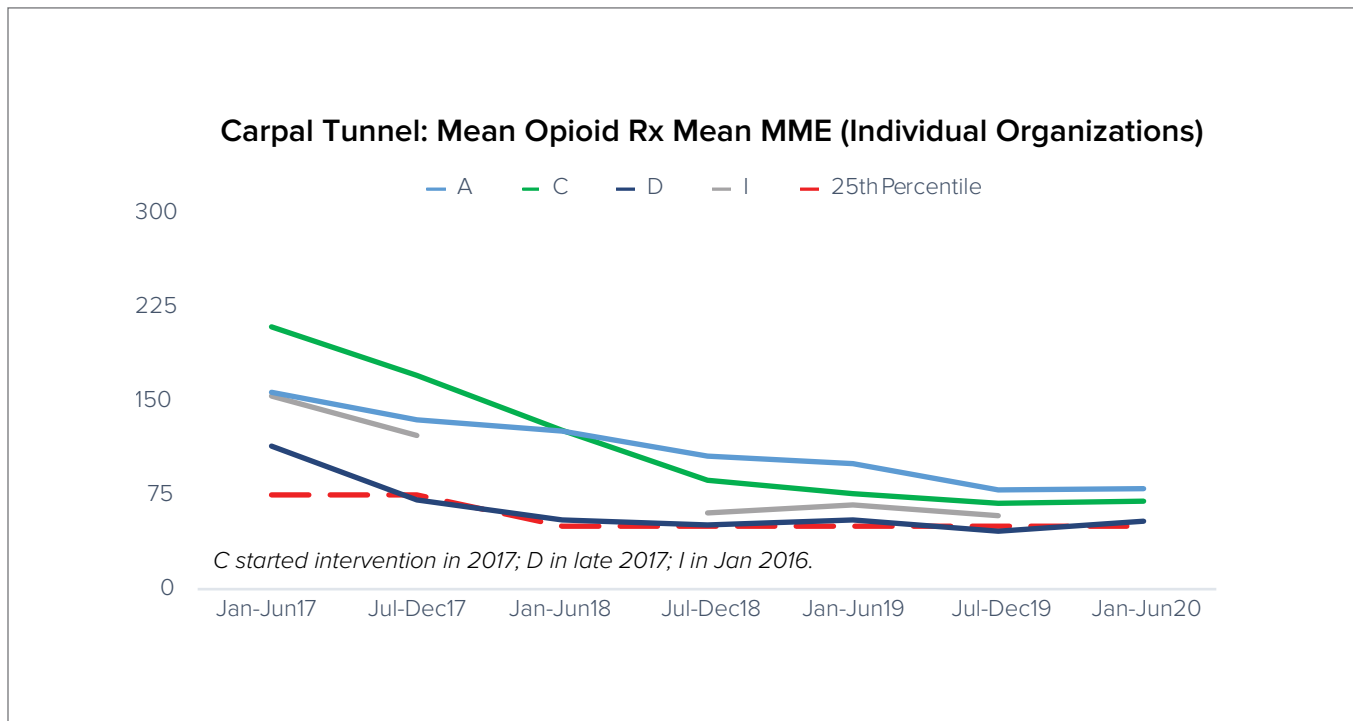


Graph 26



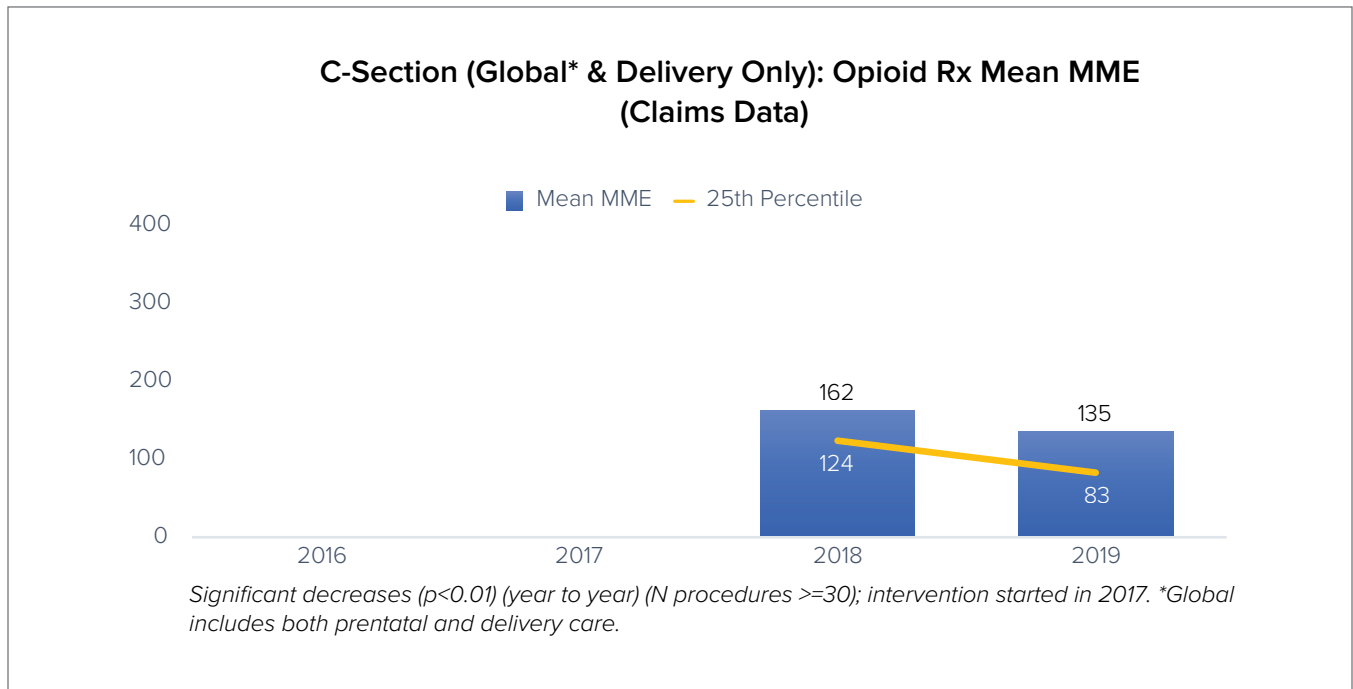
Overall claims data showed a dosage decrease of 49%; individual organizations combined decreased by 58%; and organization E had the largest decrease of 67%.

Graph 27



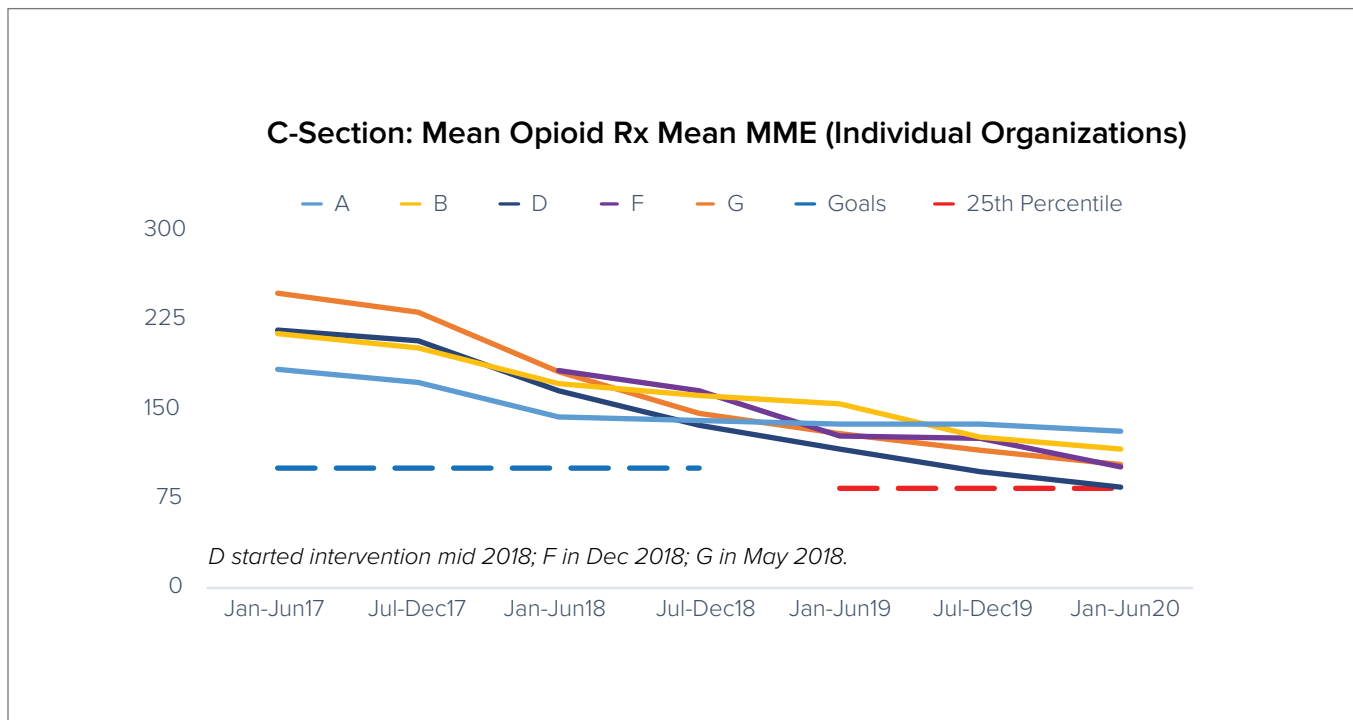
Groups also continued to work on surgeries outside of the orthopedic, spine, podiatry cohort. Here are some of their results.

Graph 28

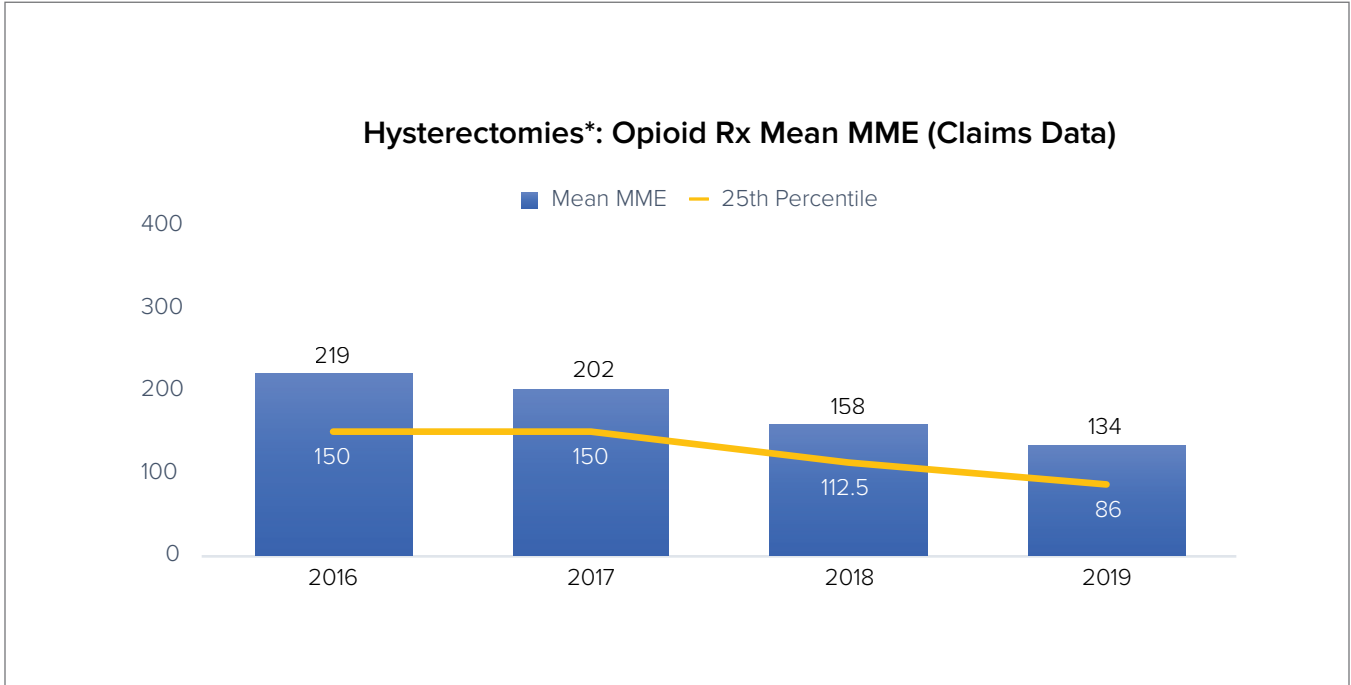


We were unable to obtain claims data for C-Sections in 2016-2017, however individual organizations combined decreased doses by 49% and organization D decreased by 61%.

Graph 29

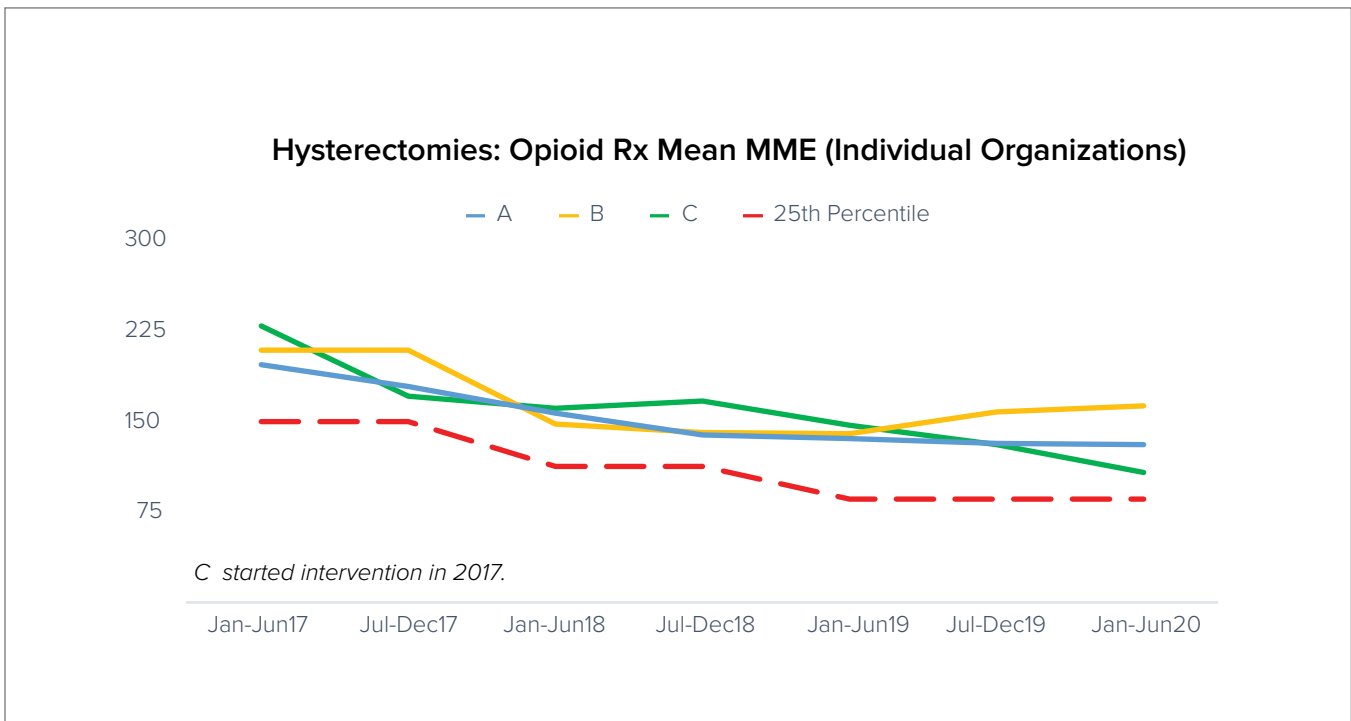


Graph 30

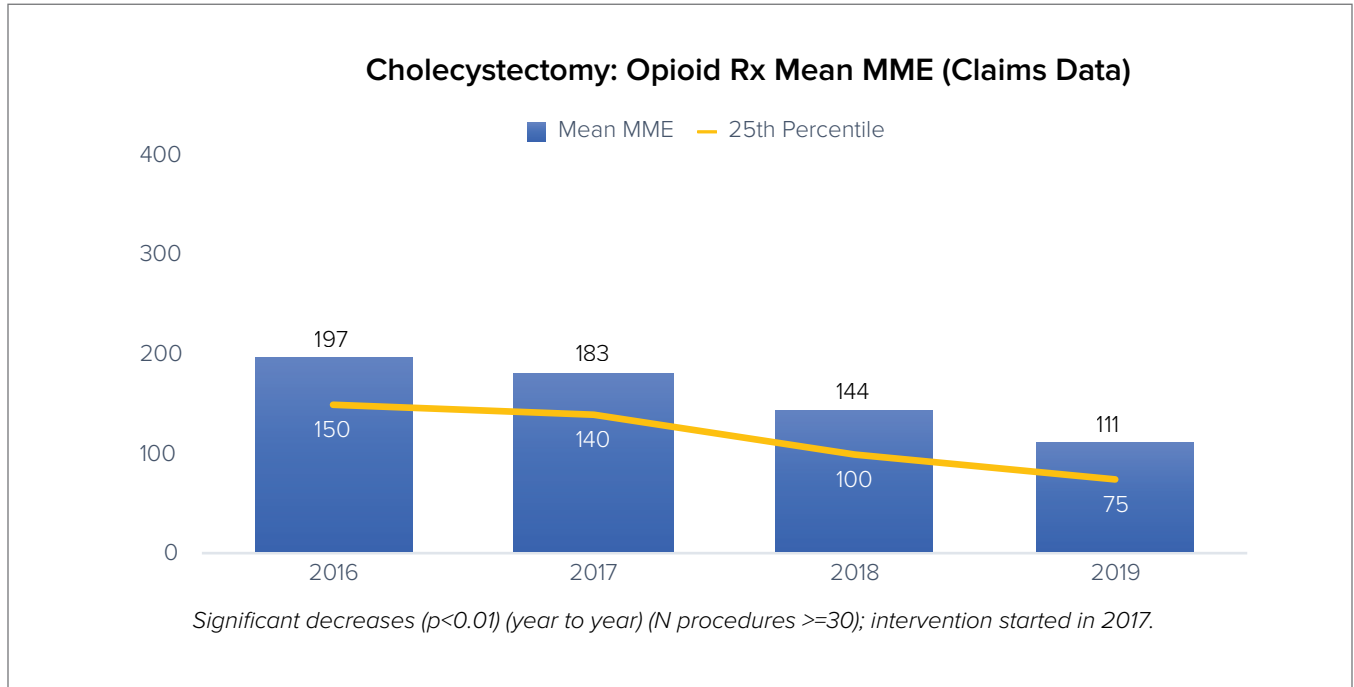


Overall claims data showed a dosage decrease of 39%; Organization C had the largest decrease of 53%.

Graph 31

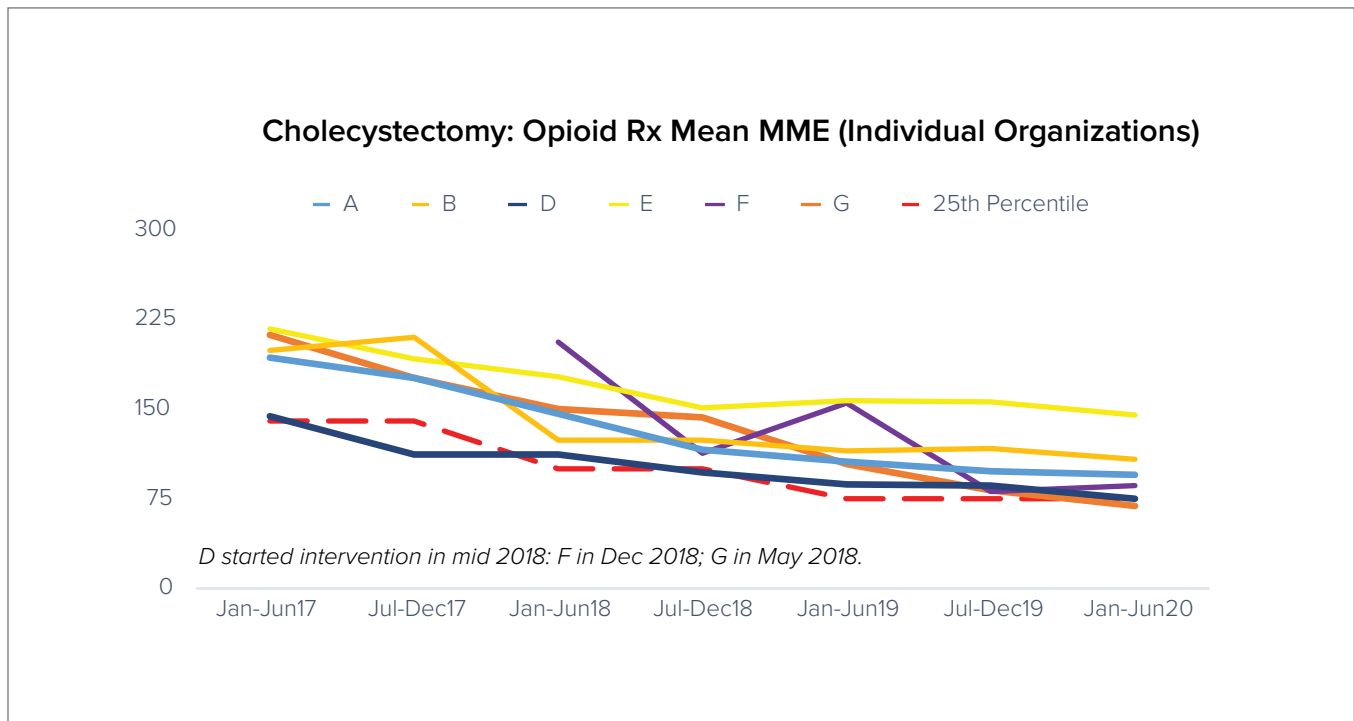


Graph 32

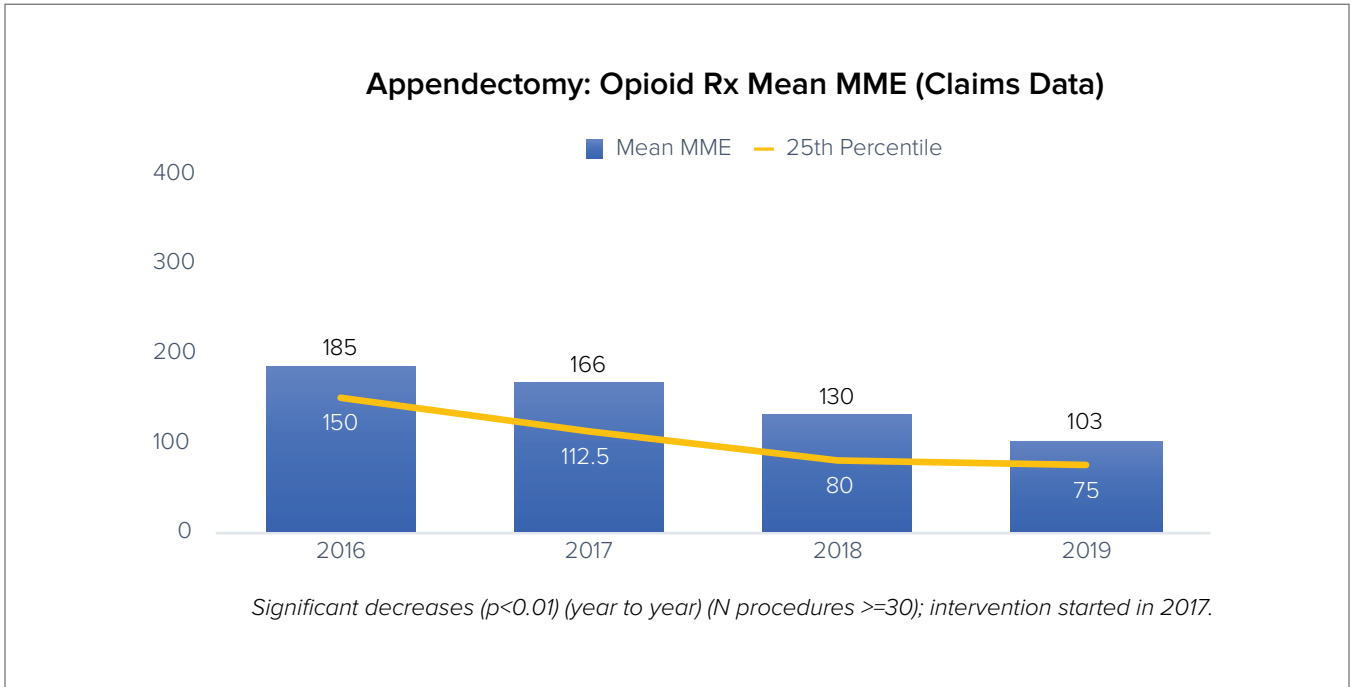


Overall claims data showed a dosage decrease of 44%; individual organizations combined decreased by 51%; and organization G had the largest decrease of 67%.

Graph 33

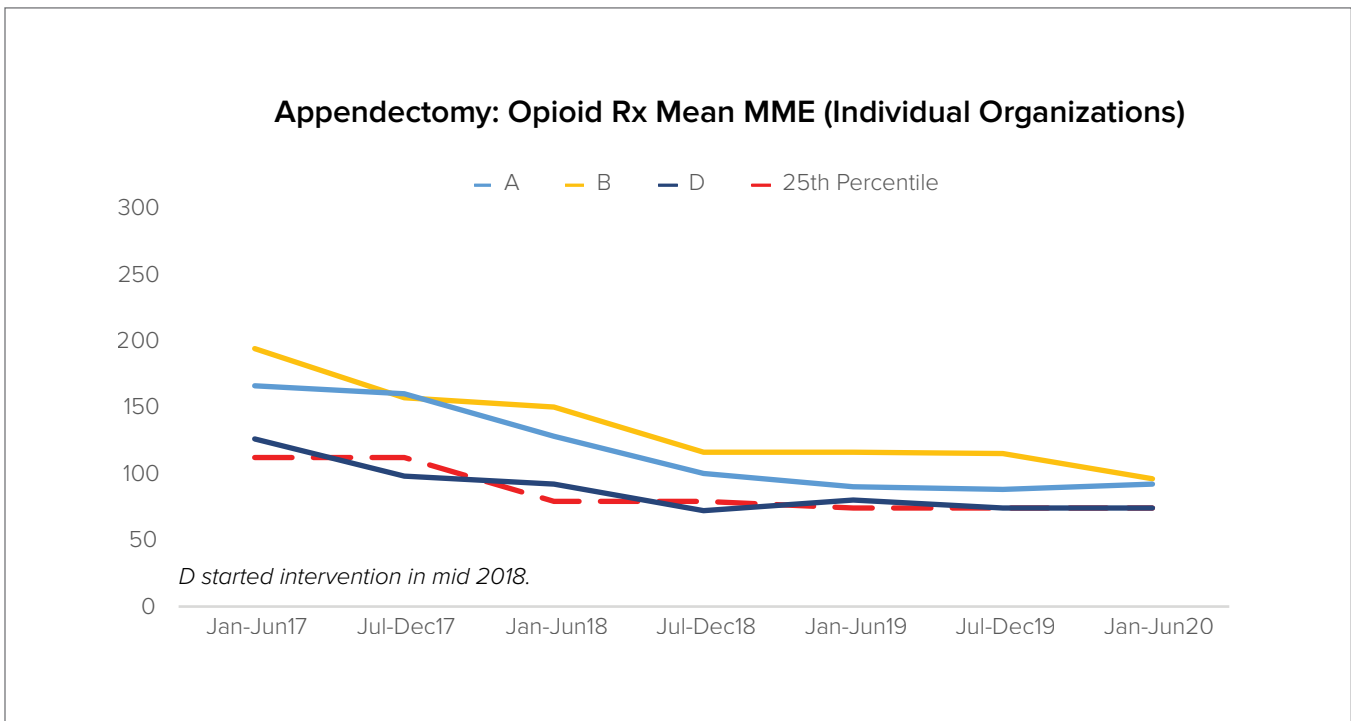


Graph 34

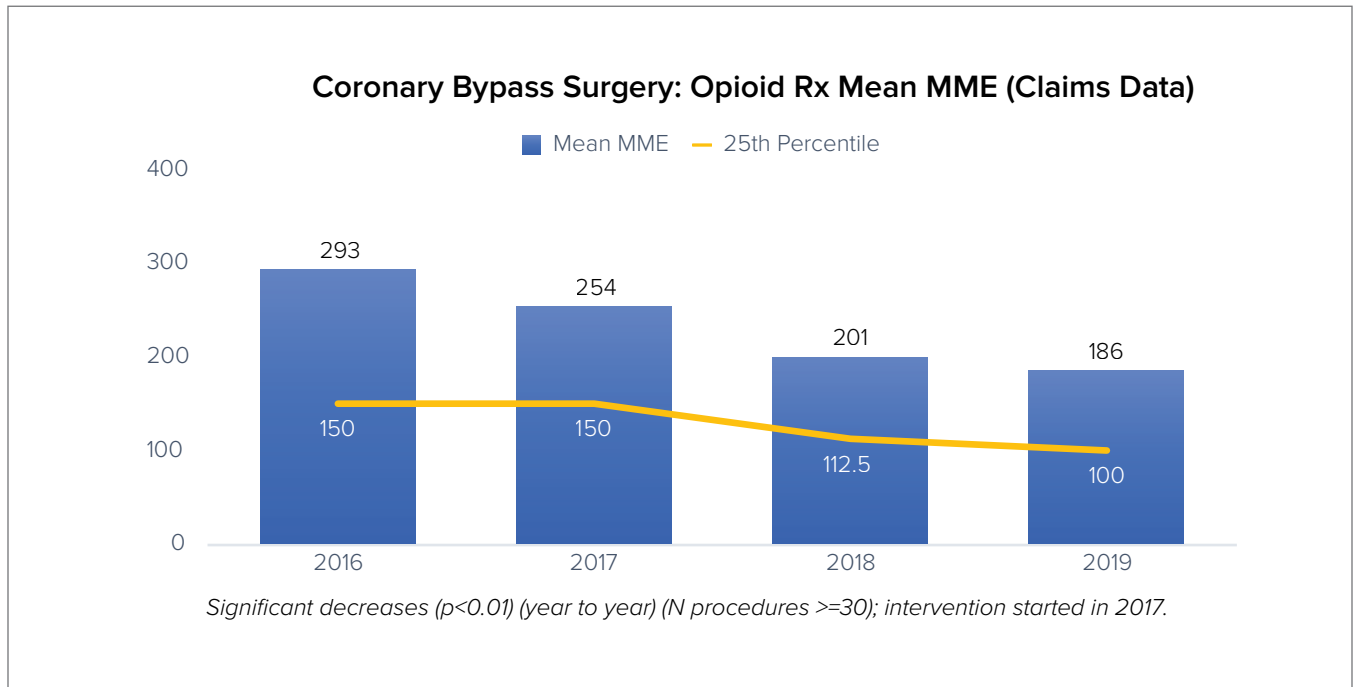


Overall claims data showed a dosage decrease of 44%; organization B had the largest decrease of 50%.

Graph 35

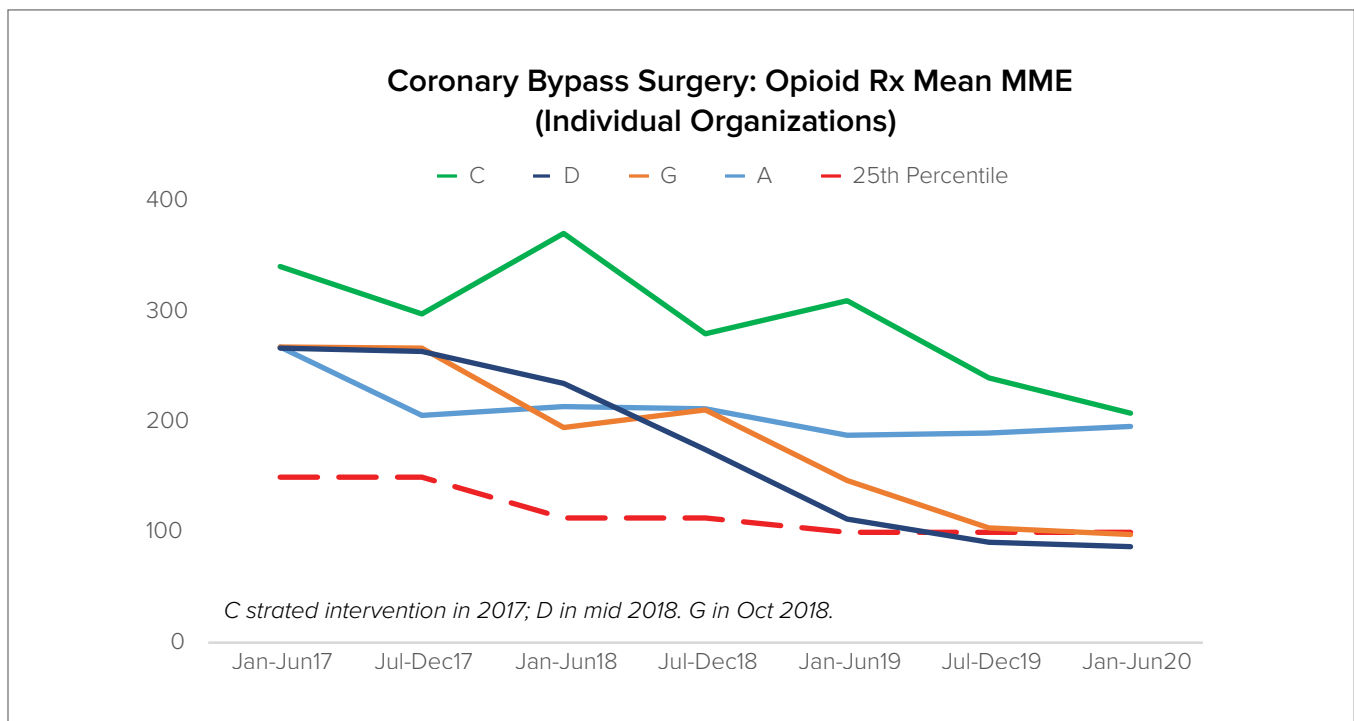


Graph 36

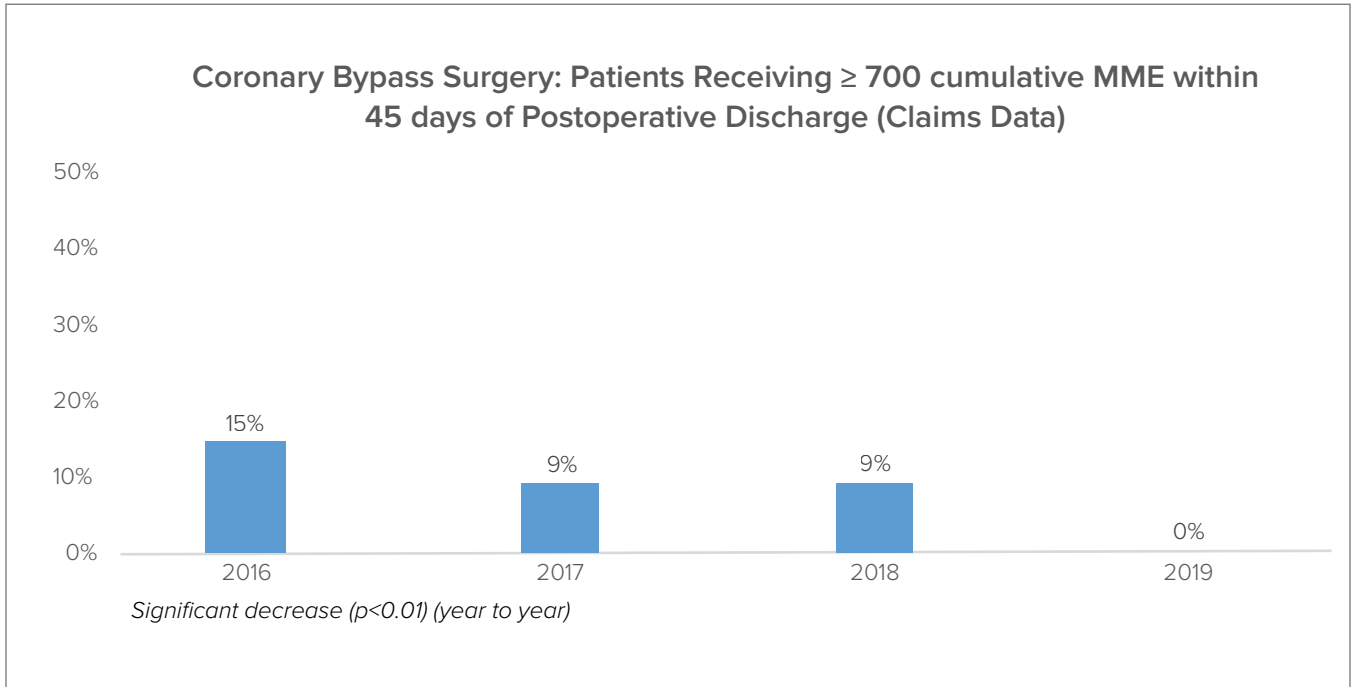


Overall claims data showed a dosage decrease of 37%; individual organizations combined decreased by 49%; and organization D had the largest decrease of 67%.

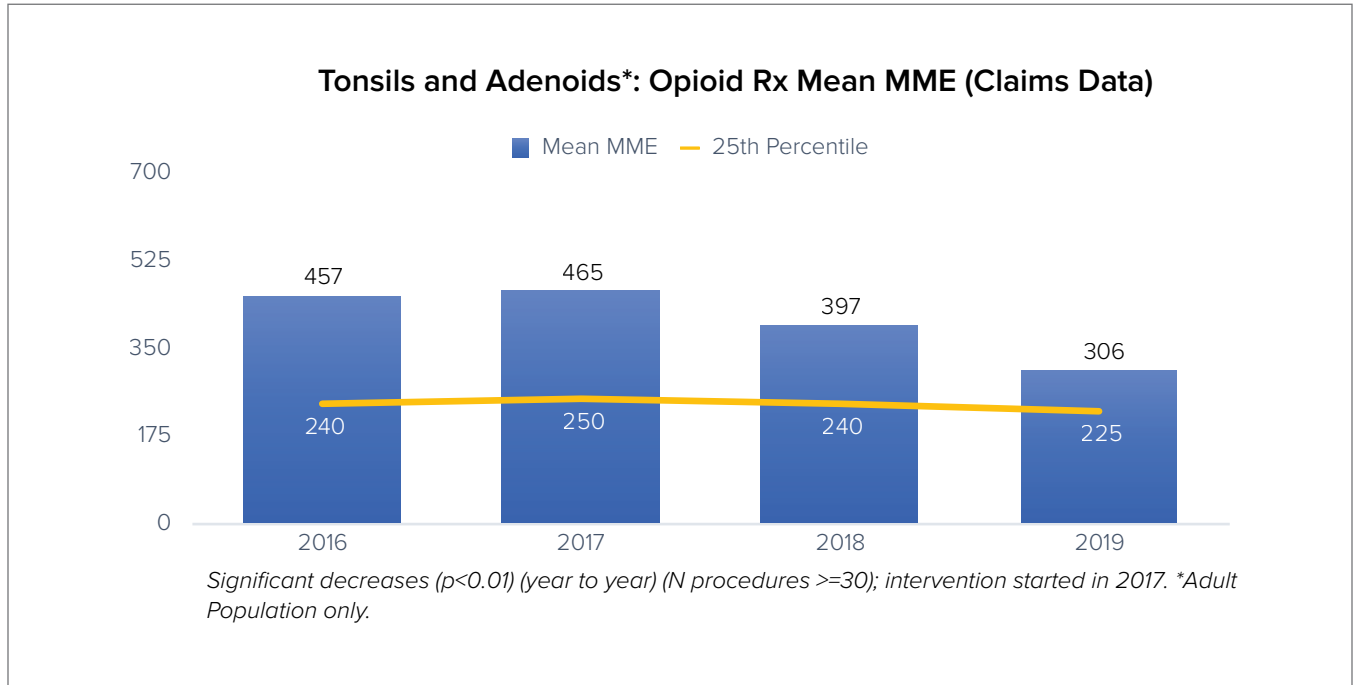
Graph 37



Graph 38

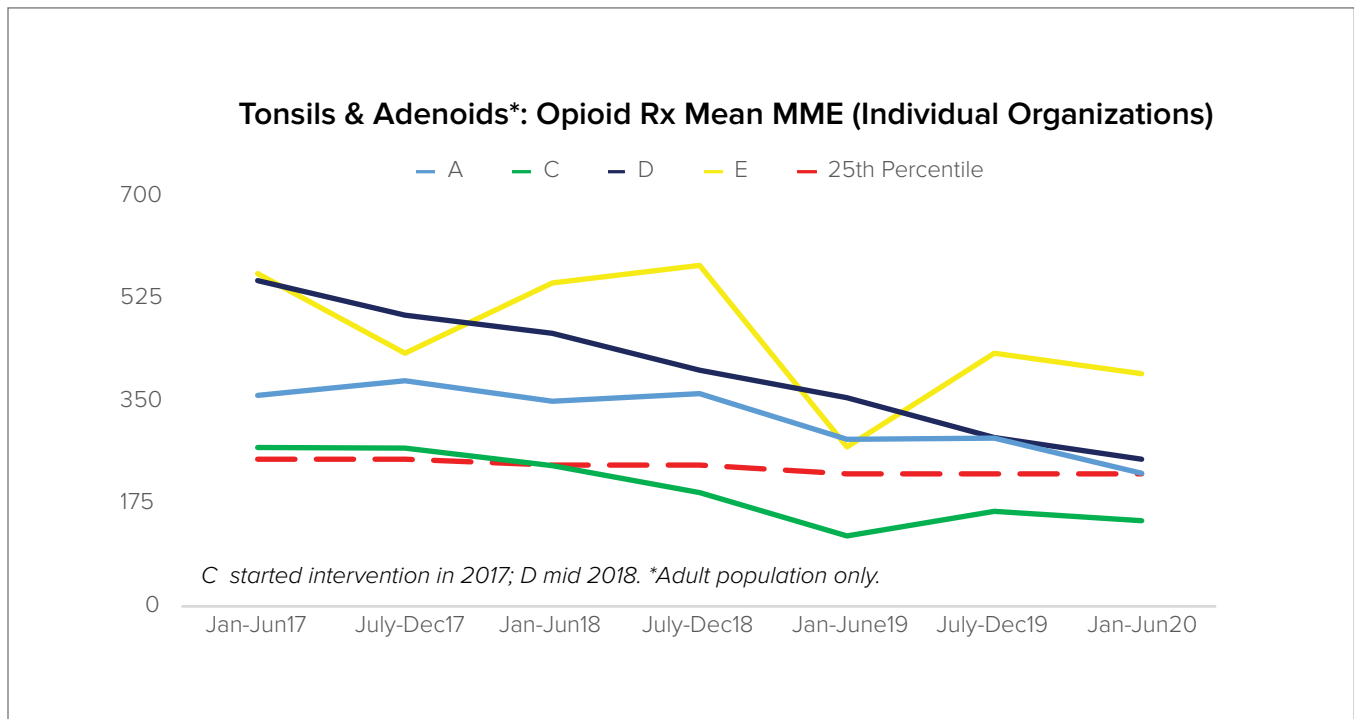


Graph 39

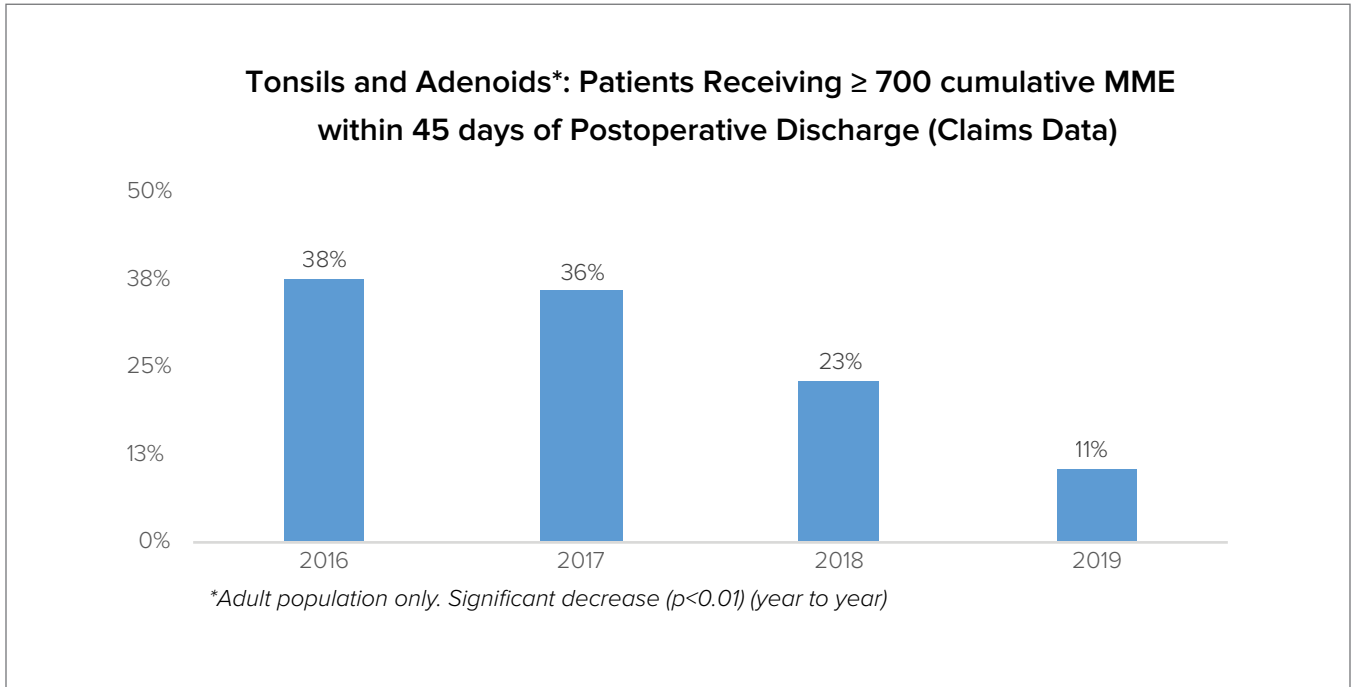


Overall claims data showed a dosage decrease of 33%; individual organizations combined decreased by 42%; and organization D had the largest decrease of 55%.

Graph 40



Graph 41



Overall claims data showed a dosage decrease of 33%; individual organizations combined decreased by 42%; and organization D had the largest decrease of 55%.

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