

Michigan Acute Care Surgery Collaborative

**Ypsilanti, MI
September 6, 2023**

Disclosures

◆ Mark Hemmila Grants

- Blue Cross Blue Shield of Michigan
 - MTQIP
- Michigan Department of Health and Human Services
 - MTQIP
- Toyota North America
 - VIPA - Vulnerable Road Users Injury Prevention Alliance
- Insurance Institute for Highway Safety
 - VIPA

No Photos Please



Agenda

- ◆ Welcome/Updates
- ◆ Mark Hemmila
 - BCBSM Updates
 - Acute Appendicitis Data
- ◆ Kim Kramer and Collaborative
 - Acute Appendicitis Readmissions
 - Order of Presentations
- ◆ Lunch

Agenda

- ◆ Finish Acute Appendicitis if needed
- ◆ Mark Hemmila
 - MACS presentation
- ◆ Kim Kramer > moved to Nov. meeting
 - Sepsis
 - Antibiotics
- ◆ Mark Hemmila
 - Recap
 - Projects

Future Meetings

- ◆ 3 per year
- ◆ Wednesday November 29, 2023, Ypsilanti
- ◆ Thursday April 18, 2024, TBD
- ◆ Wednesday September 5, 2024, TBD

- ◆ Let us know if you see problems with dates
- ◆ In-person if possible
 - Virtual – Weather, COVID

BCBSM

- ◆ Meeting July 24th
 - Presented MACS progress
 - Economic impact
- ◆ Feedback
 - No to a standalone MACS P4P Hospital Scoring Index
 - Composite P4P and/or VBR
 - Keep doing MACS, supportive

What does this mean?

- ◆ Freedom to keep on keeping on
- ◆ VBR
 - 6/2023 to submit to BCBSM > missed
 - Data collection 7/1/2023 to 6/30/2024
 - Payout 2025
 - Spring 2024 to submit
 - Data collection 7/1/2024 to 6/30/2025
 - Payout 2026
- ◆ MTQIP P4P > Composite, bonus ?
 - Spring 2024 to submit
 - Data collection 7/1/2024 to 6/30/2025
 - Payout 2026

Acute Appendicitis Data and Reports

Mark Hemmila, MD

Overview

- ◆ Data pull July 7, 2023
- ◆ Time frame
 - 7/1/2020 to 6/30/2023
 - Power - 3 years

Appendicitis

<u>Index Admission</u>		Your Center N = 660		Aggregate N = 4680	
<u>Variable</u>		<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Total Cases	Index Admissions	660	14.1	4680	100.0
	Total Admissions (with Readmissions)	793	15.2	5220	100.0
Management	Total cases	660	100.0	4680	100.0
	Operation	453	68.6	4050	86.5
	Non-operative	207	31.4	630	13.5

Studies

- ◆ CT Scan 97% of patients
- ◆ USN 9% of patients
- ◆ MRI and operation (60 patients)
 - Positive path 87% (52 pts)
 - Negative path 7% (4 pts)
 - Equivocal path 7% (4 pts)
 - 4 patients with positive MRI and negative path

Appendicitis

Index Admission

Variable

		Your Center N = 660		Aggregate N = 4680	
		<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Pathology Result	Positive (CT+/-, USN +/-)	425	95.3	3796	94.5
	Negative	9	2.0	120	3.0
	Equivocal	12	2.7	99	2.5

Appendicitis

<u>Index Admission</u>		Your Center N = 660		Aggregate N = 4680		
<u>Variable</u>		<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	
Appendicitis Type	Uncomplicated	444	67.3	3512	75.0	
	Operative	349	78.6	3274	93.2	
	Non-operative	95	21.4	238	6.8	
	Complicated/Comorbidity	Operative	8	1.2	47	1.0
		Non-operative	0	0.0	19	40.4
	Complicated	Operative	8	100.0	28	59.6
		Operative	208	31.5	1120	23.9
		Non-operative	104	50.0	756	67.5
	Non-operative	104	50.0	364	32.5	
Perforation	Yes	212	32.1	1274	27.2	
	Operative	107	50.5	890	69.9	
	Non-operative	105	49.5	384	30.1	
	No	448	67.9	3406	72.8	

Operation – Perforated vs. Non-Perforated

Risk-adjusted outcomes for operative index appendicitis patients, by perforation or non-perforation			
Outcome	All (n=4,050)	Perforation (n=890)	Non-perforation (n=3,160)
Any Complication	17.8	30.6	14.2
Incisional SSI	0.7	1.0	0.7
Organ Space SSI	2.3	7.5	0.9
Sepsis	1.6	5.0	0.7
ED Visit	9.2	9.4	9.1
Readmission	7.6	16.0	5.2
Mortality	0.3	0.8	0.1

Non-Operative – Uncomplicated vs. Complicated

Risk-adjusted outcomes for non-operative index appendicitis patients, by complicated or uncomplicated			
Outcome	All (n=602)	Complicated (n=364)	Uncomplicated (n=238)
Any Complication	47.5	52.2	40.3
Incisional SSI	.	.	.
Organ Space SSI	.	.	.
Sepsis	2.0	2.5	1.4
ED Visit	10.3	11.0	9.2
Readmission	40.4	44.2	34.5
Mortality	.	.	.

Perforated/Complicated Operation vs. Non-op

Risk-adjusted outcomes for index appendicitis patients, by perforation and operation		
	Operation	Non-op
Outcome	Perforation (n=890)	Complicated (n=364)
Any Complication	30.6	52.2
Incisional SSI	1.0	.
Organ Space SSI	7.5	.
Sepsis	5.0	2.5
ED Visit	9.4	11.0
Readmission	16.0	44.2
Mortality	0.8	.

Uncomplicated Operation vs. Non-op

Risk-adjusted outcomes for index appendicitis patients, by uncomplicated and operation		
	Non-op	Operation
Outcome	Uncomplicated (n=238)	Non-perforation (n=3,160)
Any Complication	40.3	14.2
Incisional SSI	.	0.7
Organ Space SSI	.	0.9
Sepsis	1.4	0.7
ED Visit	9.2	9.1
Readmission	34.5	5.2
Mortality	.	0.1

Question

- ◆ Who should get an operation?
 - Uncomplicated
 - Complicated
 - ◆ Perforation
 - ◆ Comorbid conditions
- ◆ Appropriateness criteria

Appendicitis

Index Admission

Variable

Pregnancy
Yes
Operative
Non-operative

Your Center
N = 660

Aggregate
N = 4680

<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
9	0.0	31	0.0
7	77.8	28	90.3
2	22.2	3	9.7

Pregnancy

- ◆ Acute appendicitis
- ◆ Acute gallbladder disease
- ◆ Expert and discussion ?

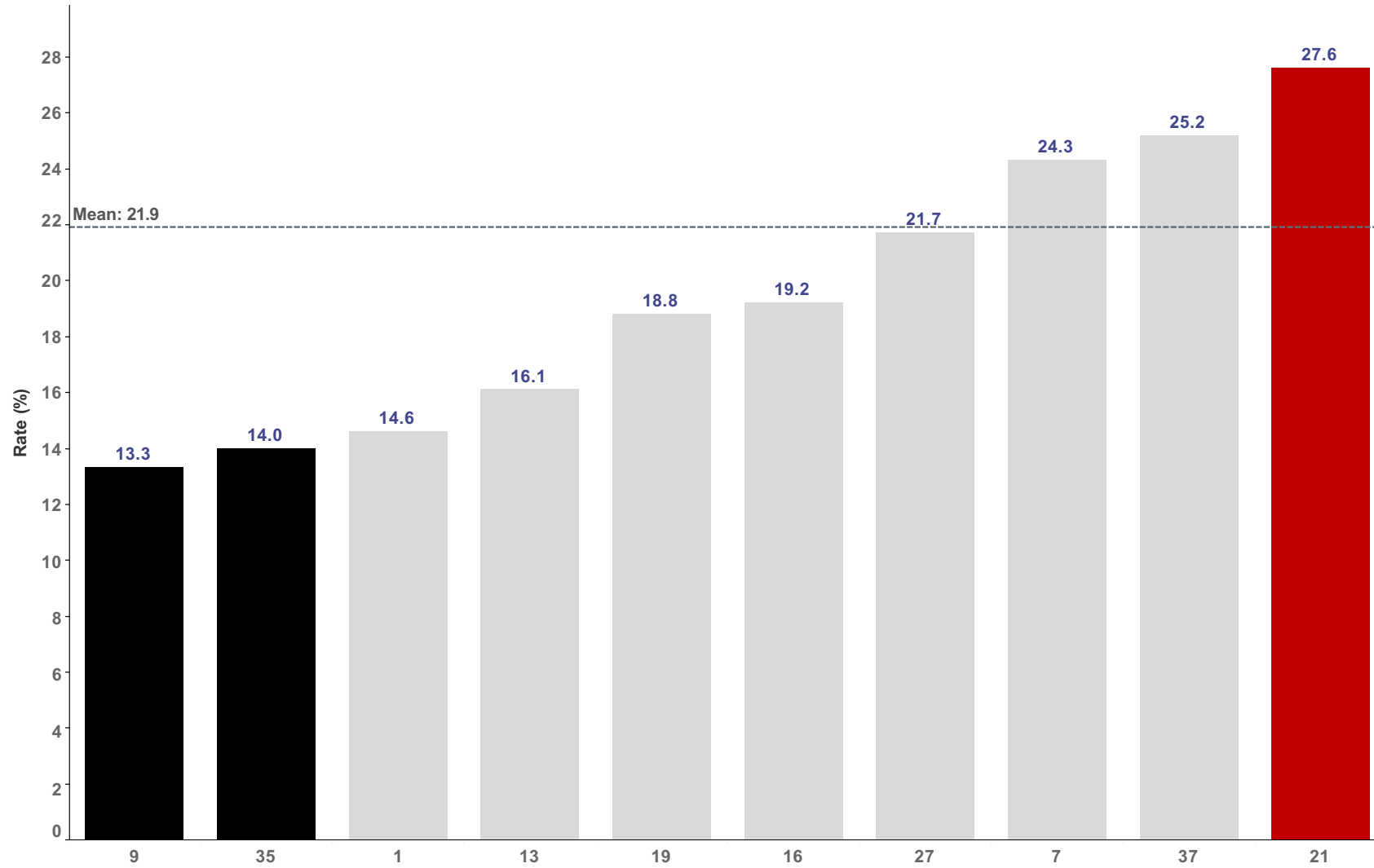
Appendicitis

<u>Index Admission</u>		Your Center N = 660		Aggregate N = 4680	
<u>Variable</u>		<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Lap vs Open	Open	41	9.1	103	2.5
	Laparoscopic	399	88.1	3806	94.0
	Laparoscopic to Open	11	2.4	82	2.0
	Robotic	0	0.0	31	0.8

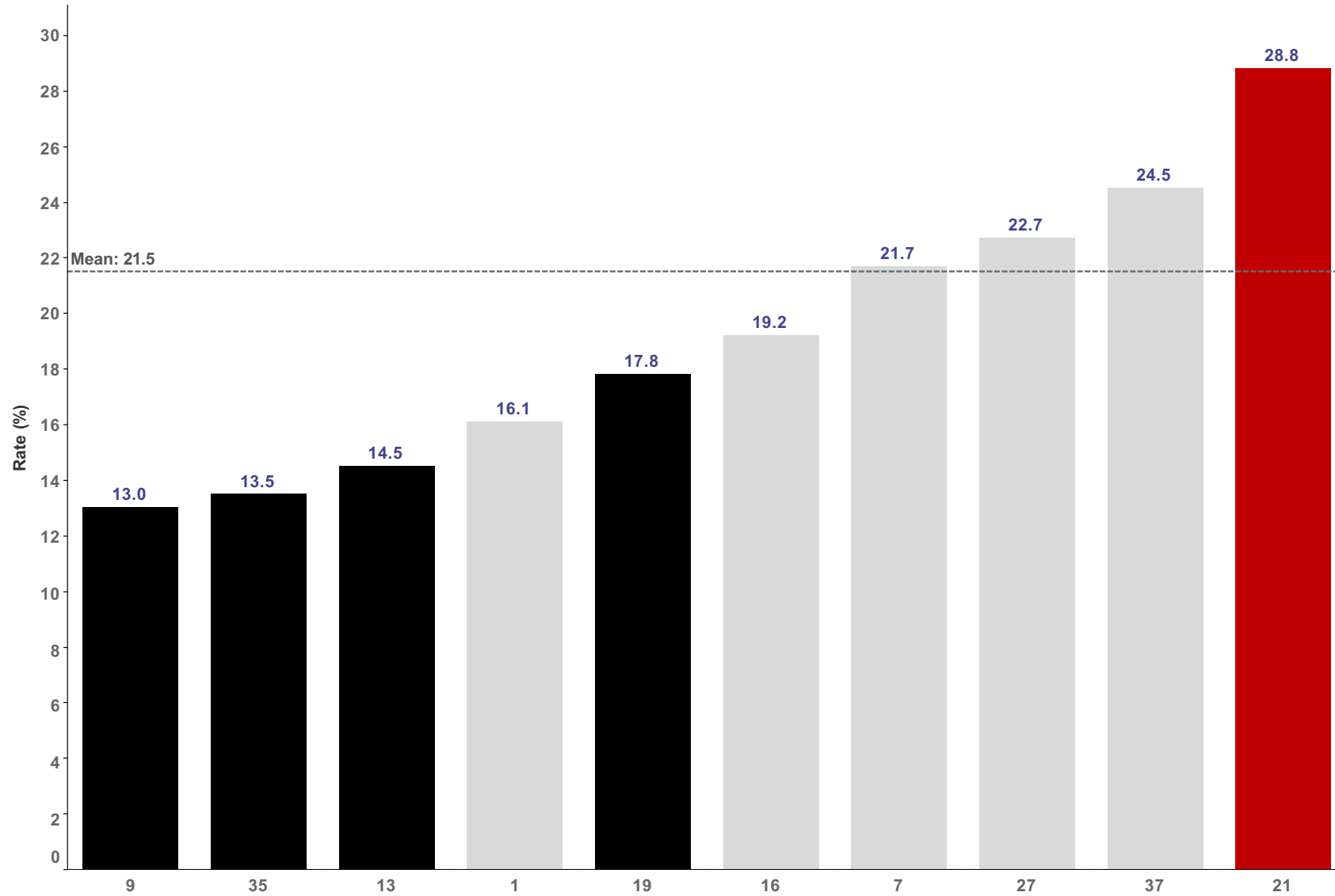
Open appendectomy

Robotic surgery > appendectomy, cholecystectomy

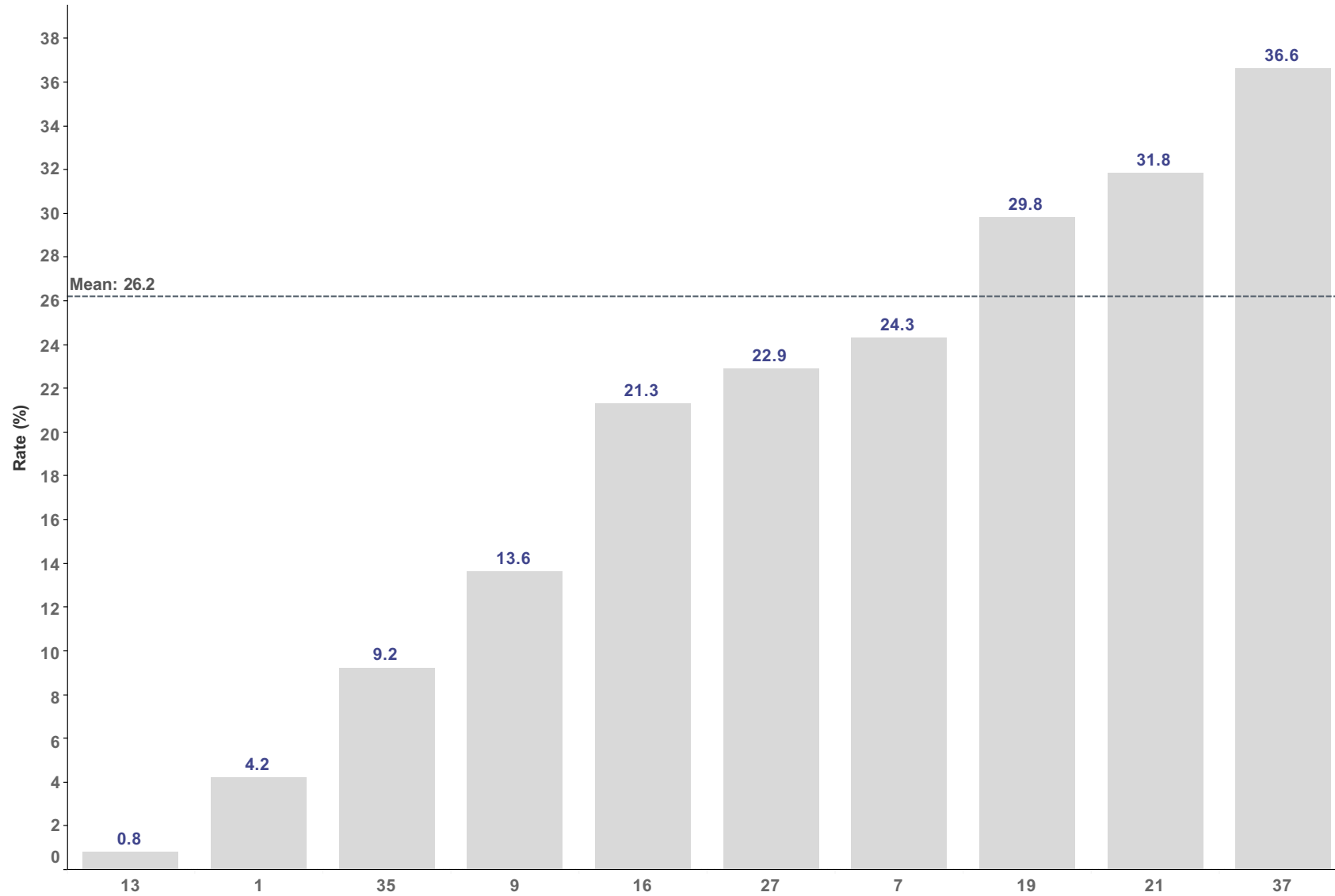
Any Complications Appendicitis



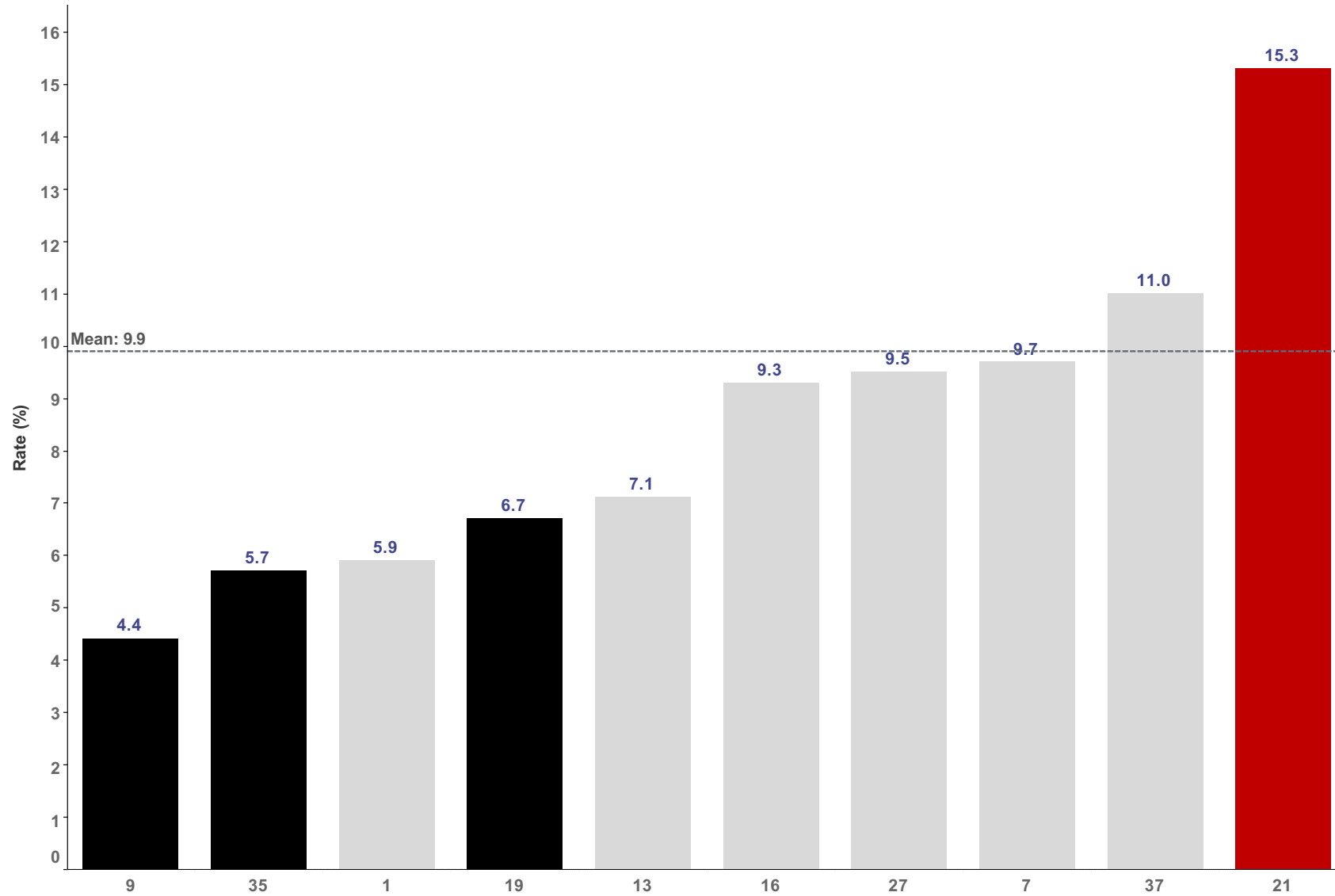
Any Complications Operation Appendicitis



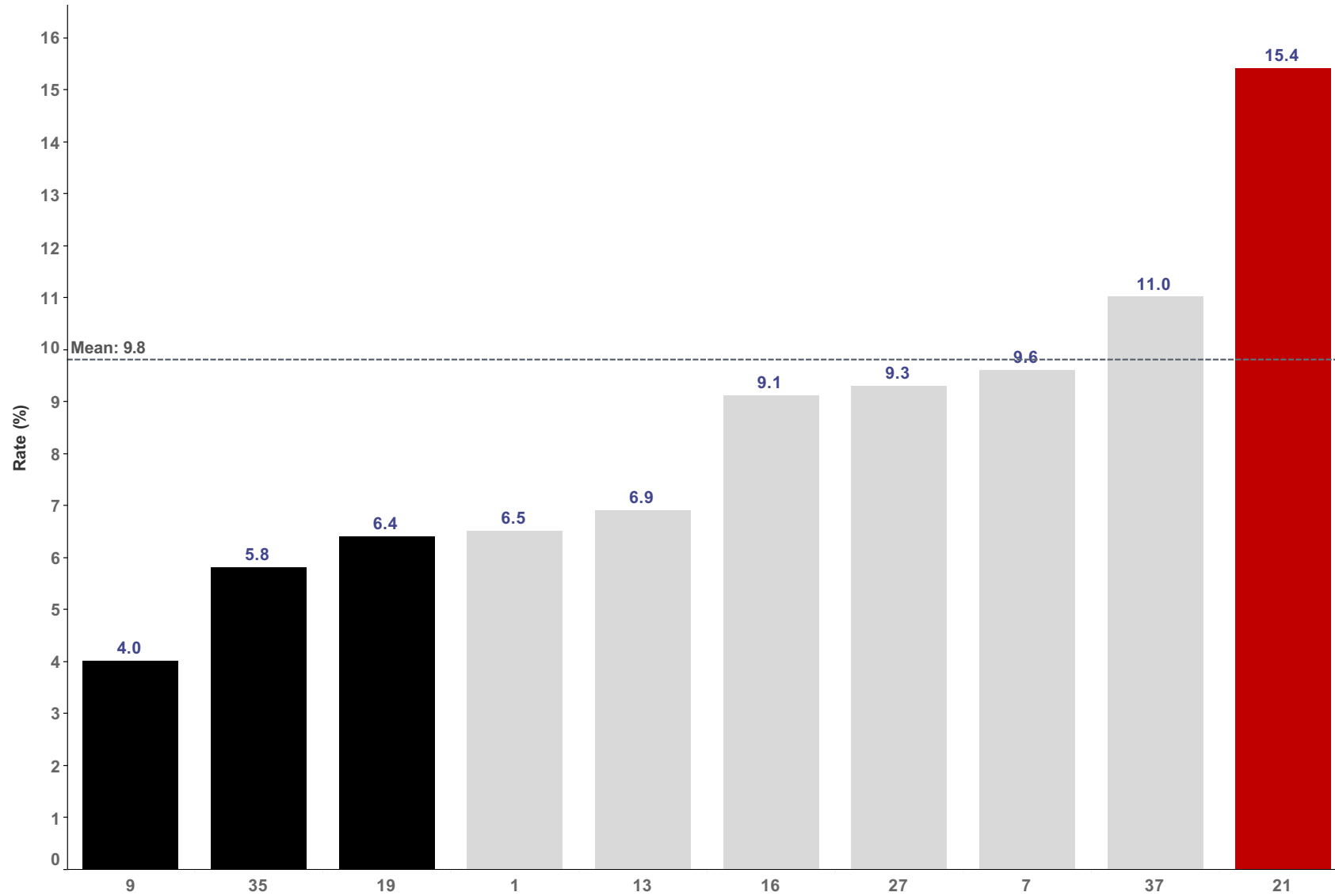
Any Complications Non-operative Appendicitis



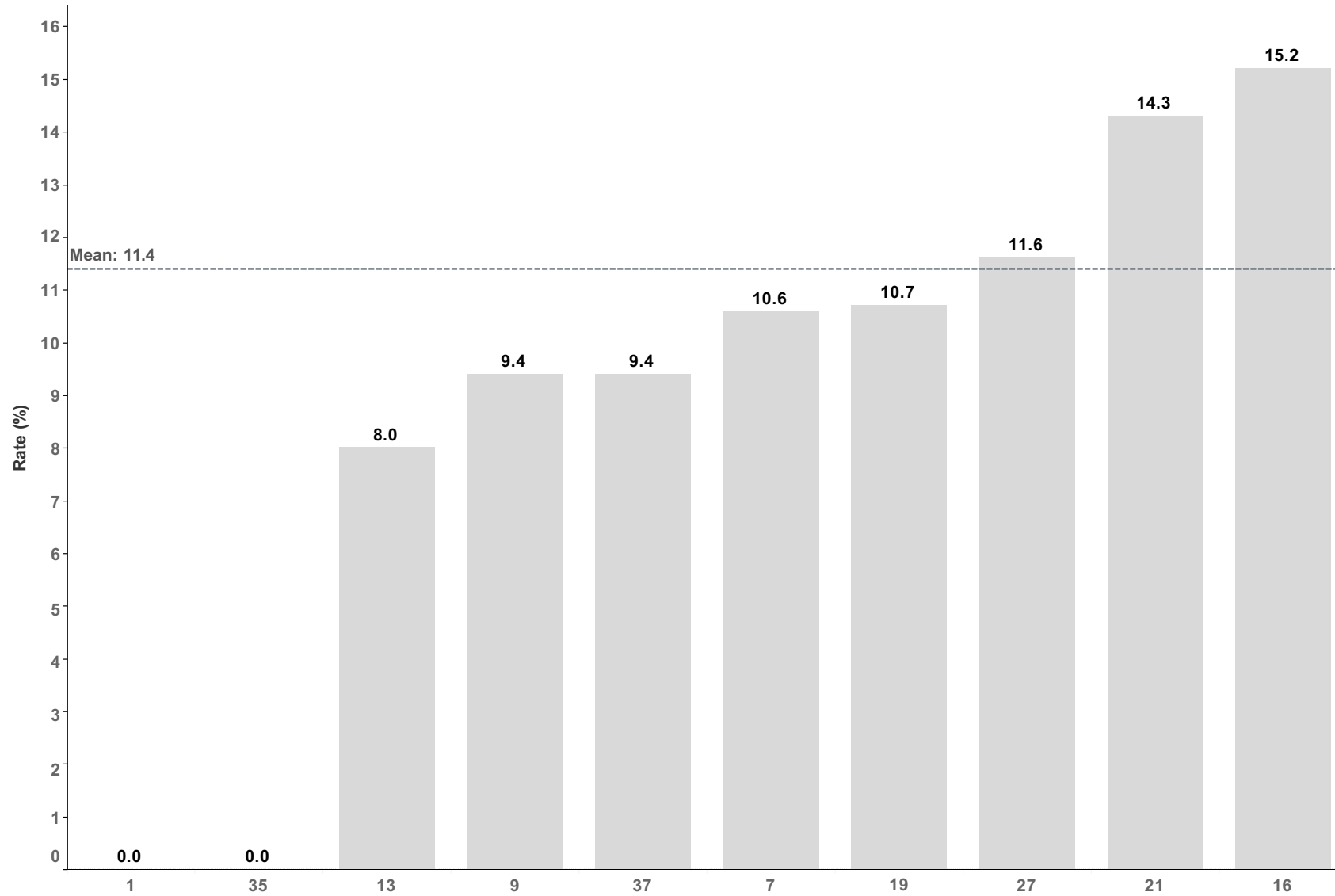
ED Visit Appendicitis



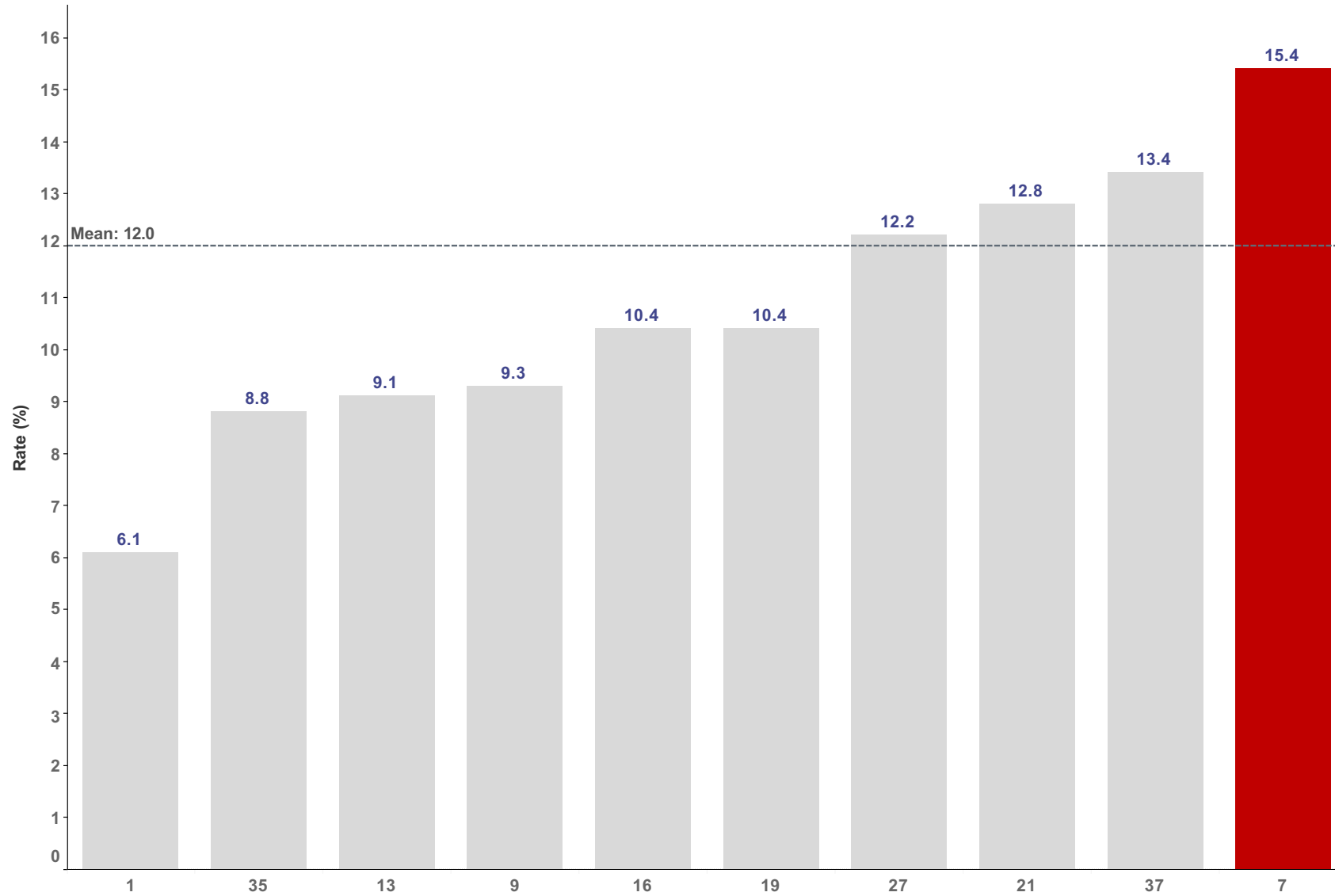
ED Visit Operation Appendicitis



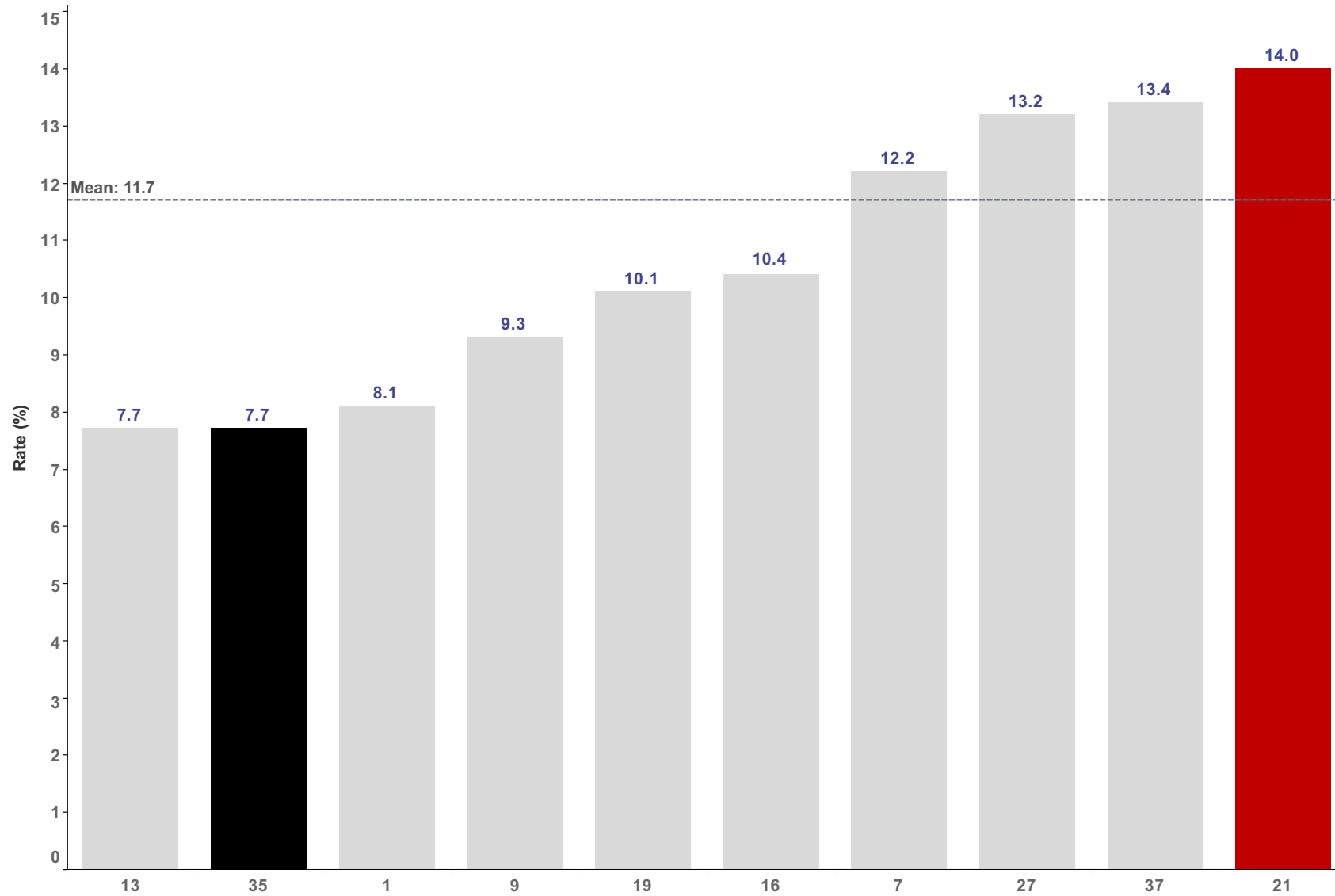
ED Visit Non-operative Appendicitis



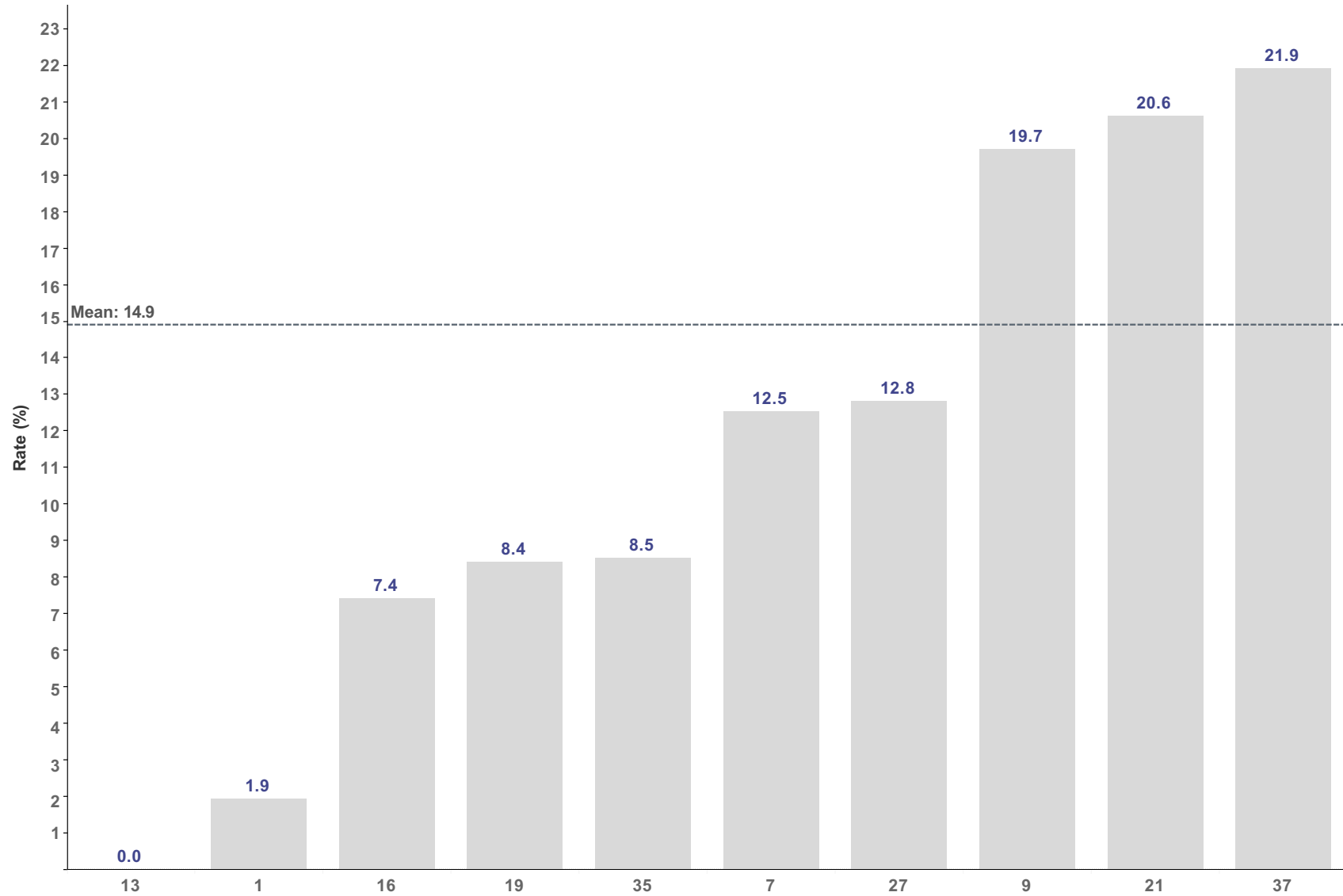
Readmission Appendicitis



Readmission Operation Appendicitis



Readmission Non-operative Appendicitis



Acute Appendicitis Readmissions

Kim Kramer, PA

Projects

- ◆ Value Based Reimbursement
 - 0-5% uplift in BCBSM professional fee reimbursement
 - Typically, 3 measures

Projects

- ◆ Clinical Care Optimization
 - GB and Appy pathways
 - Appy criteria
 - Discharge from ED non-op appy
- ◆ Techniques
 - Robotic surgery videos
 - Laparoscopy in SBO

Projects

- ◆ Studies and Timing
 - Gastrografin in SBO
 - OR in Acute Cholecystitis
 - Emergent exploratory laparotomy
- ◆ Appropriateness
 - Cholecystostomy tube
 - Operative appendectomy
- ◆ ? Others
- ◆ Share data and use it

Feedback (mhemmila@umich.edu)

- ◆ Reports
 - Questions
 - Problems/Mistakes
 - Improvements
- ◆ See you in November

