



THA Medication Safety Summit 2018

***Gleaning the Data to Support an Opioid-
Light Emergency Department (ED)***

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I have no conflicts of interest to disclose

Objectives

- Appraise the Kata improvement process
- Analyze different strategies to evaluate opioid use
- Evaluate methods to calculate opioid use in the emergency department

THE KATA PROCESS

Kata Improvement Process

- Kata - Japanese word for individual training exercises usually performed in a choreographed pattern
- Adapted by businesses for process improvement
 - Scientific thinking
 - Rapid experimentation
 - Identify obstacles

Kata Improvement Process



● Define the Challenge



● Grasp the Current Condition

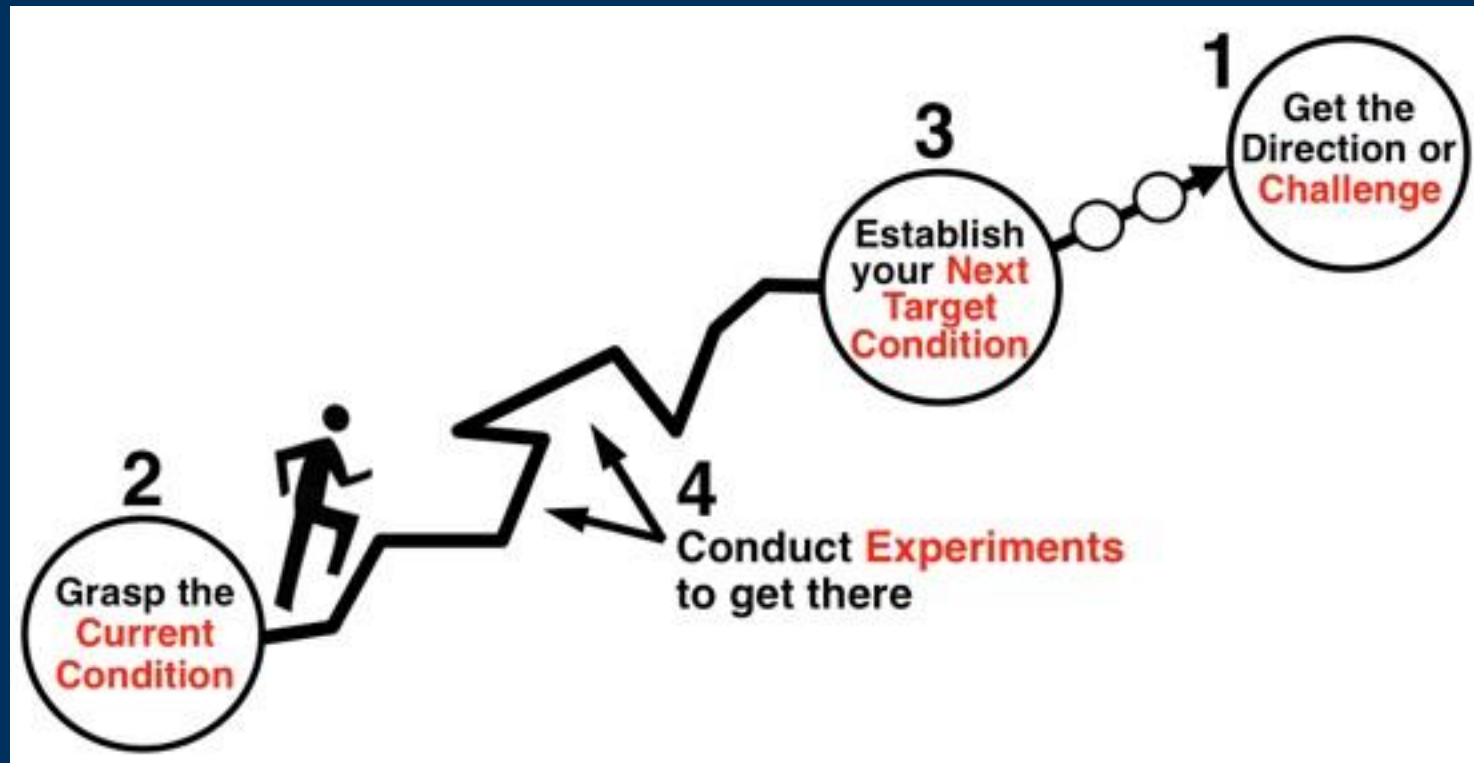


● Establish the Target Condition



● Determine Solutions

Kata Improvement Process



The Challenge

It would be reVOLutionary if by 9/30/2017, BMH-Memphis pharmacy department has reduced the total milligrams of morphine equivalents (mME) administered in the ED by 40% in order to:

- Positively affect the opioid abuse in our region
- Improve overall patient care by use of alternative pain treatments
- Reduce unnecessary ED visits

The Target

Utilize
Alternative
Treatments First

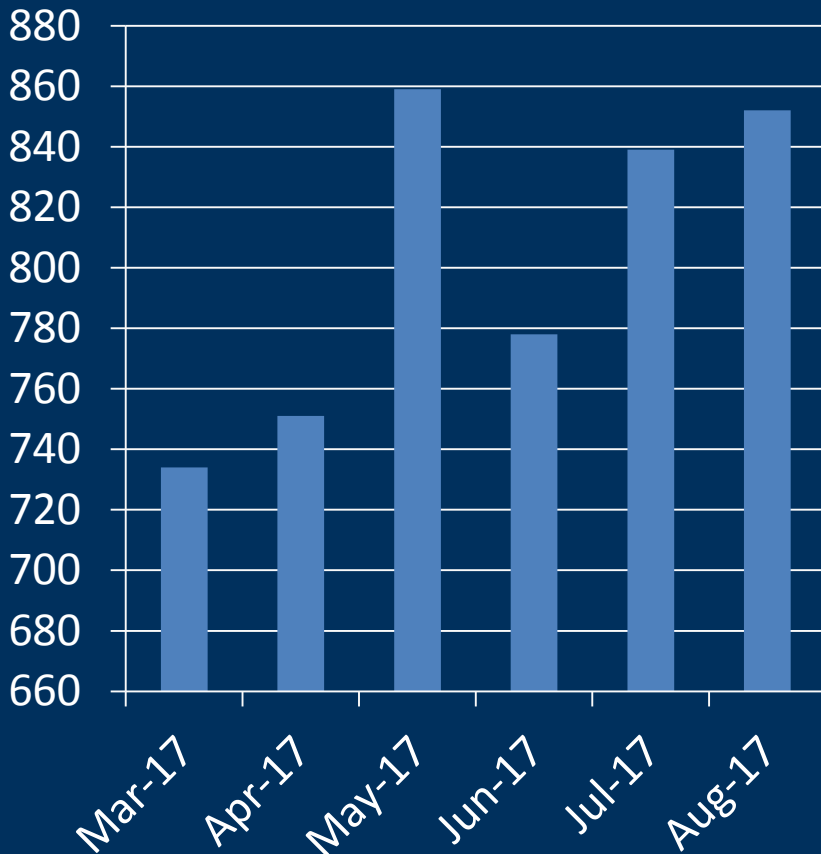
Decrease
Variance in
Ordering Habits

Utilize Lowest
Effective Dose
of Opioids

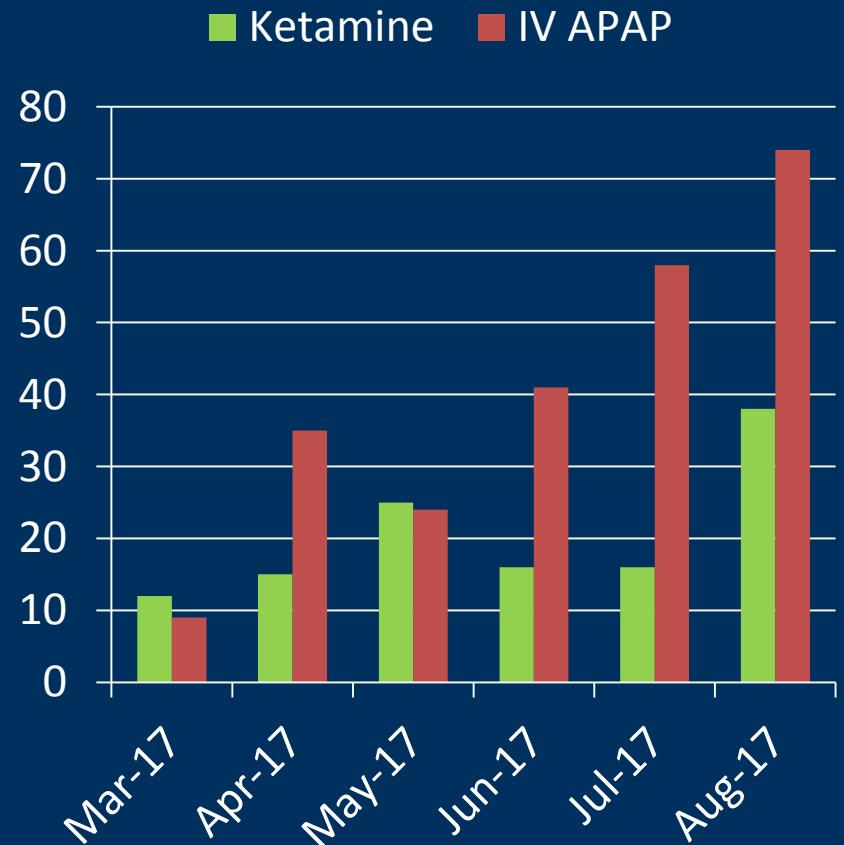
Decrease
Number of
Opioid Doses

Use of Alternatives

Ketorolac Usage



Ketamine/IV APAP Usage



Digging Through the Data

Overall ED mME/100 visits

Provider mME/100 visits

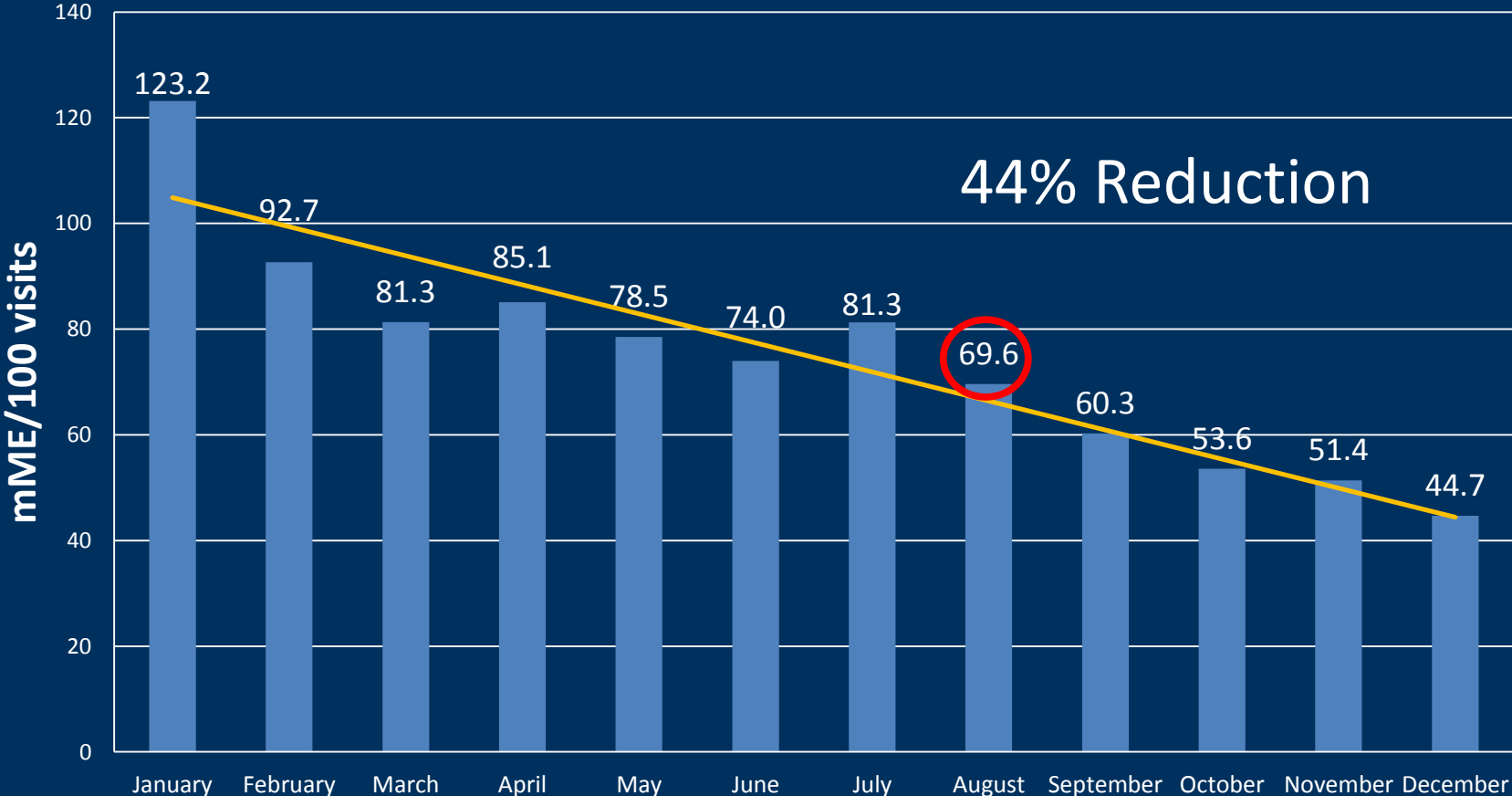
Provider opioid doses per patient

Provider mME per type of opioid

OVERALL MME/100 VISITS

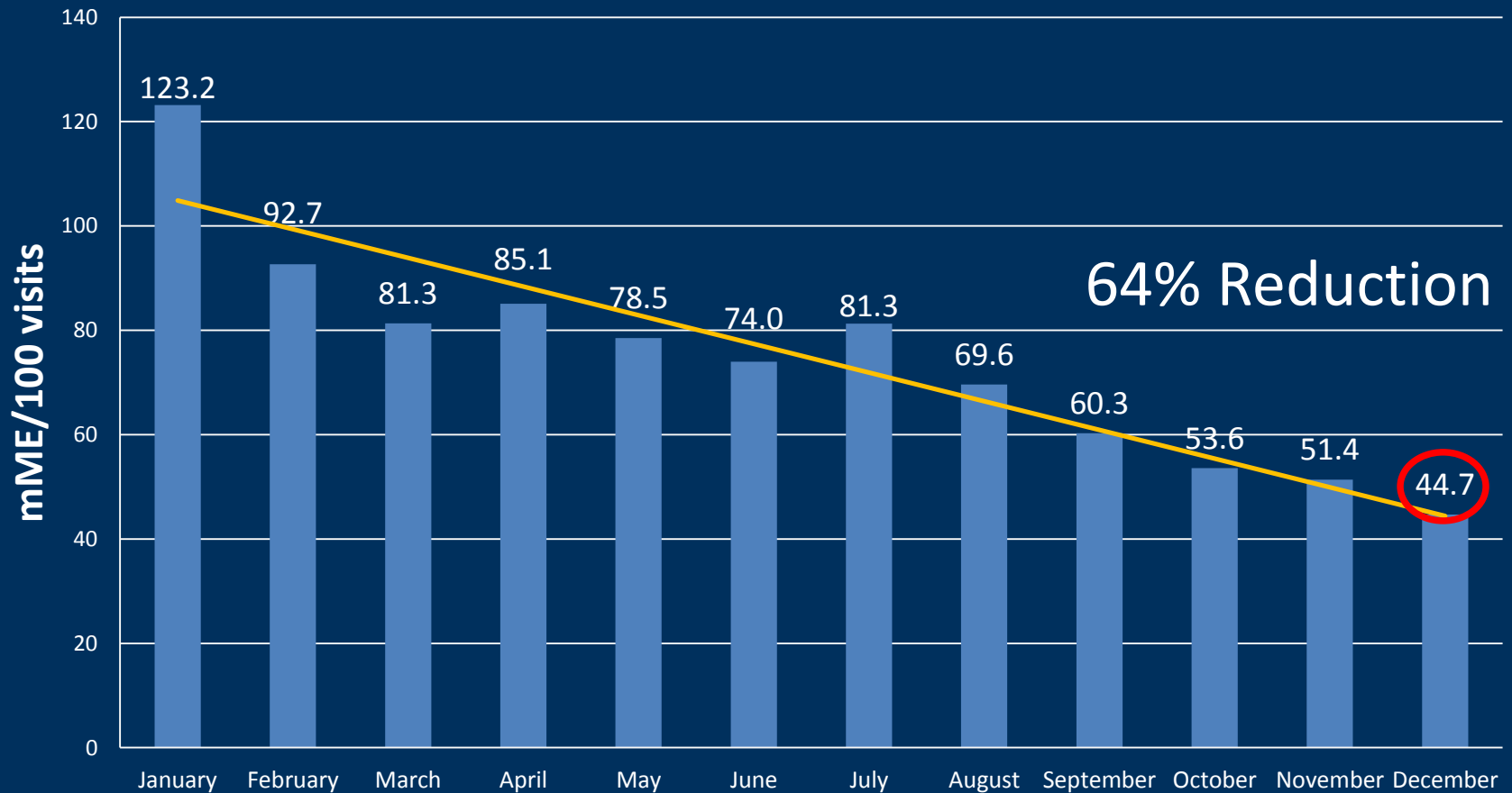
mME/100 Visits

2017 ED Opioid Reduction



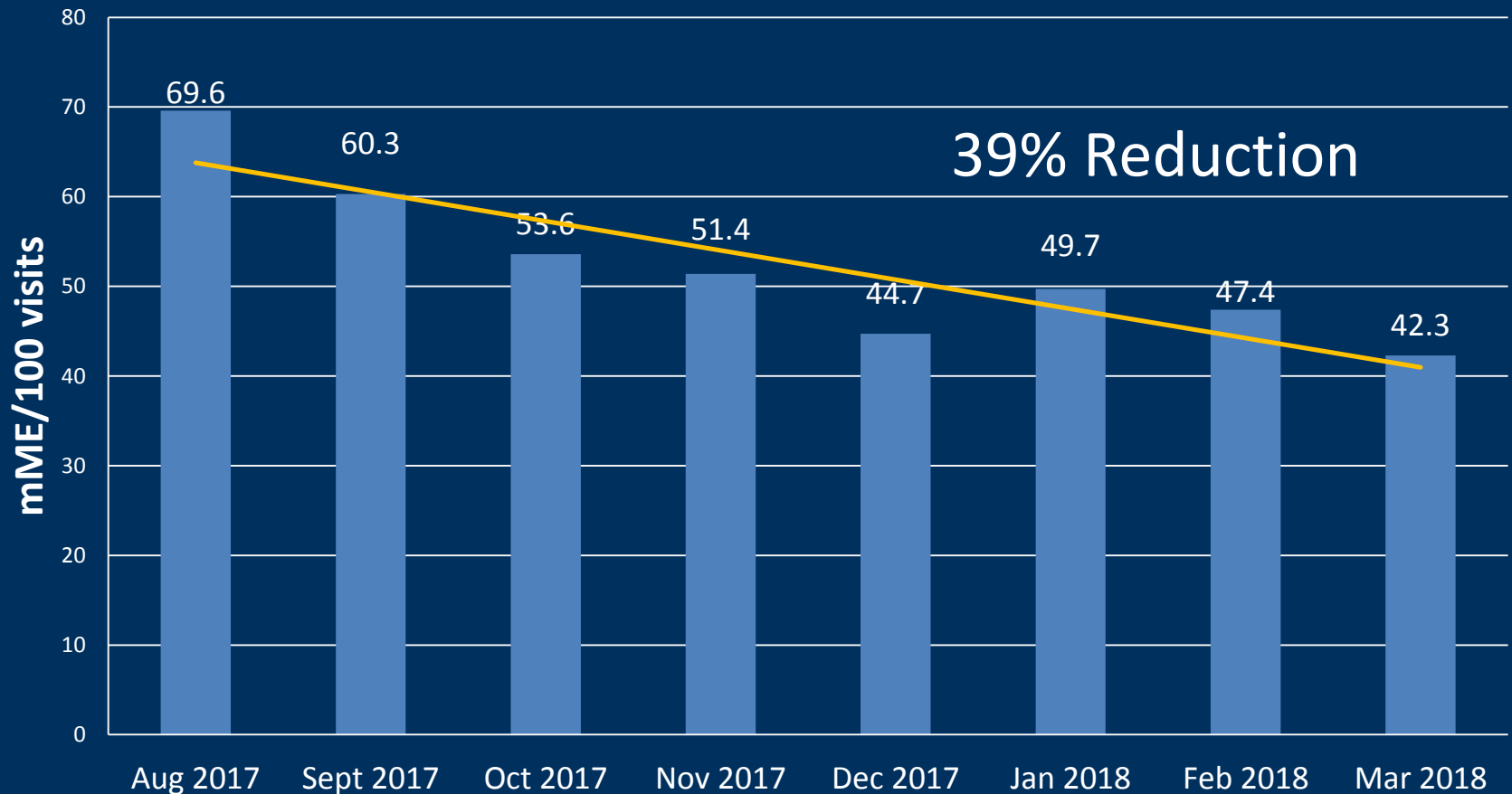
mME/100 Visits

2017 ED Opioid Reduction



mME/100 Visits

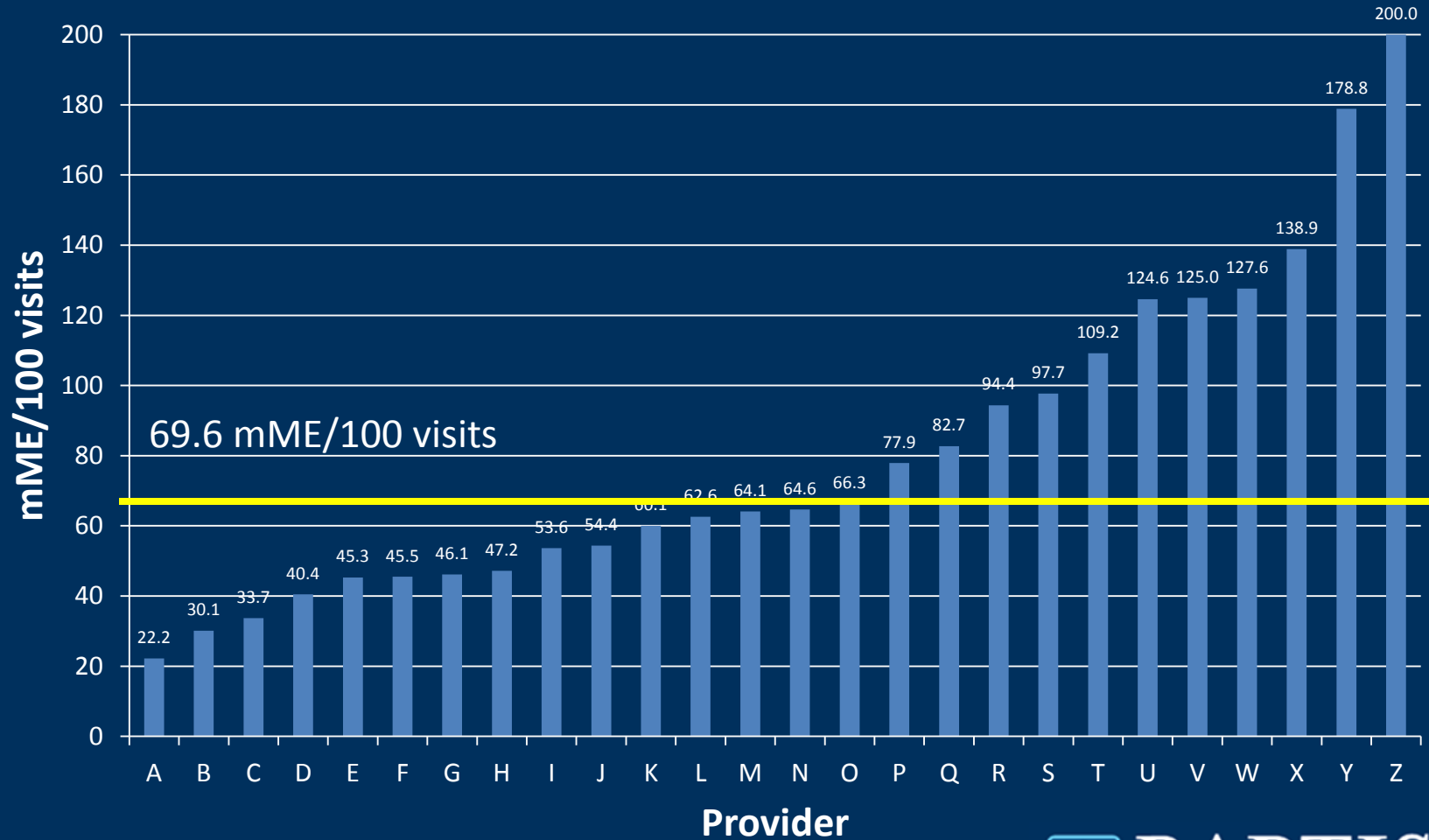
2017-2018 ED Opioid Reduction



PROVIDER MME/100 VISITS

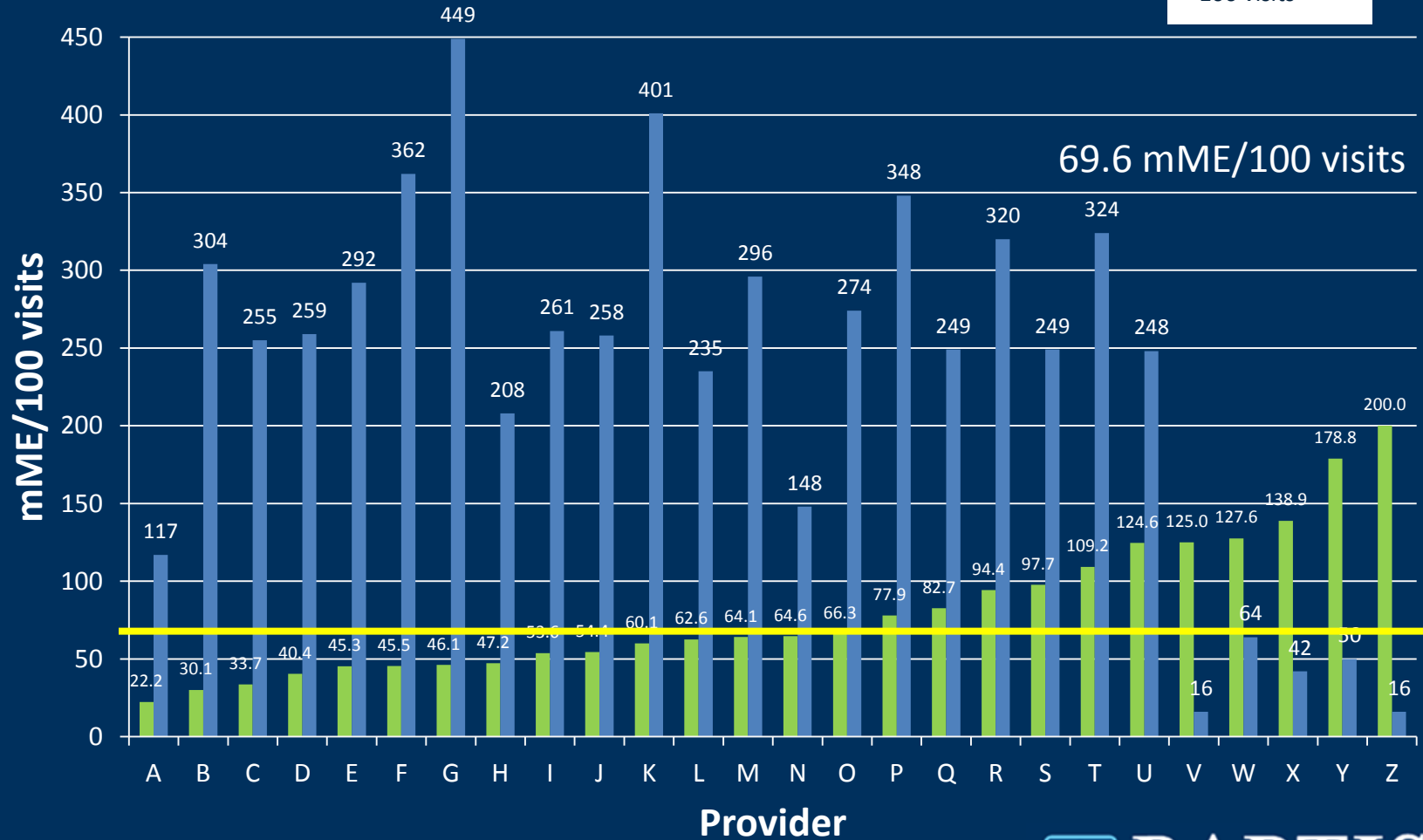
Provider Specific mME/100 Visits

August 2017



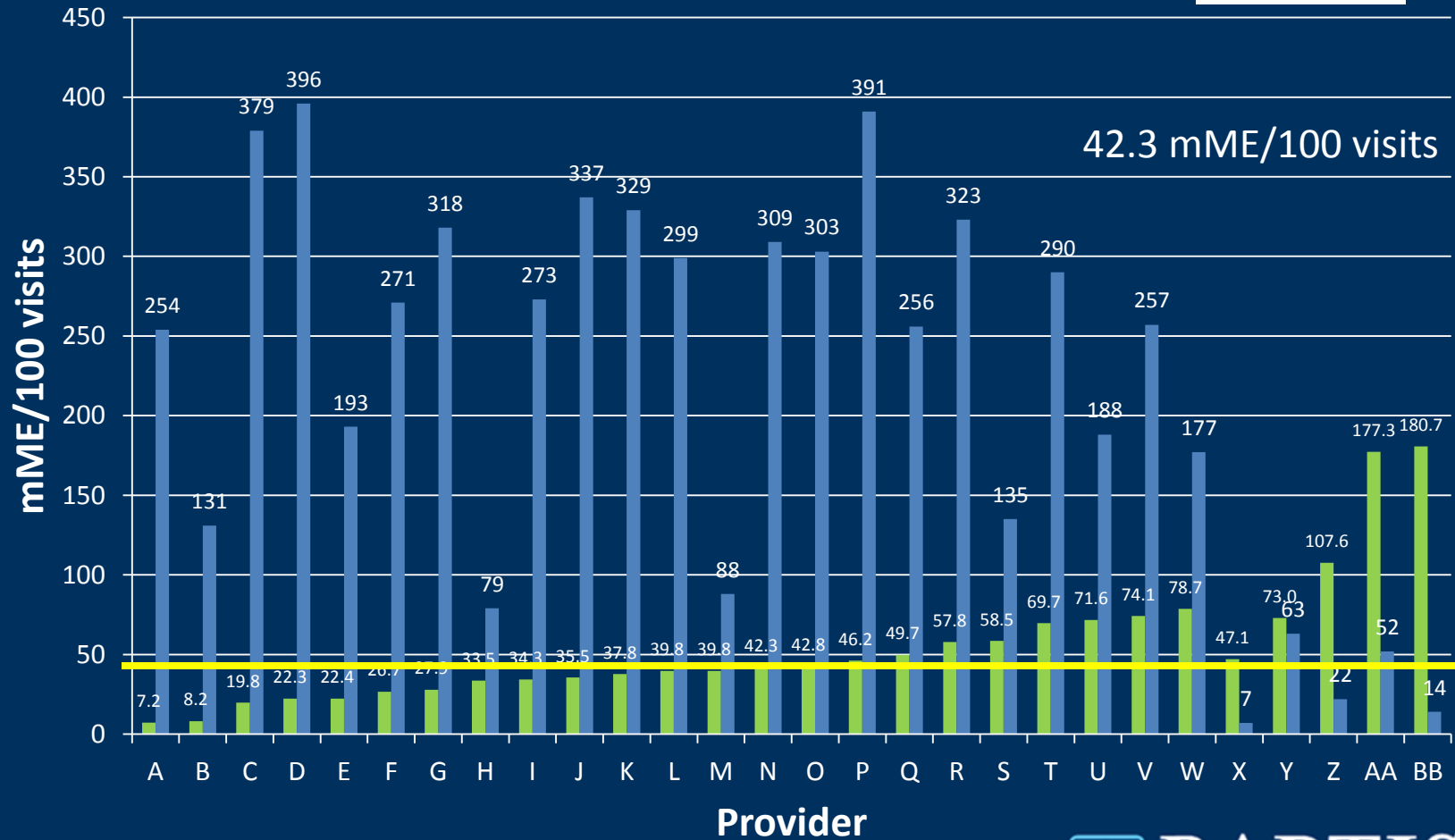
Provider Specific mME/100 Visits

August 2017



Provider Specific mME/100 Visits

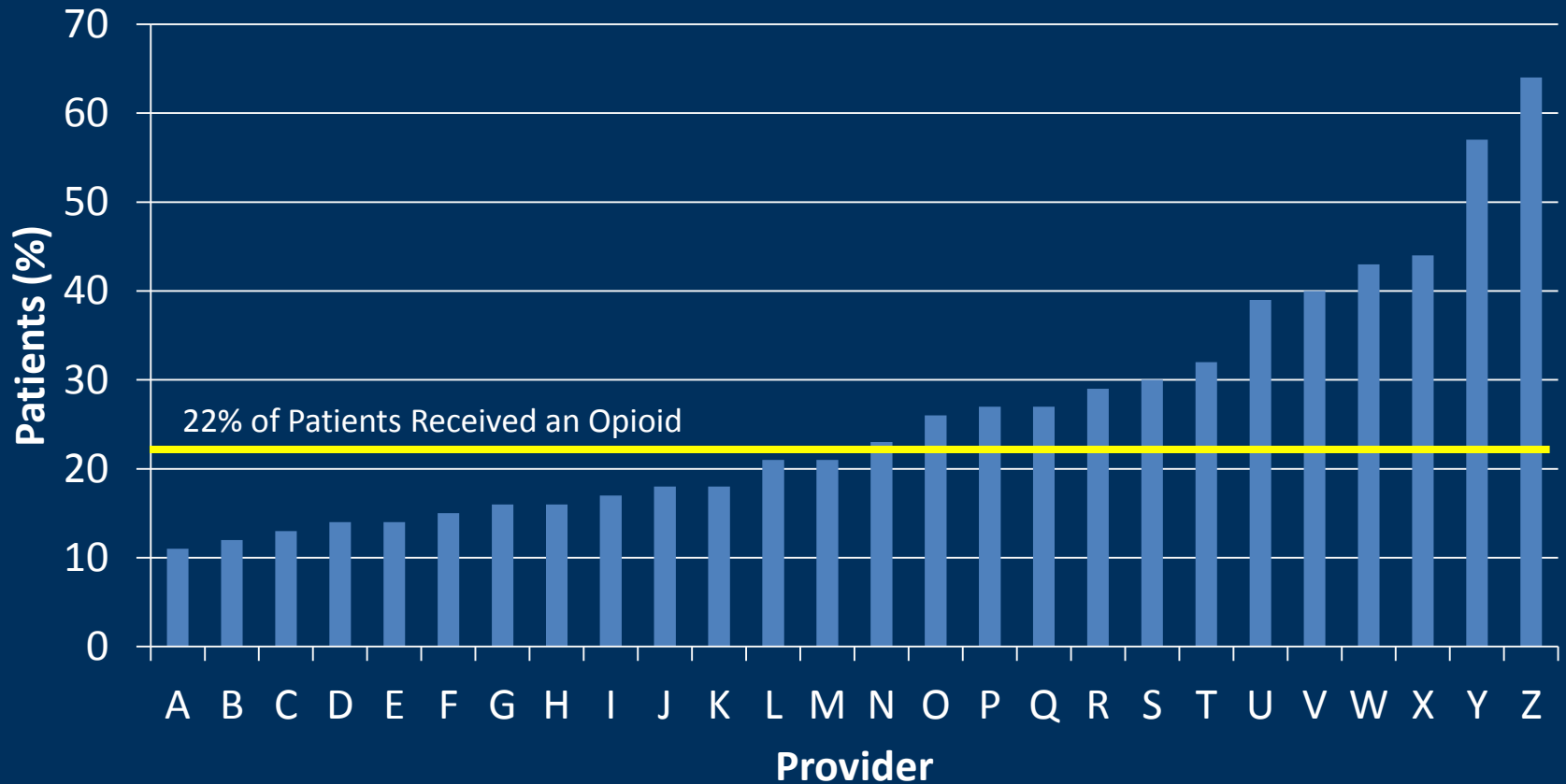
March 2018



PROVIDER DOSES/PATIENT

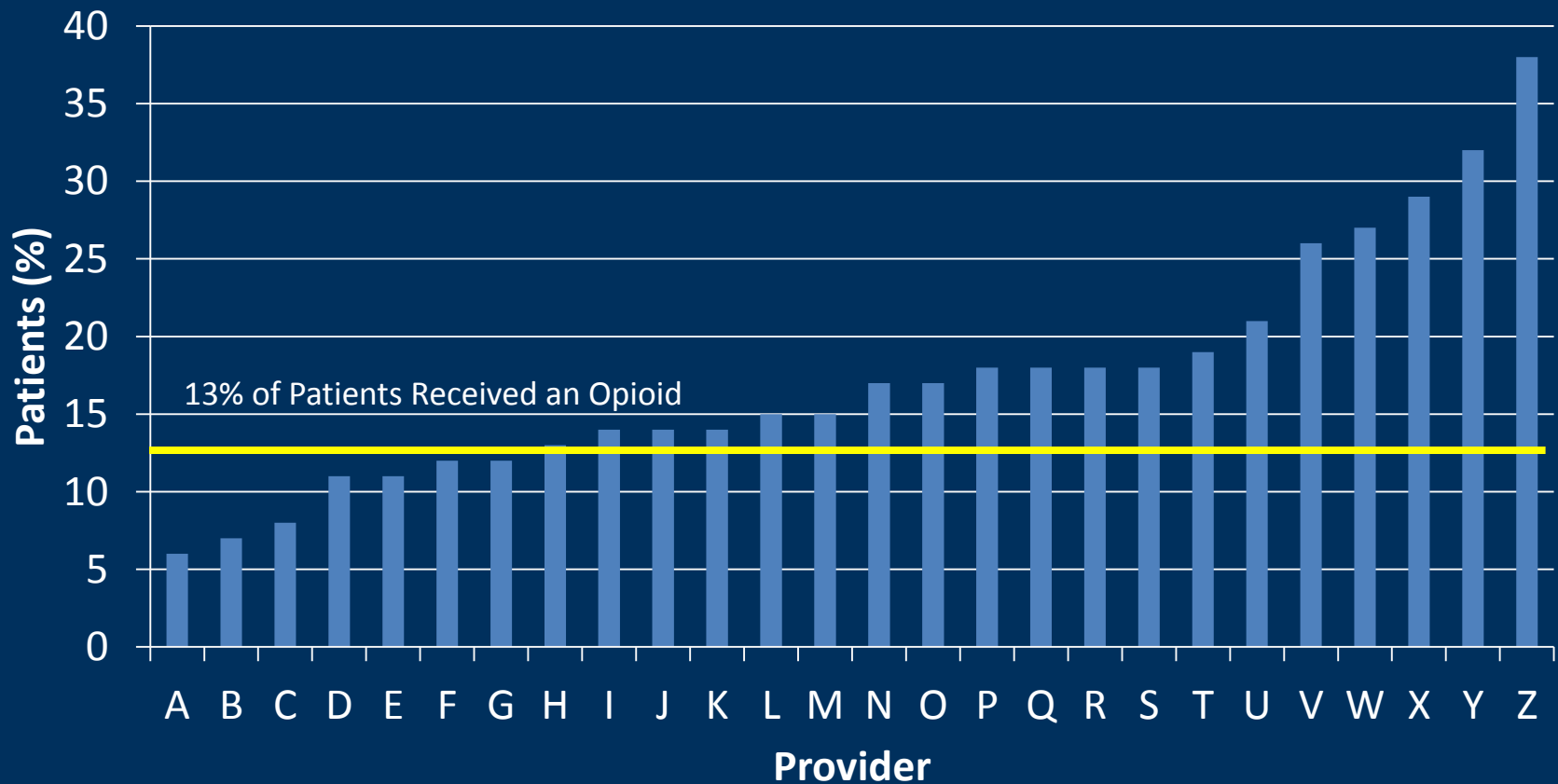
Provider Doses Per Patient

April 2017



Provider Doses Per Patient

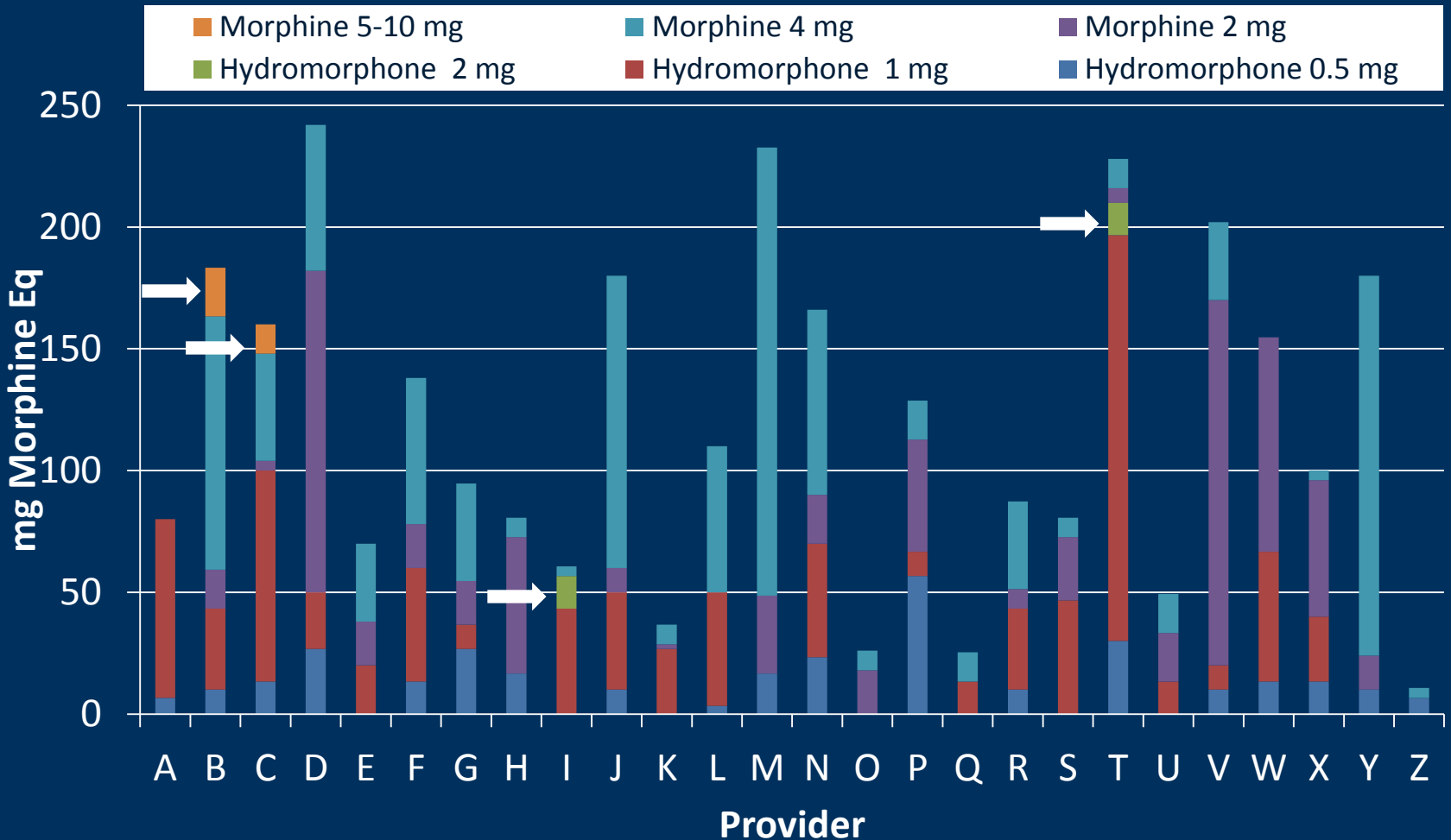
August 2017



PROVIDER MME PER OPIOID

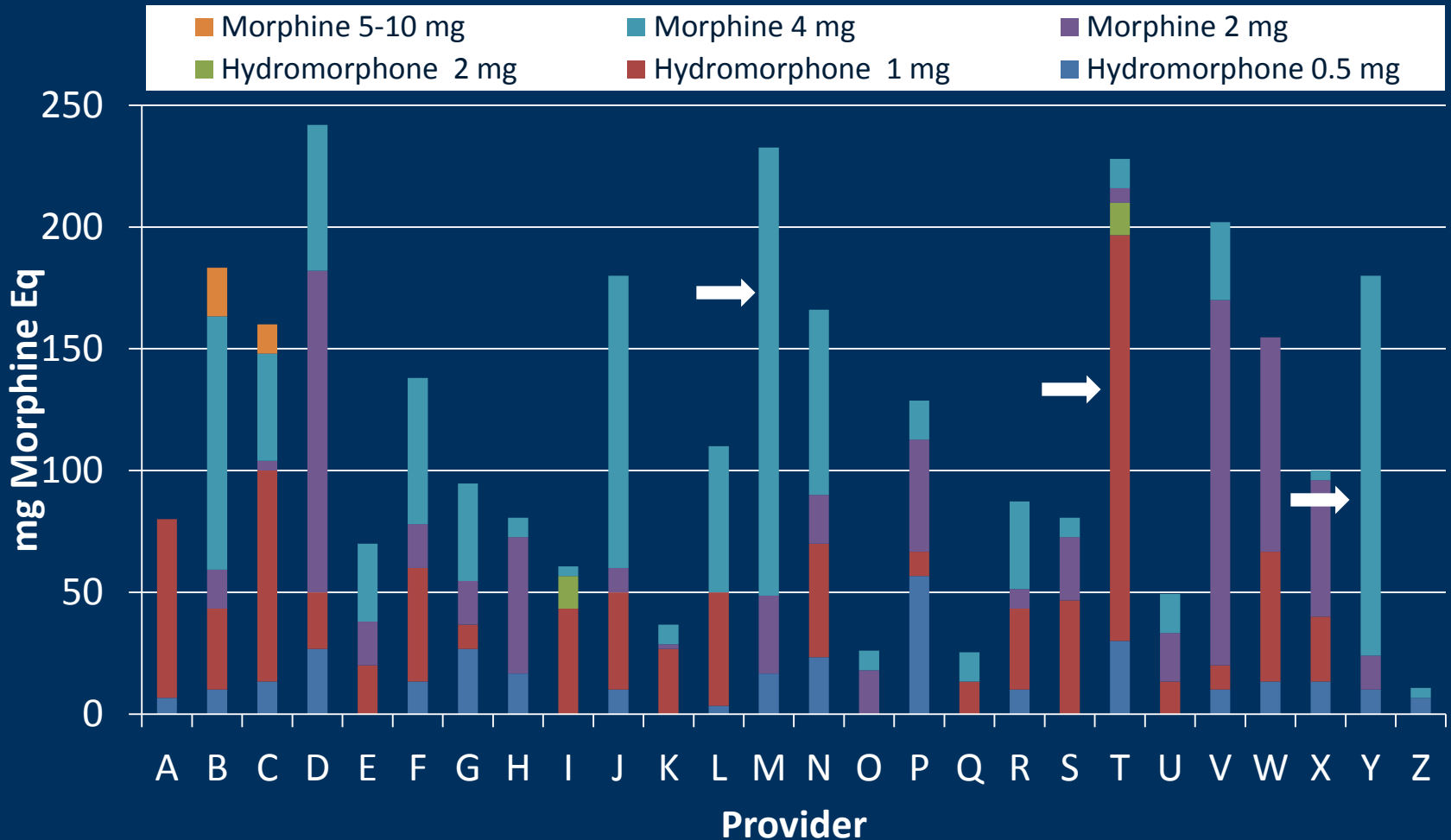
Provider mME per Opioid Type

August 2017



Provider mME per Opioid Type

August 2017



Breaking the Habit

The
Obstacle

Providers'
"Favorites"
List

Abdominal Pain Patients

Current
Condition

High Doses
Saved

Utilize Opioids First

Target
Condition

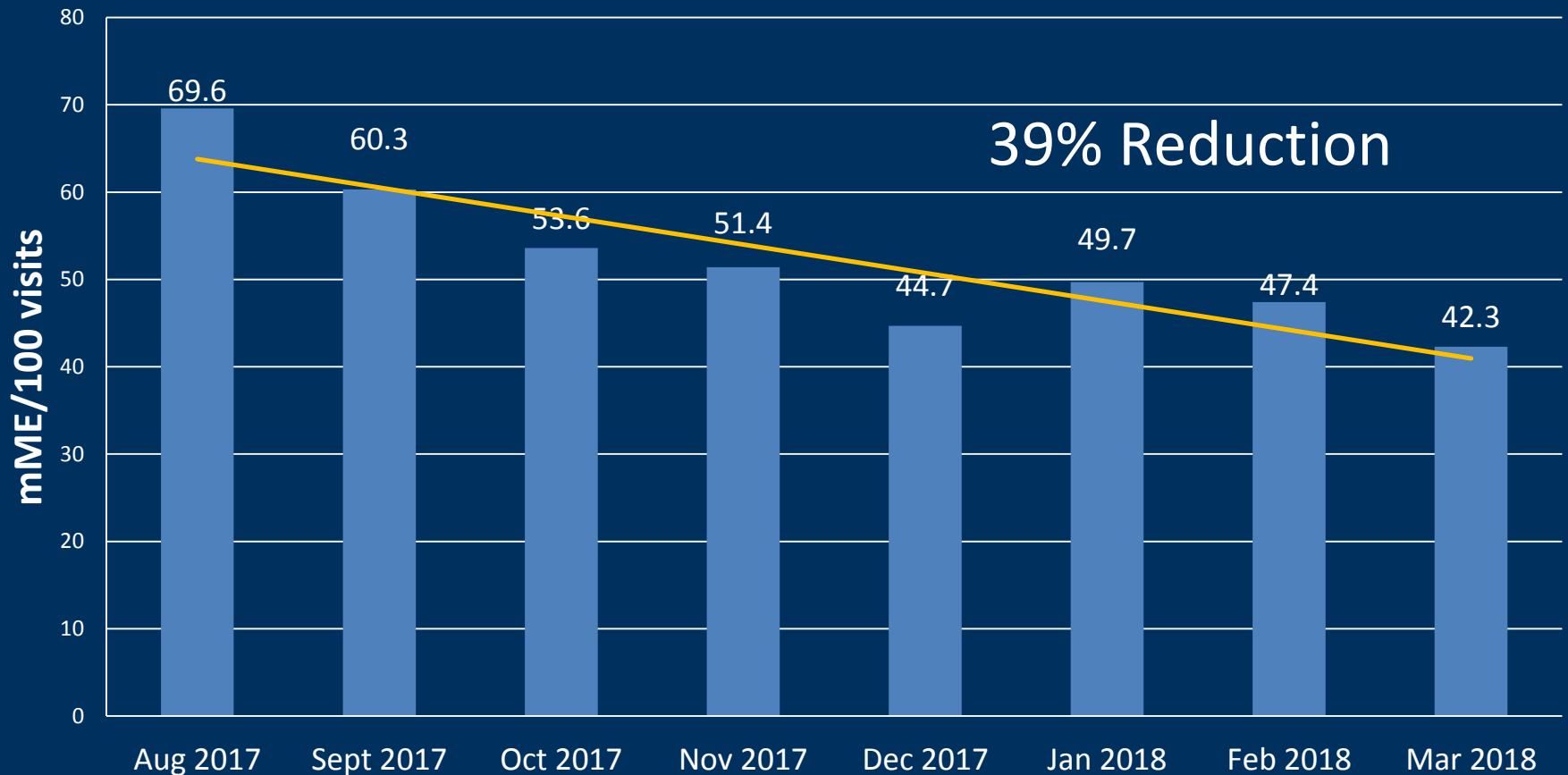
Decrease Dose
by 50%

Try Alternative
Treatments
First

Utilize Lowest
Effective Dose
of Opioids (if
needed)

mME/100 Visits

2017-2018 ED Opioid Reduction



OPIOID CALCULATIONS

Calculator Essentials

Intuitive

Adaptable

Expandable

Gathering the Data

Opioid Use Report

- Automated Dispensing System
- Electronic Health Record



Data Points

- Number of Visits
- Type of Opioid
- Dose of Opioid
- Number of Doses
- mME of Opioid

Gathering the Data

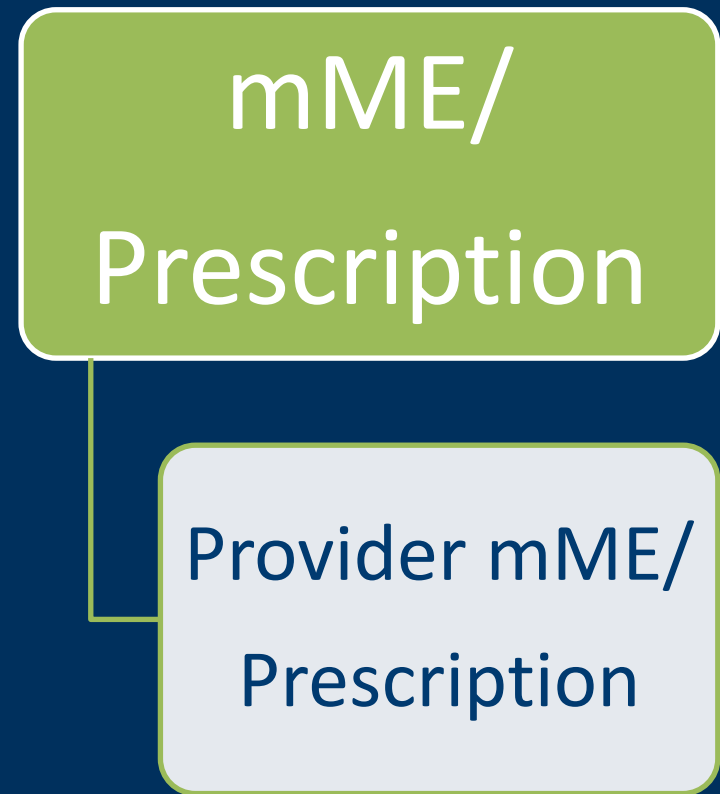
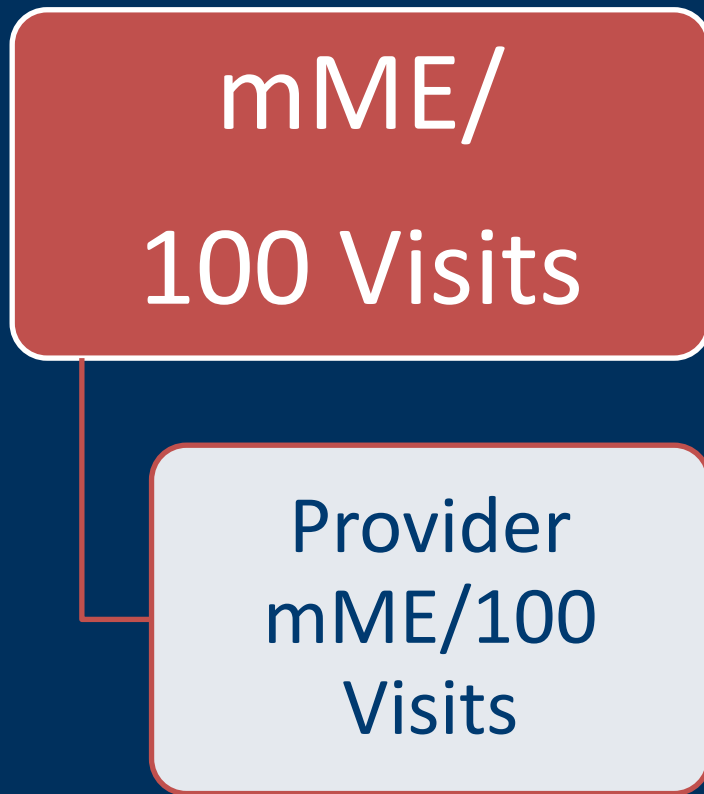
	A	B	C	D	E	F
	Drug	Form	Drug ID	MG/Dose Given Once	Multiplier	mME
1						
2	HYDROCOD-ACETAMINOP 5-217/10ML	5MG/10ML 10ML CUP	29075	0.0	5	0.00
3	HYDROCOD-ACETAMINOP 7.5/325/15ml SOLN	7.5MG/15ML 15ML CUP	29116	0.0	7.5	0.00
4	HYDROCOD-ACETAMINOPH 10-325	1EA TAB	26052	0.0	1	0.00
5	HYDROCOD-ACETAMINOPH 5-325	1EA TAB	26050	0.0	1	0.00
6	HYDROCOD-ACETAMINOPH 7.5-325	1EA TAB	26051	0.0	1	0.00
7	HYDROMORPHONE	0.5MG/0.5ML 0.5ML INJ	50775	0.0	0.5	0.00
8	HYDROMORPHONE	1MG/1ML 1ML INJ	20648	0.0	1	0.00
9	HYDROMORPHONE	2MG TAB	24222	0.0	1	0.00
10	HYDROMORPHONE	2MG/1ML 1ML INJ	22819	0.0	2	0.00
11	MORPHINE	4MG/1ML 1ML SYRG	21063	0.0	4	0.00
12	MORPHINE	2MG/1ML 1ML INJ	24444	0.0	2	0.00
13	MORPHINE	10MG/1ML 1ML VIAL	25196	0.0	10	0.00
14	MORPHINE IR	30MG TAB	24198	0.0	30	0.00
15	OXYCODONE	5MG TAB	25395	0.0	5	0.00
16	OXYCODONE-ACETAMINOP 10-325	1EA TAB	26065	0.0	1	0.00
17	OXYCODONE-ACETAMINOP 5-325MG	1EA TAB	25090	0.0	1	0.00
18	OXYCODONE-ACETAMINOP 7.5-325	1EA TAB	26064	0.0	1	0.00
19						
20						0.0

Gathering the Data

	A	B	C	D	E	F
1	Drug	Form	MG/DOSE	#DOSES	MivME	MME
2	HYDROCOD-ACETAMINOP 5-217/10ML	5MG/10ML 10ML CUP	5	1	1.666667	5
3	HYDROCOD-ACETAMINOP 7.5/325/15ml SOLN	7.5MG/15ML 15ML CUP	7.5	1	2.5	7.5
4	HYDROCOD-ACETAMINOPH 10-325	1EA TAB	10	1	3.333333	10
5	HYDROCOD-ACETAMINOPH 5-325	1EA TAB	5	1	1.666667	5
6	HYDROCOD-ACETAMINOPH 7.5-325	1EA TAB	7.5	1	2.5	7.5
7	HYDROMORPHONE	0.5MG/0.5ML 0.5ML INJ	0.5	1	3.335	10
8	HYDROMORPHONE	1MG/1ML 1ML INJ	1	1	6.67	20
9	HYDROMORPHONE	2MG TAB	2	1	2.66	8
10	HYDROMORPHONE	2MG/1ML 1ML INJ	2	1	13.34	40
11	MORPHINE	4MG/1ML 1ML SYRG	4	1	4	12
12	MORPHINE	2MG/1ML 1ML INJ	2	1	2	6
13	MORPHINE	10MG/1ML 1ML VIAL	10	1	10	30
14	MORPHINE IR	30MG TAB	30	1	10	30
15	OXYCODONE	5MG TAB	5	1	2.5	7.5
16	OXYCODONE-ACETAMINOP 10-325	1EA TAB	10	1	5	15
17	OXYCODONE-ACETAMINOP 5-325MG	1EA TAB	5	1	2.5	7.5
18	OXYCODONE-ACETAMINOP 7.5-325	1EA TAB	7.5	1	3.75	11.25
19						
20	Total morphine IV milligram equivalents				77.42167	
21	Total morphine PO milligram equivalents					232.25

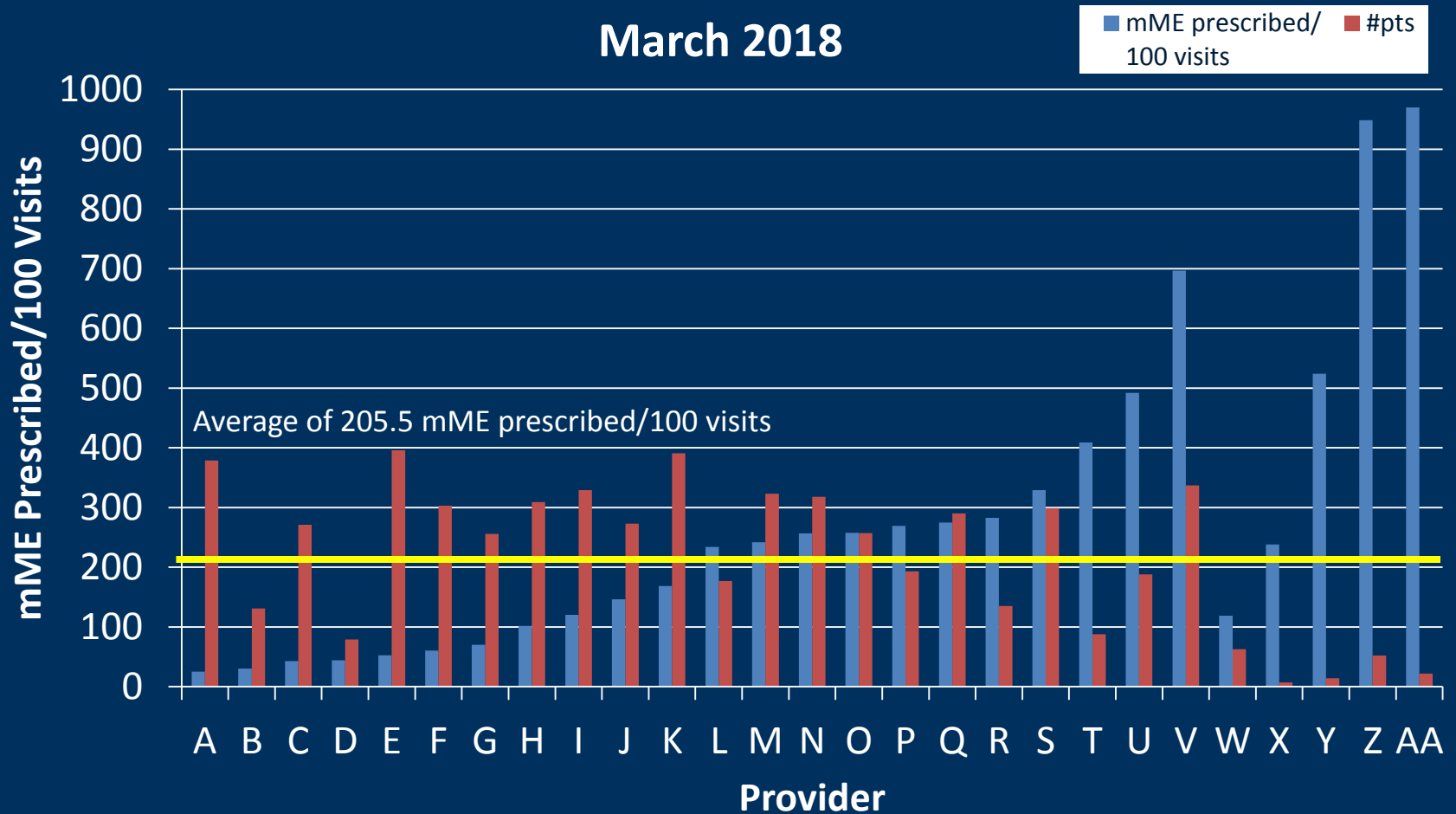
FUTURE DIRECTION

Opioids Prescribed at Discharge



Provider mME Prescribed/100 Visits

March 2018



Summary

- The Kata improvement process can help institutions identify obstacles
- Empowering our providers with the tools needed to make the best choice for our patients is the key to success
- Start somewhere!



Questions?

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