



University of Iowa Health Care

Presentation to

The Board of Regents, State of Iowa

April 18, 2019

Agenda

Today's Presentation

Opening Remarks

Operating and Financial Performance

Preliminary FY20 Operating Budget

Faculty Presentation



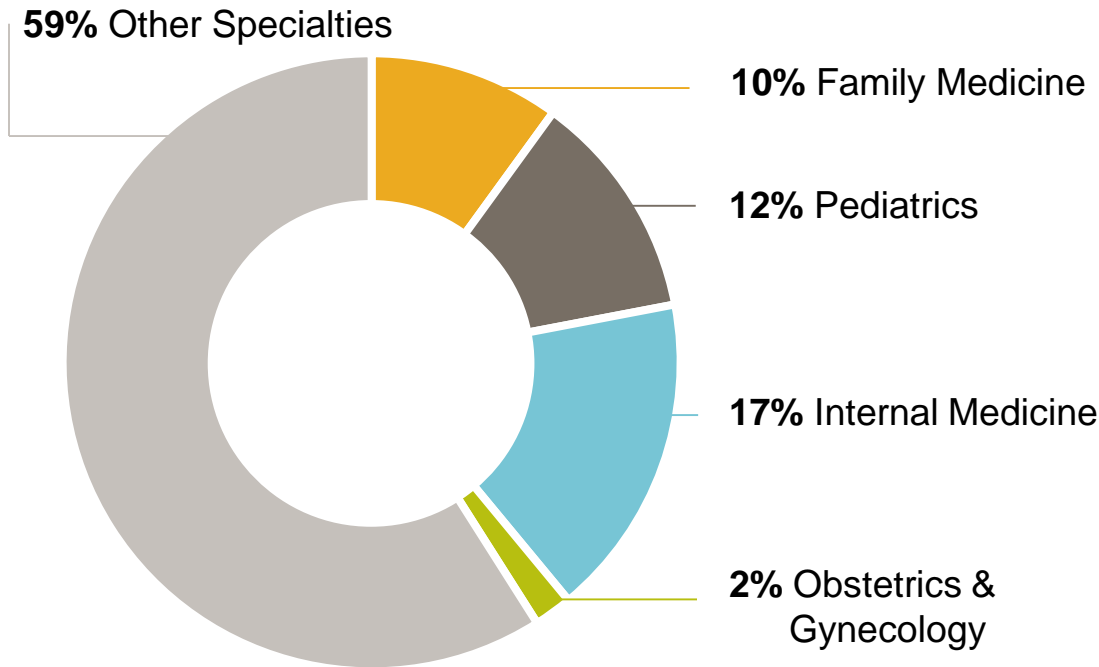
Opening Remarks

*Brooks Jackson, MD, MBA
Vice President for Medical Affairs
& Dean, Carver College of Medicine*

Match Day 2019 Results

University of Iowa Carver College of Medicine

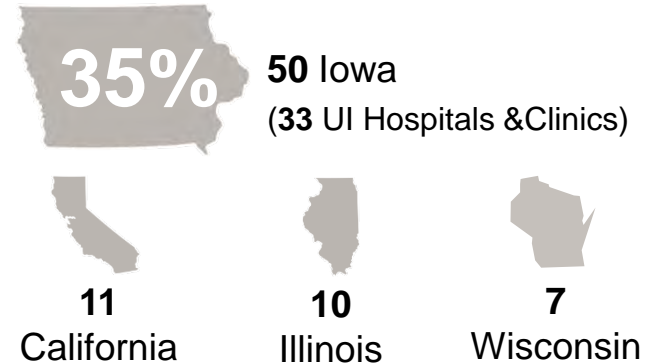
136 Students Participating



41% Entering Primary Care Specialties

52% The number of CCOM medical students staying in Iowa for residency increased 52% over last year.

Most Popular Training States



Top Specialties

- 1 Internal Medicine
- 2 Pediatrics
- 3 Family Medicine
- 4 Orthopedic Surgery
- 5 Emergency Medicine

UI Carver College of Medicine Rankings

U.S. News & World Report Rankings



The University of Iowa Carver College of Medicine ranked once again among the nation's best graduate schools

1st Physician Assistant Masters Program

6th Physical Therapy, Masters and Doctorate Program

19th Family Medicine

22nd Internal Medicine

26th Primary Care

38th Research

Comparing last year to this year – Research

Weighted Measures of *U.S. News & World Report* Research Rankings

Indicator	2019 Weight	2020 Weight
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Quality

40%

30%

Peer Assess

20%

15%

Residency Director

20%

15%

Student Selectivity

20%

20%

Median MCAT Score

13%

13%

Median Undergraduate GPA

6%

6%

Acceptance Rate

1%

1%

Faculty Resource

10%

10%

Research Activity

30%

40%

Total NIH Funding

15%

25%










Average NIH Funding/Faculty



15%

15%

Comparing previous years – Research

U.S. News & World Report Rankings









Year	U.S. News rank	Peer Assess score	Res. Dir. score	Average MCAT	Average GPA	Accept rate	NIH grants (in millions)	NIH grant/faculty (in thousands)	Faculty to student ratio
2019	 38	 3.6	 3.7	 512	 3.77	 7.2%	 \$131.4	 \$111.7	 2:1
2018	32	3.6	3.6	511	3.80	7.7%	\$104.7	\$102.5	1.7:1




 Favorable  No Change  Unfavorable

U.S. News & World Report ranks the year ahead, so 2019 numbers are for the 2020 ranking.

Comparing previous years – Primary Care

U.S. News & World Report Rankings

Year	U.S. News rank	Peer Assess score	Res. Dir. score	Average MCAT	Average GPA	Accept rate	Primary Care Rate	Faculty to student ratio
2019	 26	 3.5	 3.8	 512	 3.77	 7.2%	 38%	 2:1
2018	21	3.5	3.7	511	3.80	7.7%	38%	1.7:1

 Favorable  No Change  Unfavorable

U.S. News & World Report ranks the year ahead, so 2019 numbers are for the 2020 ranking.



Operating and Financial Performance

Bradley Haws, MBA

Associate Vice President for Finance & Chief Financial Officer, UI Health Care

Suresh Gunasekaran, MBA

Associate Vice President, UI Health Care and CEO, UI Hospitals & Clinics

Volume and Financial Highlights – FY19

Through February 2019

Operating Margin

- February year-to-date actual 5.5%, budget of 2.4%

Volume Change

- Year-over-year:
- Acute Discharges -1.8%, Patient Days 4.0%, Surgeries 5.4%, Clinic Visits 3.2%

Acuity

- Case Mix Index continues to be high – above 2.0 for all payers 2.19 and Medicare 2.22

Census

- Many days above 90% occupancy
- Closer relationship with post-acute providers being developed

Length of Stay Index

- Adult at .94 – below the expected index of 1.0
- Pediatrics at 1.03 – at the expected index

Readmission Rates

- Adult at 10.62% - below target of 11.96%
- Pediatrics at 10.50% - above target of 8.29%
 - Patients with multiple comorbidities and chronic illness

Revenues

- 4.0% above budget year-to-date

Payer Mix

- Medicare flat
- FY18: 37.3%, FY19: 37.2%

Accounts Receivable

- Positive trend for government and out-of-state payers
- Progress resolving older cases

Salary Expenses

- 2.7% below budget year-to-date

Non Salary Expenses

- 3.9% above budget year-to-date
- Implant and pharmacy costs

Surgical Volume Growth

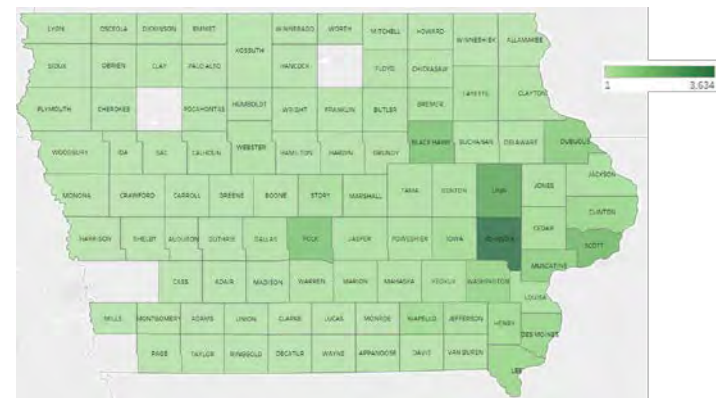
Operating and Financial Performance

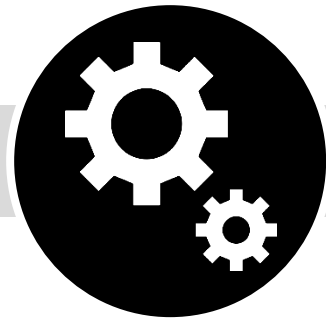
- Surgical volumes continue to grow year-over-year
 - FY17 3.6% (IP .9%, OP 6.2%)
 - FY18 3.5% (IP 6.8%, OP .5%)
 - FY19 5.4% (IP 5.3%, OP 5.5%)

- Demand for Orthopedics continues to stay strong (up 8.9% YOY)

- ORs are very busy
 - OR Utilization 88.4% in Main OR
77.5% ASC, 75.2% SFCH

Service	Main OR Block Utilization	ASC Block Utilization	SFCH Block Utilization	Combined Block Utilization
Dentistry	87.9%	81.9%	83.9%	83.8%
Gynecology	96.4%	63.6%	n/a	91.3%
Neurosurgery	100.2%	70.8%	56.2%	94.8%
Ophthalmology	72.1%	86.0%	50.7%	75.6%
Orthopaedics	92.9%	86.4%	91.0%	90.7%
Otolaryngology	85.6%	46.2%	89.1%	84.7%
Surgery	82.7%	61.4%	66.2%	78.3%
Urology	90.7%	59.2%	84.6%	84.9%
Total	88.4%	77.5%	75.6%	84.7%





Commitment to Efficiency

Right Care at the Right Place

UI QuickCare, Urgent Care, and Emergency Care



UI QuickCare

If your primary care provider isn't available, UI QuickCare treats patients with minor illnesses and injuries.

Common UI QuickCare/ Urgent Care Problems:

- Cough, Cold, Sore Throat
- Fever/Flu
- Earaches
- Eye Infections
- Bladder Infections
- Diarrhea/Nausea/Vomiting
- Rash
- Insect Bites
- Minor Burns
- Seasonal Allergies

Urgent Care

Urgent Care treats more conditions than UI QuickCare, including minor injuries requiring X-rays, and can place stitches and administer IV fluids.

In addition, Urgent Care can treat:

- Broken Bones
- Cuts/Scrapes
- Sprains/Strains
- Dehydration



Extended Hours

Urgent Care has extended hours, offering a way to receive care during evenings and weekends. Urgent Care is also open most holidays with reduced hours.

Emergency Room

Go to the emergency room if you have a serious or life-threatening condition.

Common Emergency Room Problems:

- Head Injury
- Stroke
- Severe Bleeding
- Chest Pain
- Abdominal Pain
- Difficulty Breathing
- Severe Pain
- Newborn Fever
- Major Trauma
- Suicidal Thoughts



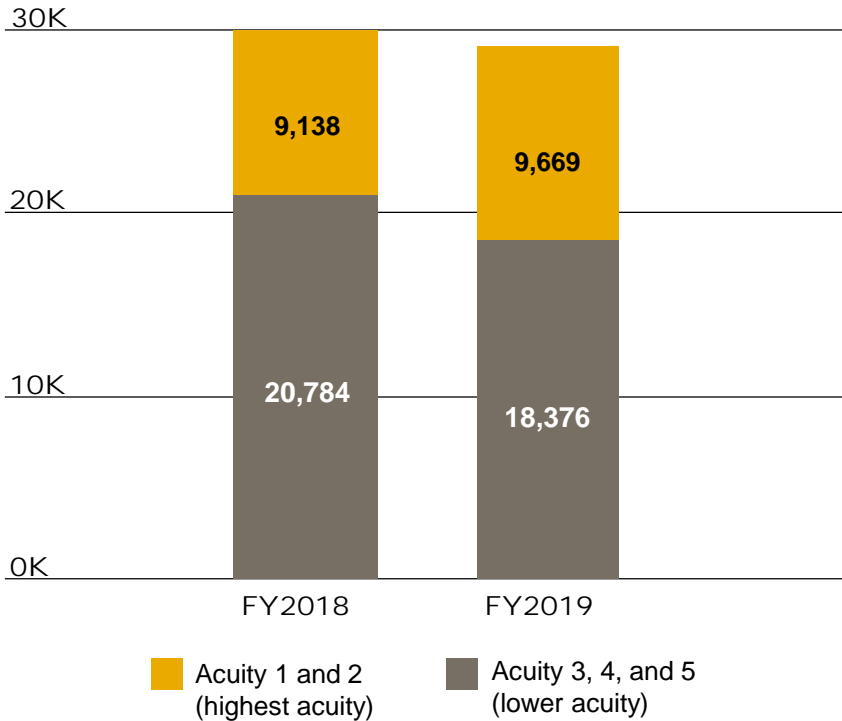
Call 911

If a person could die or become permanently disabled, it is an emergency. Call 911 to have the emergency team come to you if you can't wait.

Urgent Care Impact

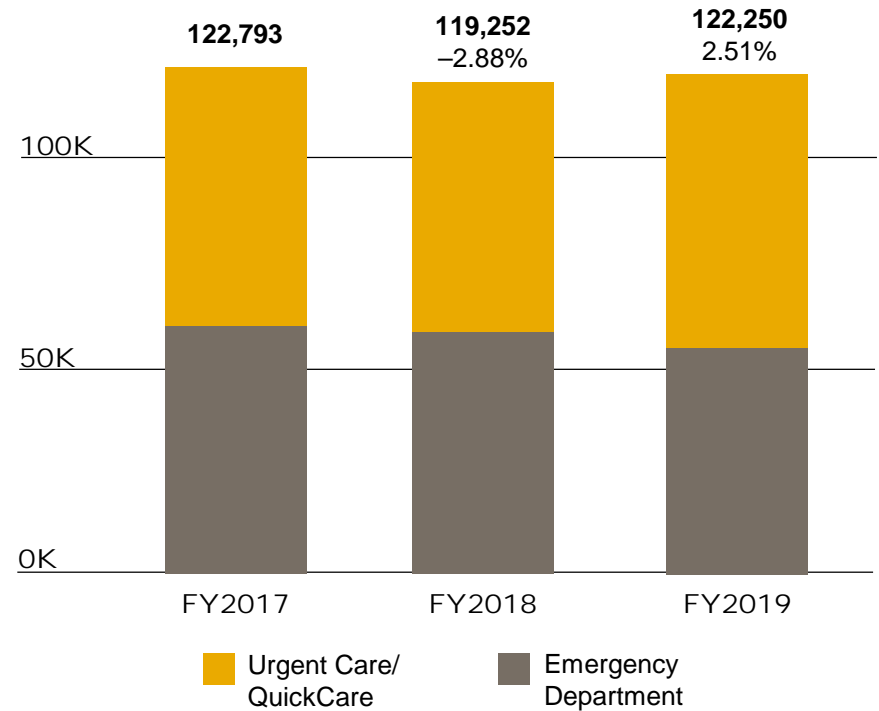
UI QuickCare, Urgent Care, and Emergency Care

FY18 Q1 and Q2 vs. FY19 Q1 and Q2
Urgent Care Impact on Emergency Visits



Arrival Method	Year-over-Year Difference
Ground Ambulance	84
Private Vehicle/Walk-In	-1,915

FY17, FY18 and Annualized FY19
Urgent Care, QuickCare, and Emergency Volumes

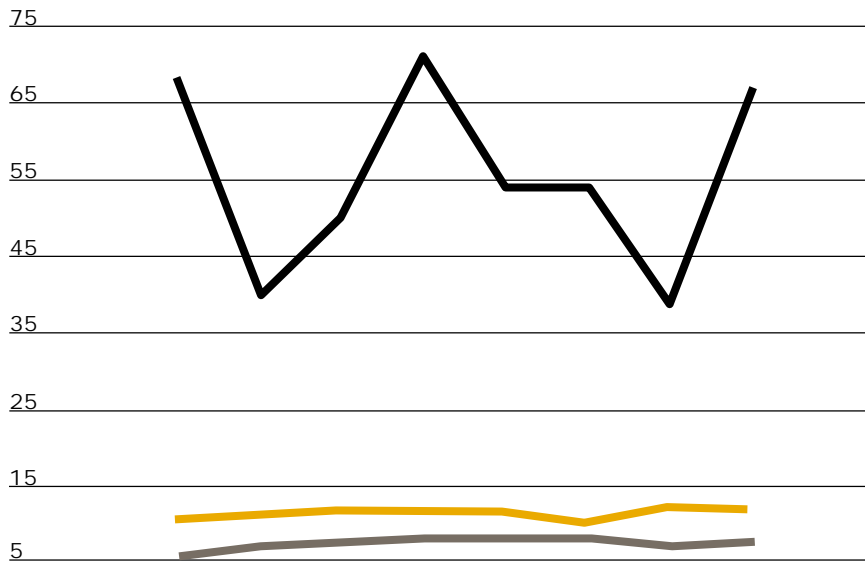


Emergency Room Waiting

UI QuickCare, Urgent Care, and Emergency Care

Average Wait Time from Check-In to Room

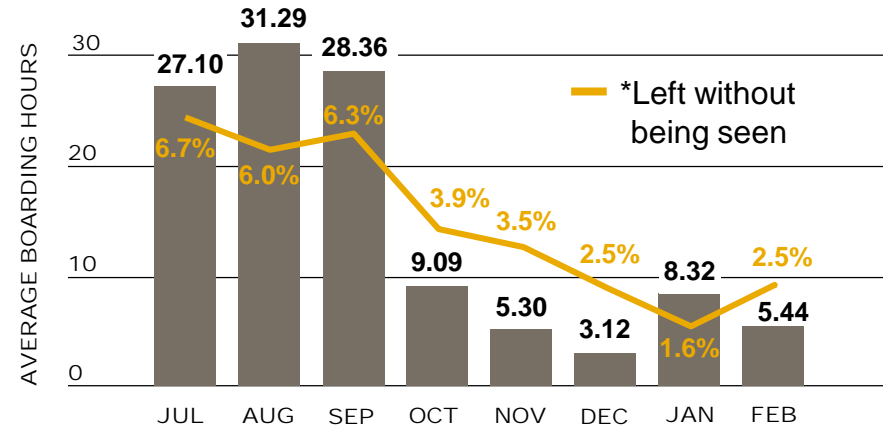
July 2018 – February 2019



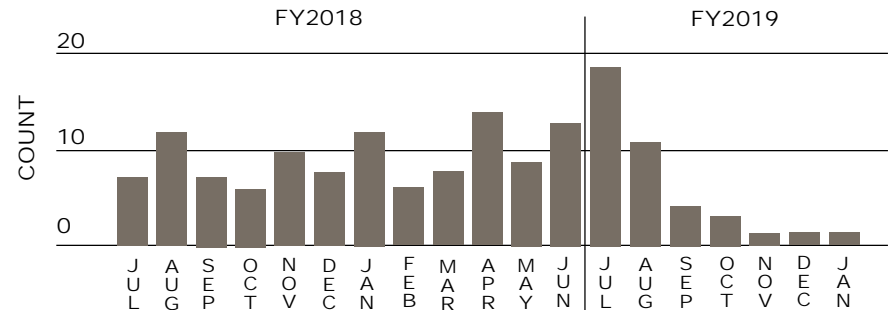
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
QuickCare	10.83	11.16	11.88	11.95	11.86	10.53	12.29	12.32
Urgent Care	5.81	7.29	7.63	8.30	8.27	8.33	7.36	7.91
Emergency	68.21	40.39	50.33	70.95	54.16	54.27	38.94	67.03

— UI QuickCares — Urgent Care — Emergency

2019 Adult ED Psych Boarding and Overall Adult LWBS* Average Emergency Department Boarding Hours and Left Without Being Seen Rate



Adult Psych Transfers from Emergency Department to Outside Facility



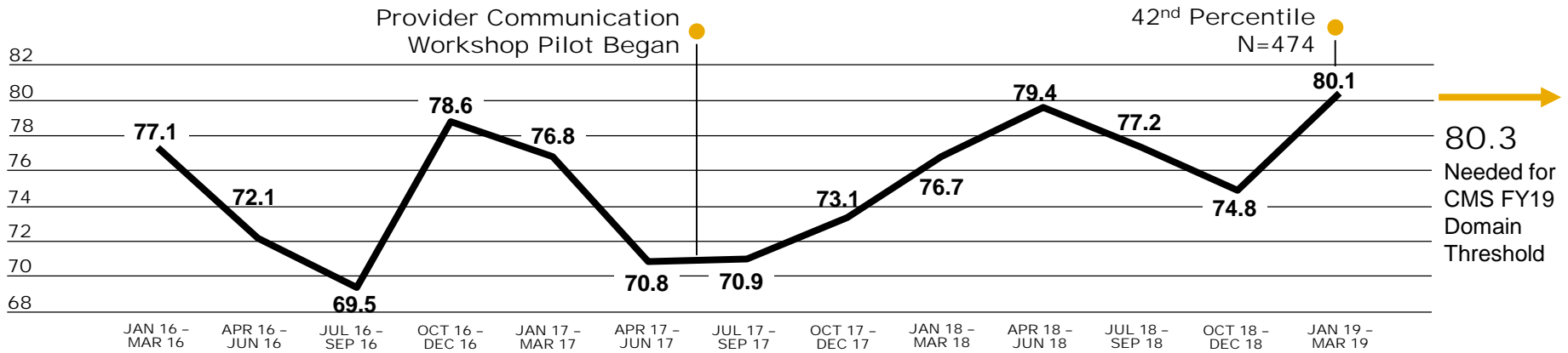


Commitment to Quality

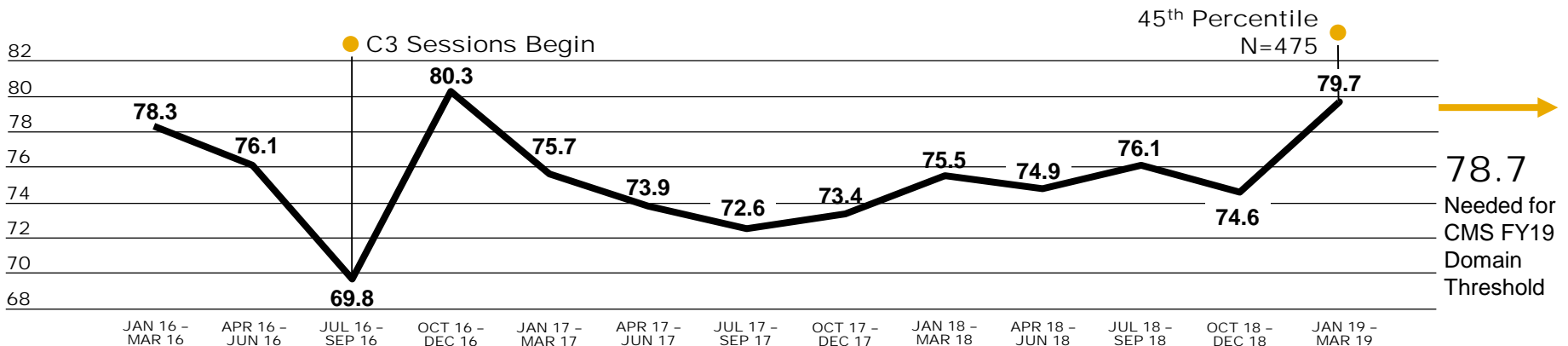
Patient Survey Results: Communication

Commitment to Quality

Inpatient Adult: HCAHPS Doctors Domain. Percent of ALWAYS for Last 12 Quarters with Current Quarter to Date.



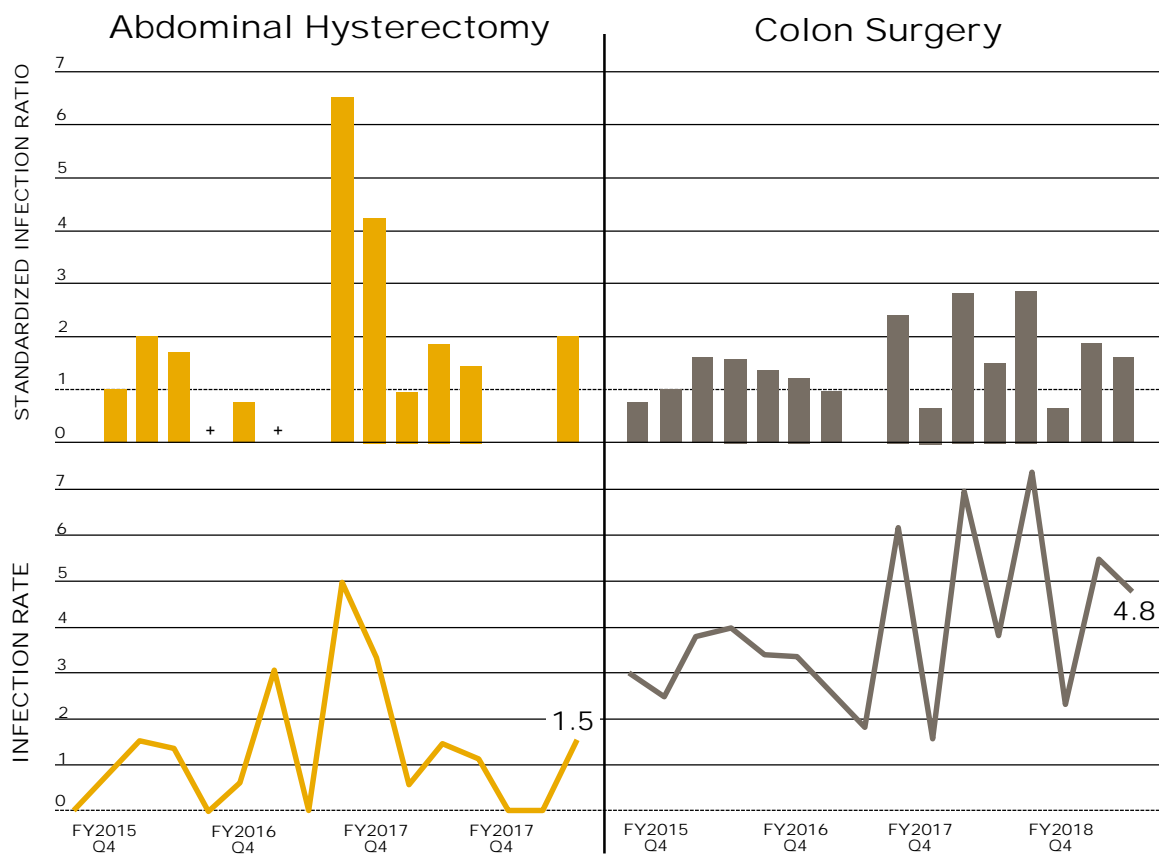
Inpatient Adult: HCAHPS Nurses Domain. Percent of ALWAYS for Last 12 Quarters with Current Quarter to Date.



Surgical Site Infection Standardized Infection Ratio

Commitment to Quality

Surgical Site Infections (CMS Reported)

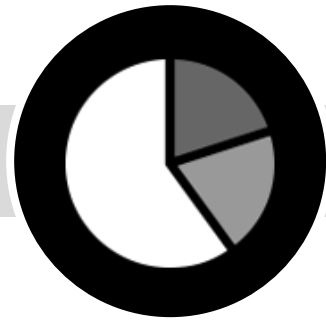


+ Insufficient data to compute
Note: Superficial infections excluded

Graphs show quarter-to-date and year-to-date results as applicable.

Surgical site infection prevention measures currently in progress:

- Optimization of perioperative antibiotic prophylaxis
- Skin preparation
- Perioperative normothermia
- Prevention of perioperative hyperglycemia
- Individual surgeon SSI rate feedback



Financial Performance

Comparative Financial Results

Fiscal Year to Date February 2019, Dollars in Thousands

NET REVENUES	Actual	Budget	Prior Year	Variance to Budget	Variance to Budget %	Variance to Prior Year	Variance to Prior Year %
Patient Revenue	\$1,164,630	\$1,117,874	\$1,053,493	\$46,756	4.2%	\$111,137	10.5%
Other Operating Revenue	34,248	35,128	33,812	(880)	-2.5%	436	1.3%
Total Revenue	\$1,198,878	\$1,153,002	\$1,087,305	\$45,876	4.0%	\$111,573	10.3%
EXPENSES							
Salaries and Wages	\$523,256	\$538,045	\$513,296	(\$14,789)	-2.7%	\$9,960	1.9%
General Expenses	542,142	521,615	482,858	20,527	3.9%	59,284	12.3%
Operating Expense before Capital	\$1,065,398	\$1,059,660	\$996,154	\$5,738	0.5%	\$69,244	7.0%
Cash Flow Operating Margin	\$133,480	\$93,342	\$91,151	\$40,138	43.0%	\$42,329	46.4%
Capital- Depreciation and Amortization	67,367	65,938	67,721	1,429	2.2%	(354)	-0.5%
Total Operating Expense	\$1,132,765	\$1,125,598	\$1,063,875	\$7,167	0.6%	\$68,890	6.5%
Operating Income	\$66,113	\$27,404	\$23,430	\$38,709	141.3%	\$42,683	182.2%
Operating Margin %	5.5%	2.4%	2.2%		3.1%		3.3%
Gain (Loss) on Investments	11,811	12,689	26,938	(878)	-6.9%	(15,127)	-56.2%
Other Non-Operating	(7,878)	(7,871)	(8,444)	(7)	-0.1%	566	6.7%
Net Income	70,046	\$32,222	\$41,924	\$37,824	117.4%	\$28,122	67.1%
Net Margin %	5.8%	2.8%	3.8%		3.0%		2.0%

* Gain/(Loss) on Investments based on information available at close. Final investment return for this period is reflected in Fiscal Year to Date returns in the subsequent reporting cycle.

Key Metrics

Financial Performance

	FY19 YTD Through February	Moody's Median
Financial Operations		
Operating Margin	5.5%	4.0%
Financial – Liquidity		
Days Cash on Hand	194	265
Financial – Leverage		
Debt to Capitalization	17.8%	27.6%



Why Margin Matters

Health Care Trends in Iowa Disadvantage UIHC

Since 2010, we are in a new healthcare world. . .



Cost Inflation Exceeds Annual Price Inflation

In the Iowa healthcare marketplace, the annual cost inflation for employees, drugs, equipment and supplies (3-5%) exceeds the annual price inflation from government and commercial payers (1-2%).



Low Total Growth in Population

There is little total population growth for Iowans and more Iowans every year are funded by government payers rather than commercial payers (who pay higher prices for services).

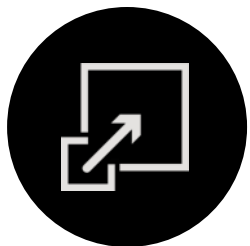


Cumulative Effect

The cumulative effect of these trends is that even if UIHC sees the same number of patients and provides the same services, UIHC loses \$50-\$70M in margin every year.

How does UIHC Achieve Positive Margin?

Overcoming the \$50-70M Challenge



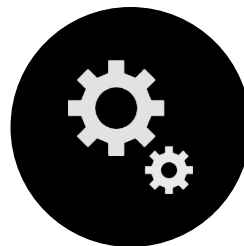
Growth

We see more patients in our hospitals, operating rooms, and clinics so that we continue to drive higher revenue.



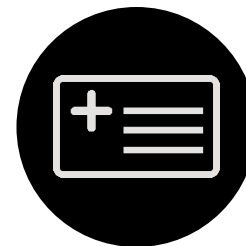
New therapies and treatments

We invest in the latest treatments and therapies as well as world class faculty in order to be the pre-eminent care provider in the state.



Greater operational efficiencies

We are focused on getting the maximum throughput and efficiency while maintaining one standard of care for all patients.

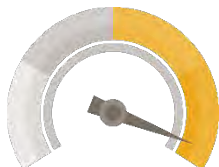


Optimizing payor mix

We are committed to offering the programs, quality, and convenience necessary for commercial patients to choose UI Health Care.

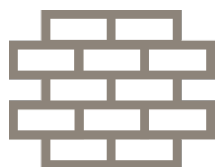
Capital Investments are Needed

Capital investments are critical to UIHC's future and maintaining margin



UI Hospitals & Clinics is full

After years of growth, we are now consistently full in both our operating rooms and inpatient beds (over 90%).



UI Hospitals & Clinics buildings are outdated

With the exception of the UI Stead Family Children's Hospital, all adult patient rooms are in buildings that are between 30-50 years old. Older buildings drive up operating costs and often cannot easily handle the latest technology.



Majority of patient rooms are small and semi-private

These rooms do not meet the patient preference and care models in practice today.



Too much care is delivered on main campus

It is difficult to attract patients when they must travel to the very congested main campus.

Margin is Too Low To Fund Necessary Capital Plan

Operating Margin and Capital Plan

Capital Needs (in millions)	FY20	FY21	FY22	FY23	FY24
Equipment Replacement	24.0	29.4	24.5	26.4	29.4
Infrastructure Replacement	19.1	28.9	24.0	23.1	24.1
Technology Investment	13.4	11.8	10.5	11.3	14.0
Inpatient Growth Investment	29.7	80.8	87.9	47.0	32.4
Outpatient Growth Investment	36.7	38.3	61.5	118.9	51.3
Facility Replacement	47.1	16.8	19.3	20.1	26.7
Total Capital Need	170.0	206.1	227.6	246.9	178.0

Margin + Debt Issuance

Projected Margin (3.9% each year)	73.7	77.1	80.3	83.6	87.2
Depreciation and Debt Service	75.4	78.0	85.0	82.5	99.4
Cash Application from Additional \$260M Debt Issuance	45.0	60.0	70.0	85.0	-
Total Margin + Debt Issuance	194.1	215.1	235.3	251.1	186.6

Margin and Debt Issuance vs. Capital Needs	24.1	8.9	7.7	4.3	8.6
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Future Concerns

Operating Margin and Capital Plan

- UI Health Care management must continue to balance capital investment and operational performance in order to achieve our tripartite mission.
- In upcoming Board meetings, we will present our vision for continued growth, improved operational efficiencies, and the areas of capital investment that will best drive margin while still promoting one standard of care for patients.
- In the absence of strong margin generation, capital investment will continue to fall and UI Health Care will be unable to maintain its vital clinical, research and teaching programs at present levels and may require additional state support.
- We aim to partner with our communities and manage the health enterprise in order to remain self-sustaining while continuing to serve the burgeoning health care needs of Iowans.



Preliminary FY20 Operating Budget

Bradley Haws, MBA

Associate Vice President for Finance & Chief Financial Officer, UI Health Care

Suresh Gunasekaran, MBA

Associate Vice President, UI Health Care and CEO, UI Hospitals & Clinics

Preliminary Key Drivers

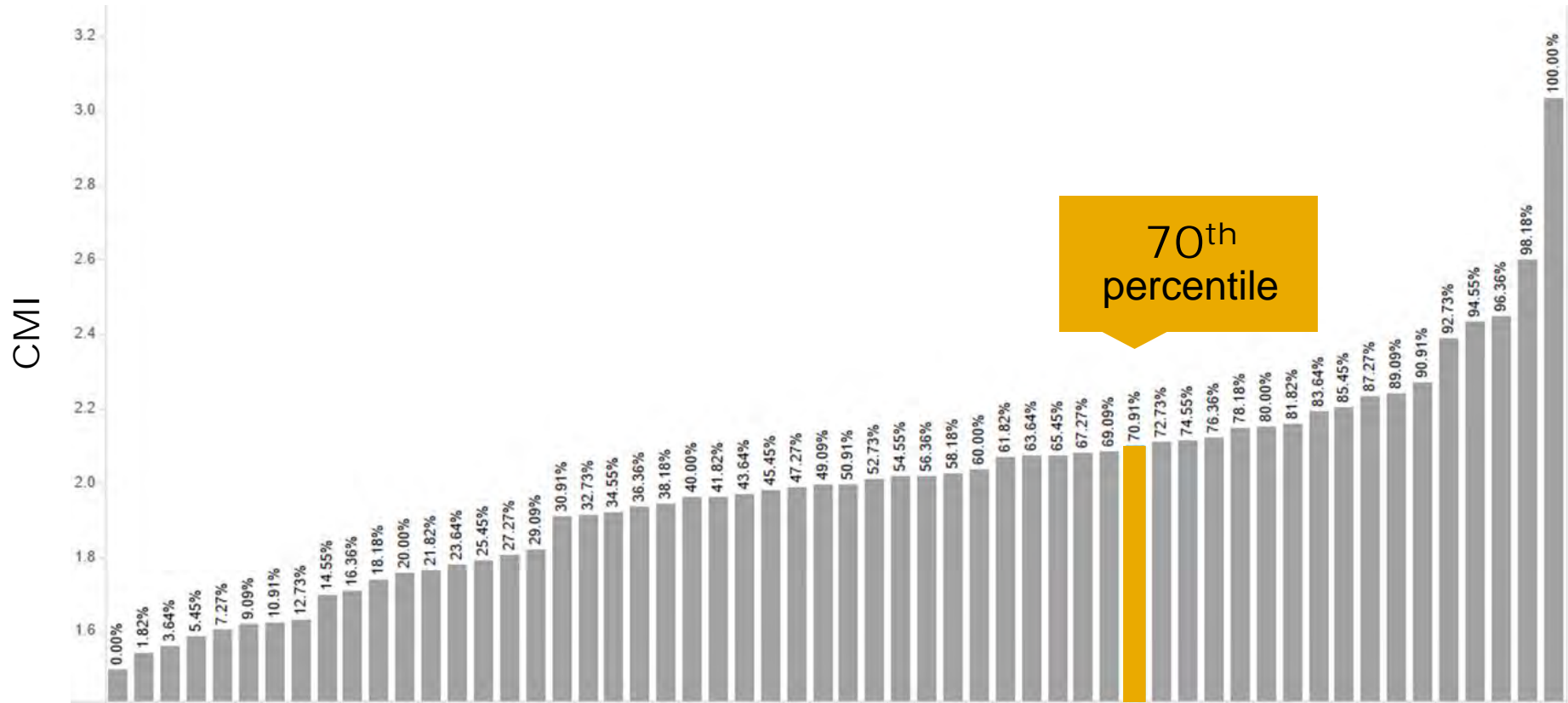
UI Health Care Operating Budget FY2020

Revenue	
Volume Growth	
Inpatient	2.65%
Outpatient	5.00%
Physician Work RVUs	3.00%
Payor Rate Increase	0.35%
Charge Increase	6.00%
Expense	
Salary Increase Assumptions	
SEIU	2.10%
Merit	2.10%
P&S	2.10%
Faculty	2.00%
Blended Fringe Benefit Rate	43.71%
Non-Salary Increase Assumptions	
Drugs	7.00%
Supplies	3.00%
Utilities	2.50%
Other Non-Salary Expense	2.00%

Preliminary Operating Margin: 3.9%

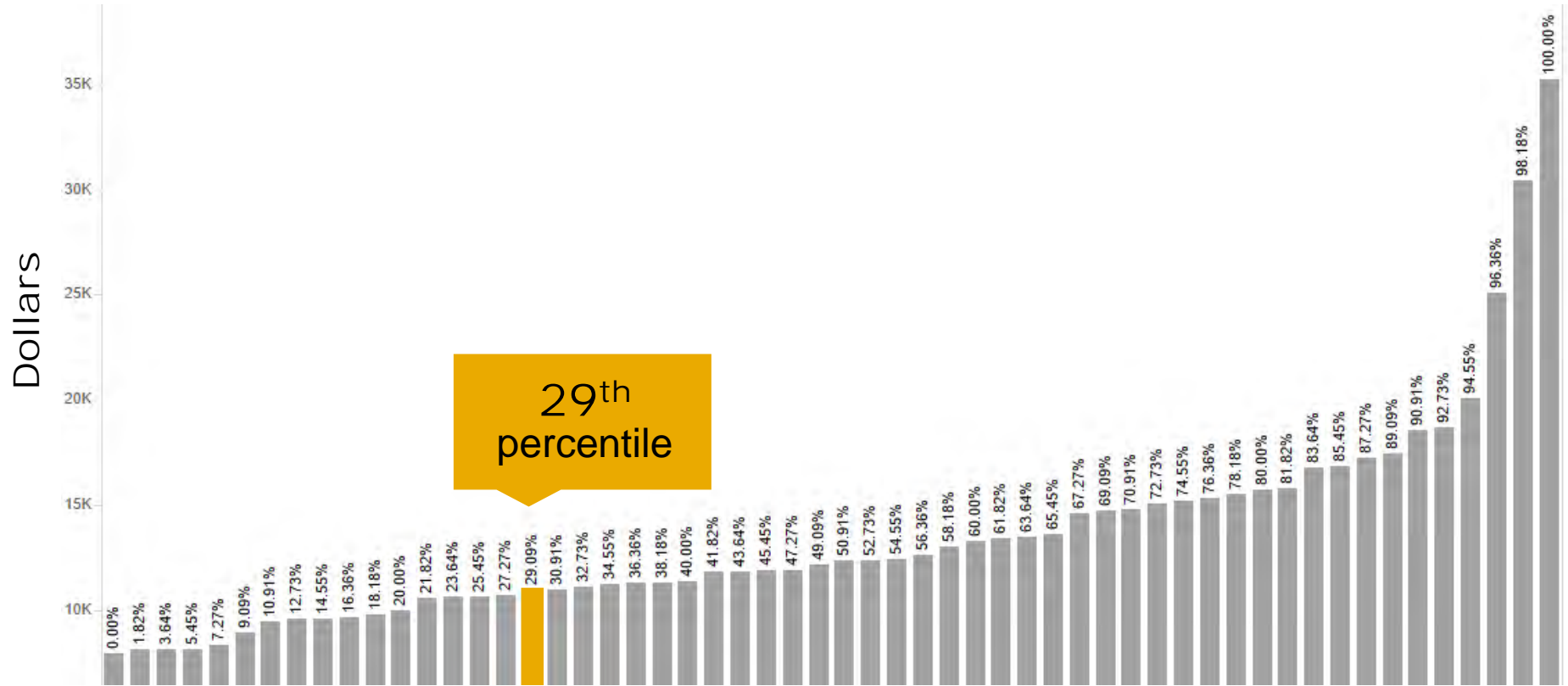
Hospital Case Mix Index

Action OI Data – CY2018 Quarter 3



Net Operating Revenue per CMI Weighted Adjusted Discharge

Action OI Data – CY2018 Quarter 3



Chargemaster Price Increase

UI Health Care Operating Budget FY2020

- The University of Iowa Hospitals and Clinics is proposing a 6.0% rate increase for FY20.
- UIHC charges have an impact on certain prospective contractual rates set by payers. They also directly impact current reimbursement for percent of charge, carve-out and outlier payment terms. The estimated impact of a 6% price increase is a 0.8% yield or \$14M.

Chargemaster Price Increase

UI Health Care Operating Budget FY2020

- **Benchmarking**

UIHC charges are low compared to peer institutions.

- In the most recently issued Vizient comparison, UIHC acuity adjusted charges are at the 23rd percentile of Midwest Academic Medical Centers.
- Over the past 6 years, our acuity adjusted charge percentile has decreased from 33rd percentile to the current 23rd percentile.

- **Self-Pay Impact**

UIHC has a charity care program that shields the medically indigent from being impacted by increases in charges. The program discounts charges for services using a sliding scale based upon the Federal Poverty Limit (adjusted for family size). This program starts at 350% of the FPL.

Chargemaster Price Increase

UI Health Care Operating Budget FY2020

Support requested from the Board of Regents for a 6% rate increase at the University of Iowa Hospital and Clinics effective July 1, 2019.



Faculty Presentation

Improving Immunity Against Malaria

Noah S. Butler, PhD
Associate Professor of Microbiology and Immunology

Malaria Remains a Persistent Global Health Crisis

Improving Immunity Against Malaria

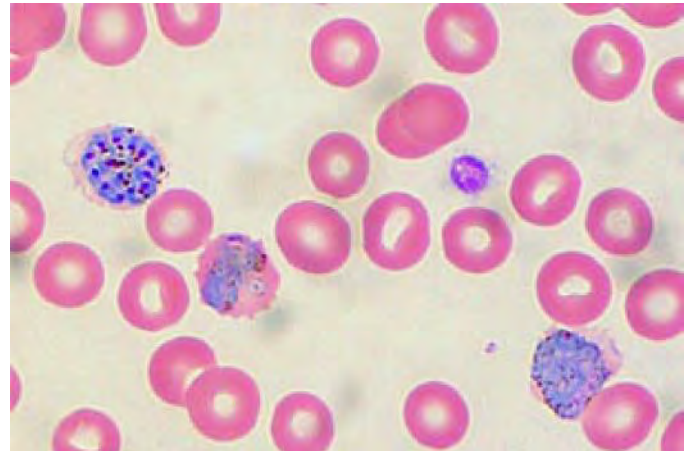
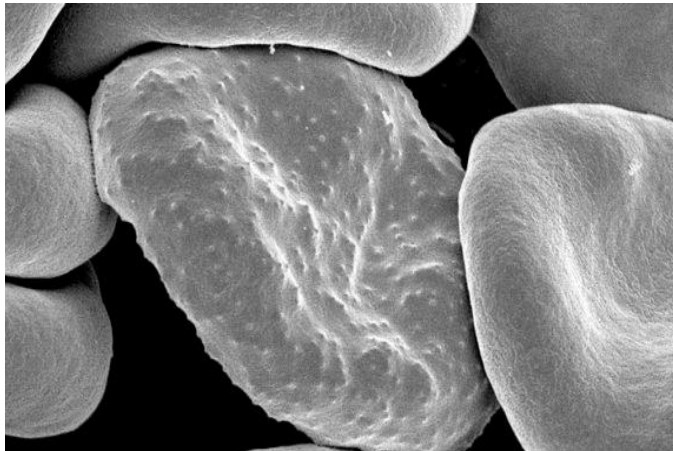


3,850,000,000



220,000,000

440,000



Our Central Questions

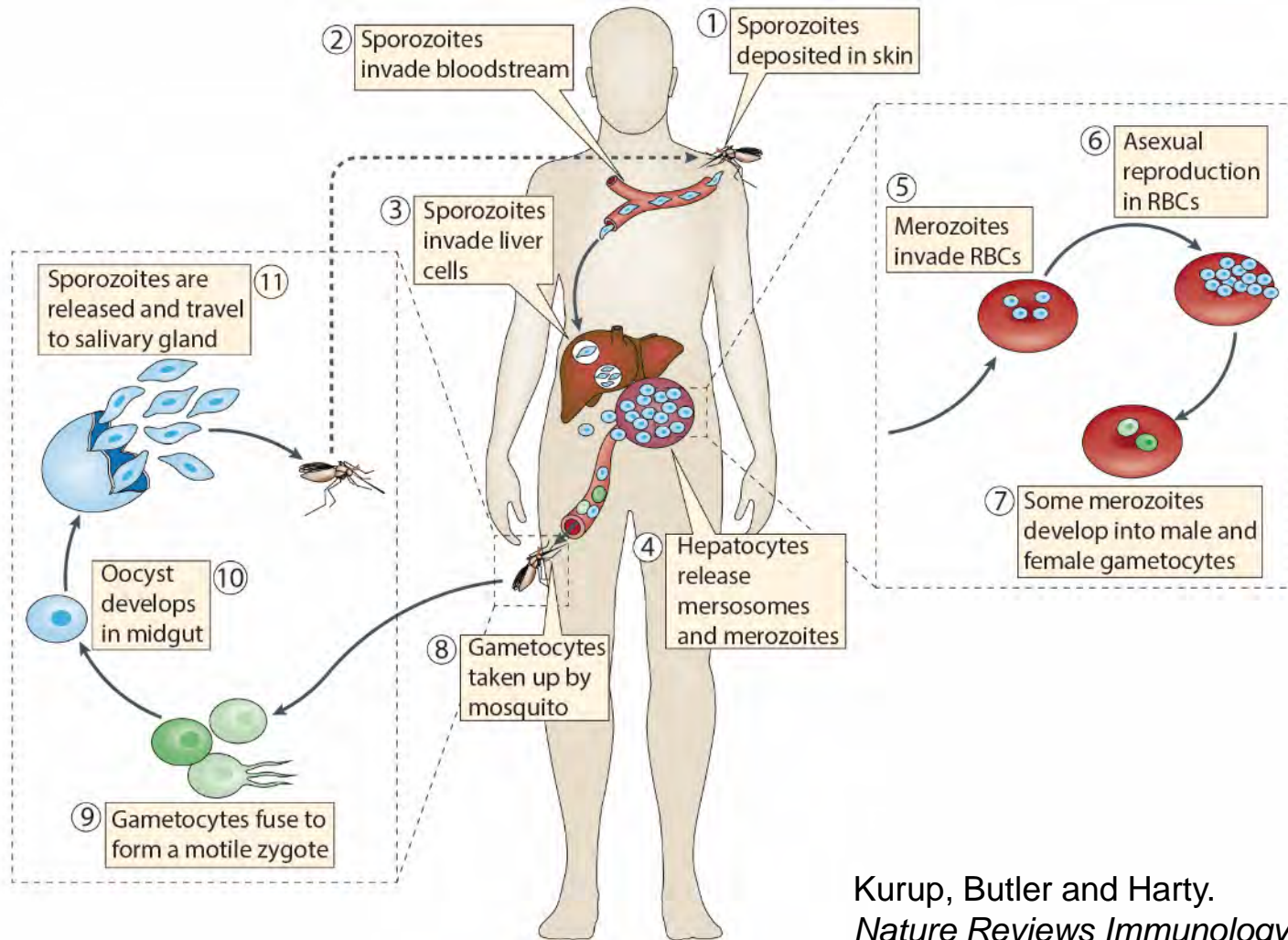
Improving Immunity Against Malaria

Why haven't we been able to develop a malaria vaccine?

Why don't people develop resistance to malaria on their own?

Malaria Parasite Life Cycle

Improving Immunity Against Malaria

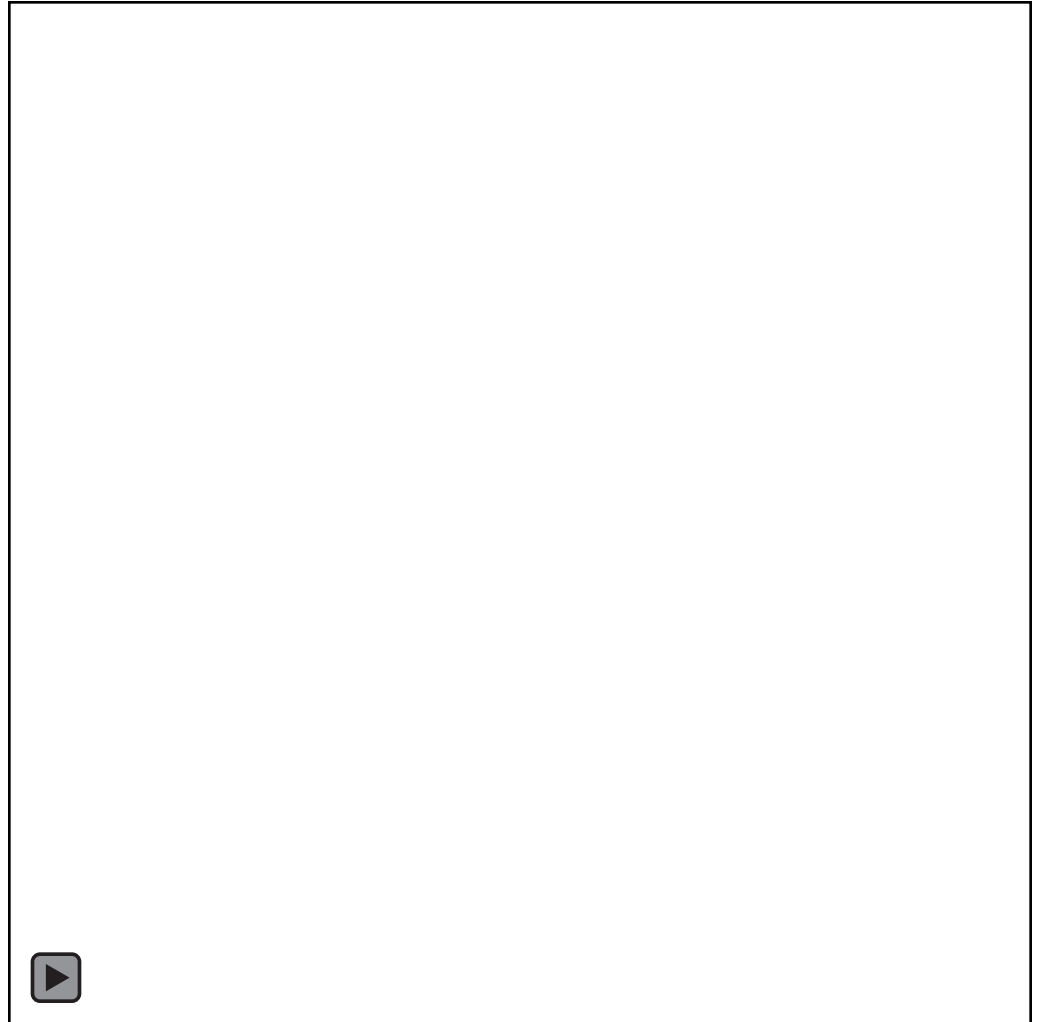


Kurup, Butler and Harty.
Nature Reviews Immunology (In Press)

Research Programs at UI Span the Spectrum of Malarial Disease and Life Cycle Stages

Improving Immunity Against Malaria

Malaria
Host Immune Cells



Why no vaccine? Why no natural resistance to malaria?

Improving Immunity Against Malaria

Three hypotheses being explored in the Butler Lab:

- Failures in immune cell activation
- Lack of immune cell survival
- Deficiencies in immune cell function

Approaches to Address our Hypotheses:

Improving Immunity Against Malaria

- Cutting-edge experimental cellular and molecular immunology
- Sophisticated “big data” genomics approaches
- Powerful collaborations with clinical investigators in the field
 - Dr. Margaret Feeney, UCSF-Uganda
 - Dr. Robert Seder, NIH-Kenya

What are we learning?

Improving Immunity Against Malaria

- Our experiments in the lab reflect observations from human studies
- Identification of genetic and programming circuits that distinctly govern malaria parasite-specific white blood cell function
- Novel opportunities (i.e. “molecular switches”) that can be targeted therapeutically to tip the balance back in favor of the patient

Broader relevance?

Improving Immunity Against Malaria

Deficiencies in immune cell activation during malaria have clear, relevant parallels:

- Chronic viral infections
 - HIV, Hepatitis C
- Cancer
 - Leukemia and lymphoma

Acknowledgements

Improving Immunity Against Malaria

Butler Lab

- Nirmal Dutta, Ph.D.
- Angela Pack, Ph.D.
- Rahul Vijay, D.V.M., Ph.D.
- Fionna Surette
- Jordan Johnson
- Alexandria Sturtz
- Graham Ausdal
- Patrick Schwartzhoff
- Celeste Renfroe

Collaborations

- Gail Bishop, University of Iowa
- Wendy Maury, University of Iowa
- Eric Taylor, University of Iowa
- Hai-Hui Xue, University of Iowa
- John Harty, University of Iowa
- Maggie Feeney, UCSF
- Robert Seder, NIH

Research Support

- University of Iowa Department of Microbiology and Immunology
- University of Iowa Holden Comprehensive Cancer Center
- University of Iowa Carver College of Medicine
- NIH/NIAID