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# University of Iowa Health Care

PRESENTATION TO THE BOARD OF REGENTS, STATE OF IOWA

September 23–24, 2020

# Agenda

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- Opening Remarks
- Operating and Financial Performance
- Faculty Presentation: Coronavirus Research

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# Opening Remarks

Presentation to The Board of Regents, State of Iowa | September 2020

**Brooks Jackson, MD, MBA**

Vice President for Medical Affairs

& Tyrone D. Artz, Dean, Carver College of Medicine

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# Operating and Financial Performance

Presentation to The Board of Regents, State of Iowa | September 2020

**Suresh Gunasekaran, MBA**

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

**Bradley Haws, MBA**

Associate Vice President &  
Chief Financial Officer, UI Health Care

# Volume and Financial Highlights–FY20

PRELIMINARY

THROUGH JUNE 2020

## Operating Margin

- Fiscal Year actual 4.5%, budget of 3.9%

## Volume Change

- Year-over-year: Inpatient Discharges -8.9%, Acute Patient Days -2.9%, Surgeries -5.6%, Clinic Visits -3.7%

## Acuity

- Case Mix Index increasing. 2.32 overall in June.

## Length of Stay Index

- Adult at .95 through May
- Pediatrics at .99 through May

## Revenues

- 2.0% below budget year-to-date
  - Inpatient below budget 6.7%
  - Outpatient above budget 2.2%

## Payer Mix

- Medicare mix is increasing
- FY19: 37.7%, FY20: 38.0%, June 2020: 38.9%

## Accounts Receivable

- Days in Net AR is 46.6 days with prior year of 49.5 days

## Salary Expenses

- 2.1% below budget year-to-date

## Non Salary Expenses

- 5.7% above budget year-to-date
- Supply and drug costs above budget

# FY20 Additional Details

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- \$31.1M of HHS CARES funding received
- Concerted effort to assure safe patient return resulted in pre-pandemic level volumes in many areas
- No material shift to Medicaid or self-pay noted

# Comparative Financial Results

PRELIMINARY

FISCAL YEAR TO DATE: JUNE 2020, 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	\$1,888,420	\$1,875,053	\$1,781,510	\$13,367	0.7%	\$106,910	6.0%
Other Operating Revenue	82,337	50,856	53,418	31,481	61.9%	28,919	54.1%
<b>Total Revenue</b>	<b>\$1,970,757</b>	<b>\$1,925,909</b>	<b>\$1,834,928</b>	<b>\$44,848</b>	<b>2.3%</b>	<b>\$135,829</b>	<b>7.4%</b>
<b>EXPENSES</b>							
Salaries and Wages	\$837,285	\$855,428	\$785,405	(\$18,143)	-2.1%	\$51,880	6.6%
General Expenses	940,985	889,885	848,172	51,100	5.7%	92,813	10.9%
Operating Expense before Capital	\$1,778,270	\$1,745,313	\$1,633,577	\$32,957	1.9%	\$144,693	8.9%
<b>Cash Flow Operating Margin</b>	<b>\$192,487</b>	<b>\$180,596</b>	<b>\$201,351</b>	<b>\$11,891</b>	<b>6.6%</b>	<b>(\$8,864)</b>	<b>-4.4%</b>
Capital- Depreciation and Amortization	103,483	105,486	101,855	(2,003)	-1.9%	1,628	1.6%
<b>Total Operating Expense</b>	<b>\$1,881,753</b>	<b>\$1,850,799</b>	<b>\$1,735,432</b>	<b>\$30,954</b>	<b>1.7%</b>	<b>\$146,321</b>	<b>8.4%</b>
<b>Operating Income</b>	<b>\$89,004</b>	<b>\$75,110</b>	<b>\$99,496</b>	<b>\$13,894</b>	<b>18.5%</b>	<b>(\$10,492)</b>	<b>-10.5%</b>
<b>Operating Margin %</b>	<b>4.5%</b>	<b>3.9%</b>	<b>5.4%</b>		<b>0.6%</b>		<b>-0.9%</b>
Gain (Loss) on Investments	35,391	22,016	56,141	13,375	60.8%	(20,750)	-37.0%
Other Non-Operating	(13,451)	(14,385)	(25,287)	934	6.5%	11,836	46.8%
<b>Net Income</b>	<b>\$110,944</b>	<b>\$82,741</b>	<b>\$130,350</b>	<b>\$28,203</b>	<b>34.1%</b>	<b>(\$19,406)</b>	<b>-14.9%</b>
<b>Net Margin %</b>	<b>5.6%</b>	<b>4.3%</b>	<b>7.0%</b>		<b>1.3%</b>		<b>-1.4%</b>

\* 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

	FY20 YTD Through June	Moody's Median
<b>Financial Operations</b>		
Operating Margin	3.9%	4.4%
<b>Financial – Liquidity</b>		
Days Cash on Hand	210	276
<b>Financial – Leverage</b>		
Debt to Capitalization	17.6%	24.4%



# Volume and Financial Highlights–FY21

THROUGH AUGUST 2020

## Operating Margin

- Fiscal Year actual 7.9% vs goal (before COVID risks) of 3.8%

## Volume Change

- Year-over-year: Inpatient Discharges -7.8%, Acute Patient Days 1.6% Surgeries -2.5%, Clinic Visits 12.6%

## Acuity

- Case Mix Index 2.30

## Length of Stay Index

- Adult at .95
- Pediatrics at .98

## Revenues

- 6.5% above budget year-to-date
  - Inpatient below budget 6.2%
  - Outpatient above budget 6.7%

## Payer Mix

- Medicare decreased since June
- FY20 YTD: 38.0%, August YTD FY21: 37.1%

## Accounts Receivable

- Days in Net AR – 47.4 days

## Salary Expenses

- 0.5% above budget year-to-date

## Non Salary Expenses

- 5.9% above budget year-to-date
- Supply and drug costs above budget

# FY21 Additional Details

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- \$13.7M of HHS CARES funding earned. Will be recorded over first 6 months of FY21.
- Initial FEMA submission through first level of three level review

# Comparative Financial Results

FISCAL YEAR TO DATE: AUGUST 2020, 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	\$350,364	\$327,914	\$323,871	\$22,450	6.8%	\$26,493	8.2%
Other Operating Revenue	12,248	8,438	8,851	3,810	45.2%	3,397	38.4%
<b>Total Revenue</b>	<b>\$362,612</b>	<b>\$336,352</b>	<b>\$332,722</b>	<b>\$26,260</b>	<b>7.8%</b>	<b>\$29,890</b>	<b>9.0%</b>
<b>EXPENSES</b>							
Salaries and Wages	\$141,209	\$140,541	\$136,011	\$668	0.5%	\$5,198	3.8%
General Expenses	175,631	165,458	152,987	10,173	6.1%	22,644	14.8%
Operating Expense before Capital	\$316,840	\$305,999	\$288,998	\$10,841	3.5%	\$27,842	9.6%
<b>Cash Flow Operating Margin</b>	<b>\$45,772</b>	<b>\$30,353</b>	<b>\$43,724</b>	<b>\$15,419</b>	<b>50.8%</b>	<b>\$2,048</b>	<b>4.7%</b>
Capital- Depreciation and Amortization	17,007	17,568	16,791	(561)	-3.2%	216	1.3%
<b>Total Operating Expense</b>	<b>\$333,847</b>	<b>\$323,567</b>	<b>\$305,789</b>	<b>\$10,280</b>	<b>3.2%</b>	<b>\$28,058</b>	<b>9.2%</b>
<b>Operating Income</b>	<b>\$28,765</b>	<b>\$12,785</b>	<b>\$26,933</b>	<b>\$15,980</b>	<b>125.0%</b>	<b>\$1,832</b>	<b>6.8%</b>
<b>Operating Margin %</b>	<b>7.9%</b>	<b>3.8%</b>	<b>8.1%</b>		<b>4.1%</b>		<b>-0.2%</b>
Gain (Loss) on Investments	15,700	1,847	598	13,853	750.0%	15,102	2,525.4%
Other Non-Operating	(1,942)	(2,309)	(2,268)	367	15.9%	326	14.4%
<b>Net Income</b>	<b>\$42,523</b>	<b>\$12,323</b>	<b>\$25,263</b>	<b>\$30,200</b>	<b>245.1%</b>	<b>\$17,260</b>	<b>68.3%</b>
<b>Net Margin %</b>	<b>11.3%</b>	<b>3.7%</b>	<b>7.6%</b>		<b>7.6%</b>		<b>3.7%</b>

Above is the internal budget, based upon pre-COVID performance. Given the ongoing COVID and economic risks, the final annual budget is lower than shown. 1.9% annual and (.3%) for YTD August.

# Key Metrics

	FY21 YTD Through August	Moody's Median
<b>Financial Operations</b>		
Operating Margin	7.3%	4.4%
<b>Financial – Liquidity</b>		
Days Cash on Hand	201	276
<b>Financial – Leverage</b>		
Debt to Capitalization	17.3%	24.4%

# UIHC – COVID Update

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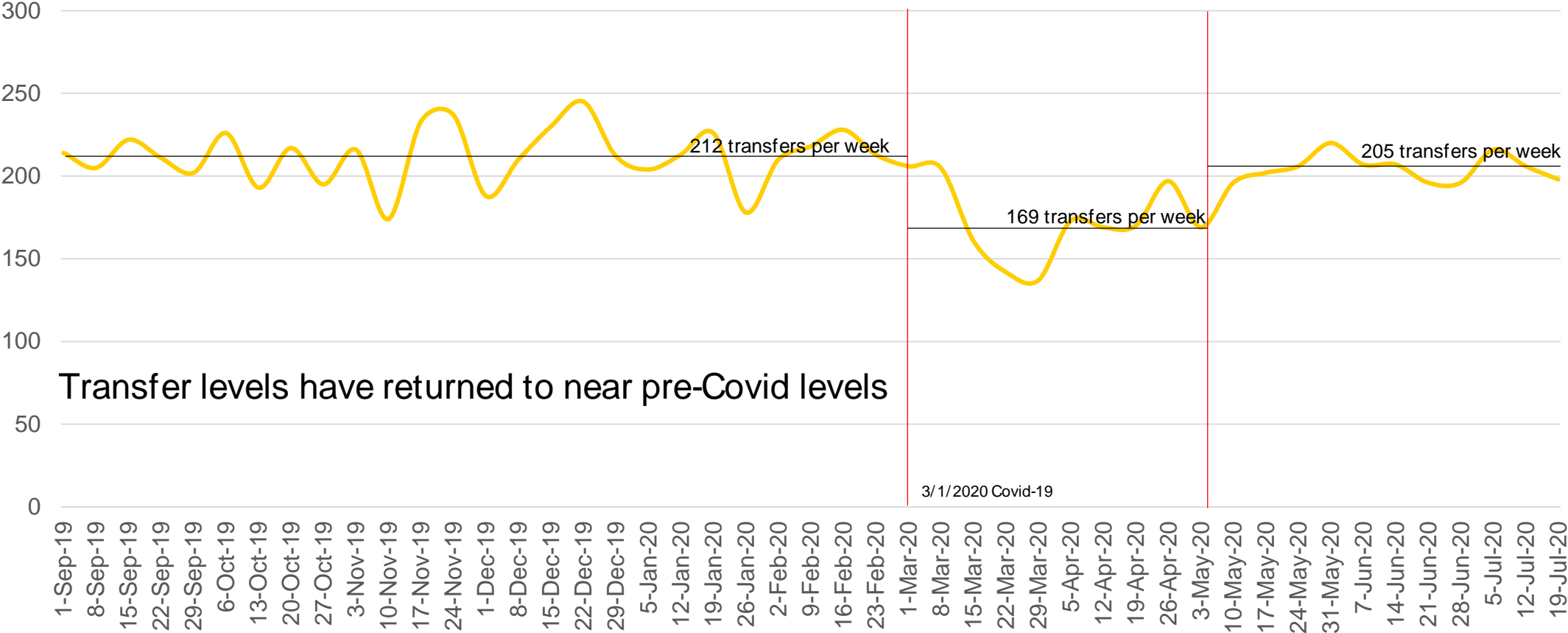
- Continuing to expand our safety standards with more protections in work rooms, modification to safety standards, and increased testing.
- ILI Clinic volumes and testing volumes remain high, but team continues to handle the volume efficiently.
- Continue to accept all COVID-19 patient transfers even though overall bed capacity remains limited by high demand from all directions.
- Continue to have concerns around the preservation of our workforce with the peak workload for such a long period of time.
- We continue to plan additional inpatient and ED space within the present physical plant to deal with increasing volumes.

# UIHC Remains a Strong Referral Center

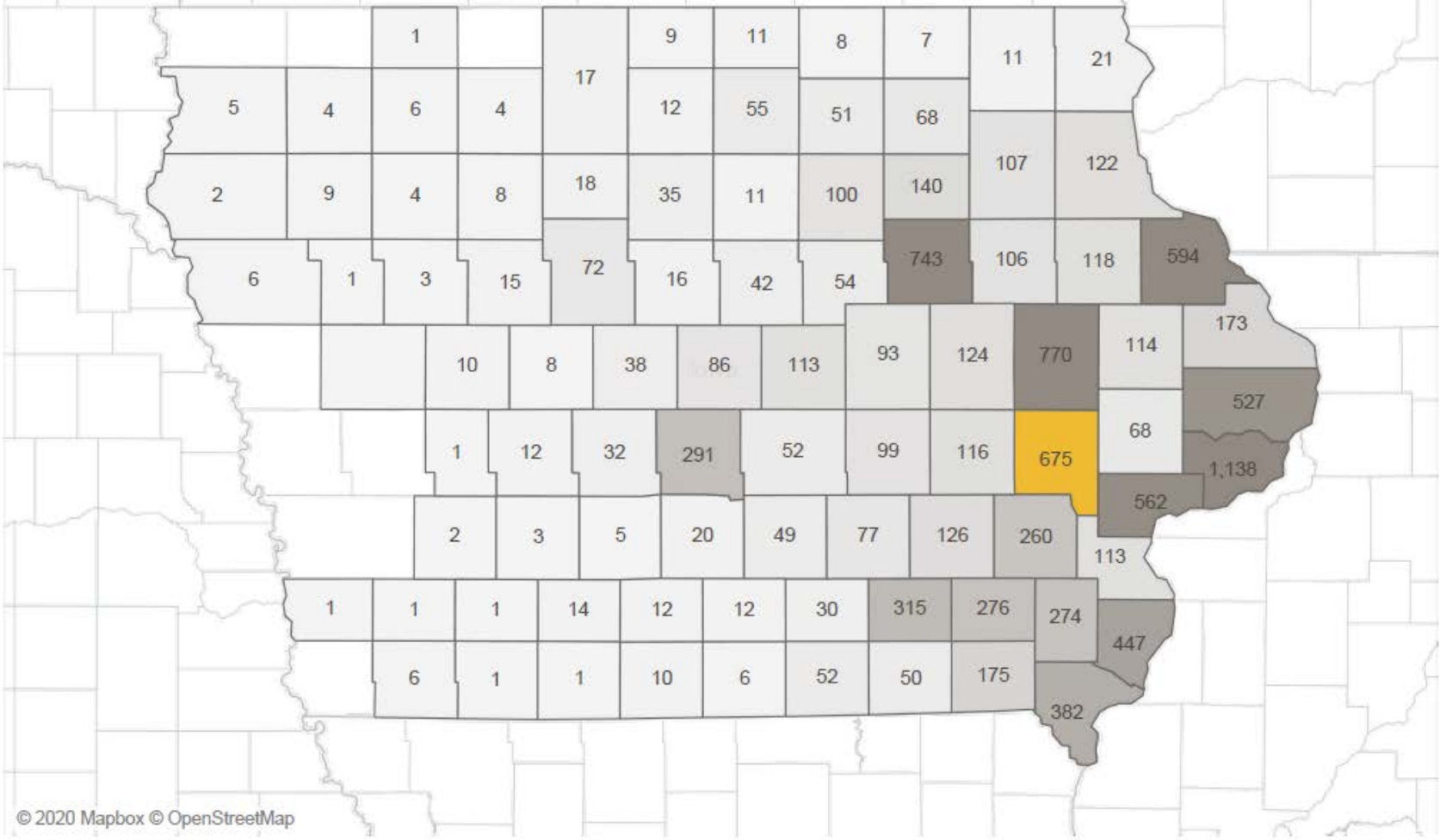
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- UIHC has seen most admit and occupancy indicators rebound to or near pre-Covid levels
- Inpatient transfer volumes are at 97% of pre-Covid levels though the acuity of such transfers has increased 6%
- Similarly, ED to UIHC ED transfer occupancy is also up 4%
- Direct admits (non-transfers, from external as well as internal ~35%) are at 90% of pre-Covid levels
  - Likely a result of reduced clinical workloads of external and internal providers
- Occupancy from patients who access our ED are back to pre-Covid levels but are up 11% compared to pre-Covid baseline over the last 30 days

# UIHC Inbound IP Transfers



# UIHC Transfers from Across Iowa Remain Strong

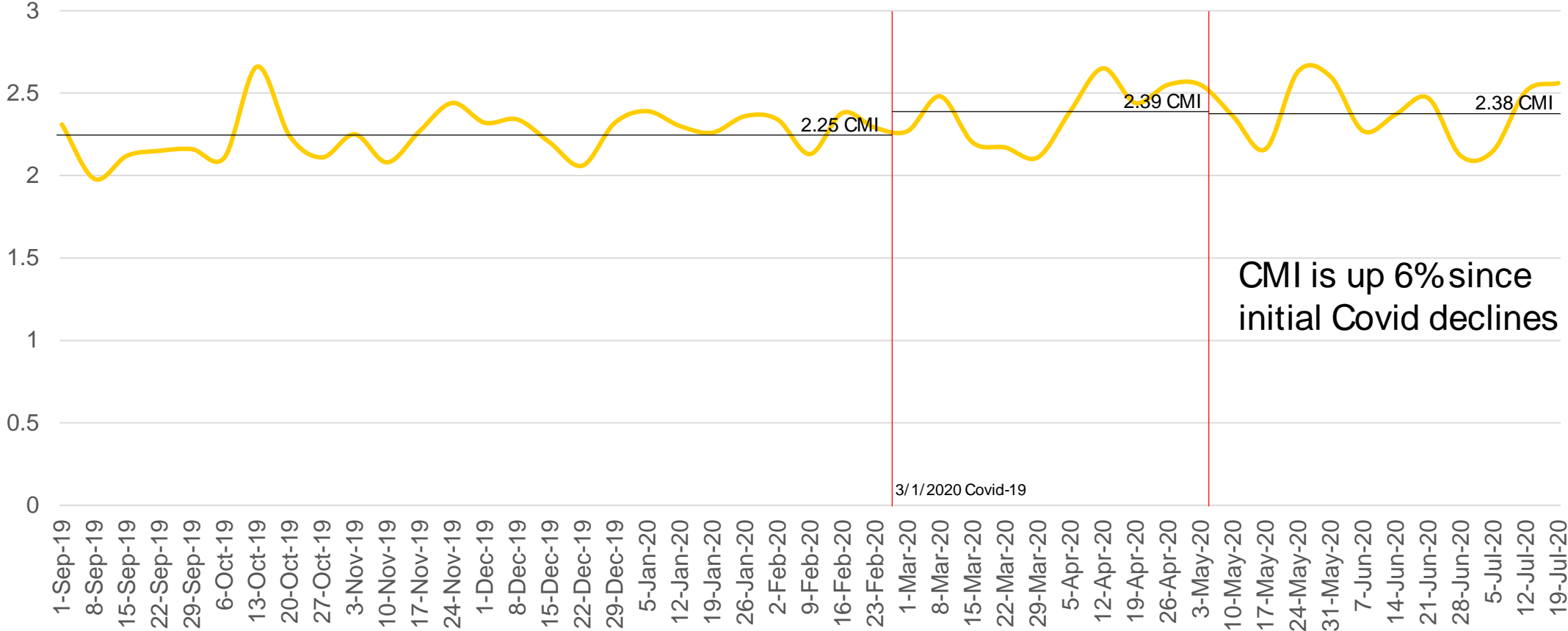


© 2020 Mapbox © OpenStreetMap

Data: 7/1/19 - 6/30/20

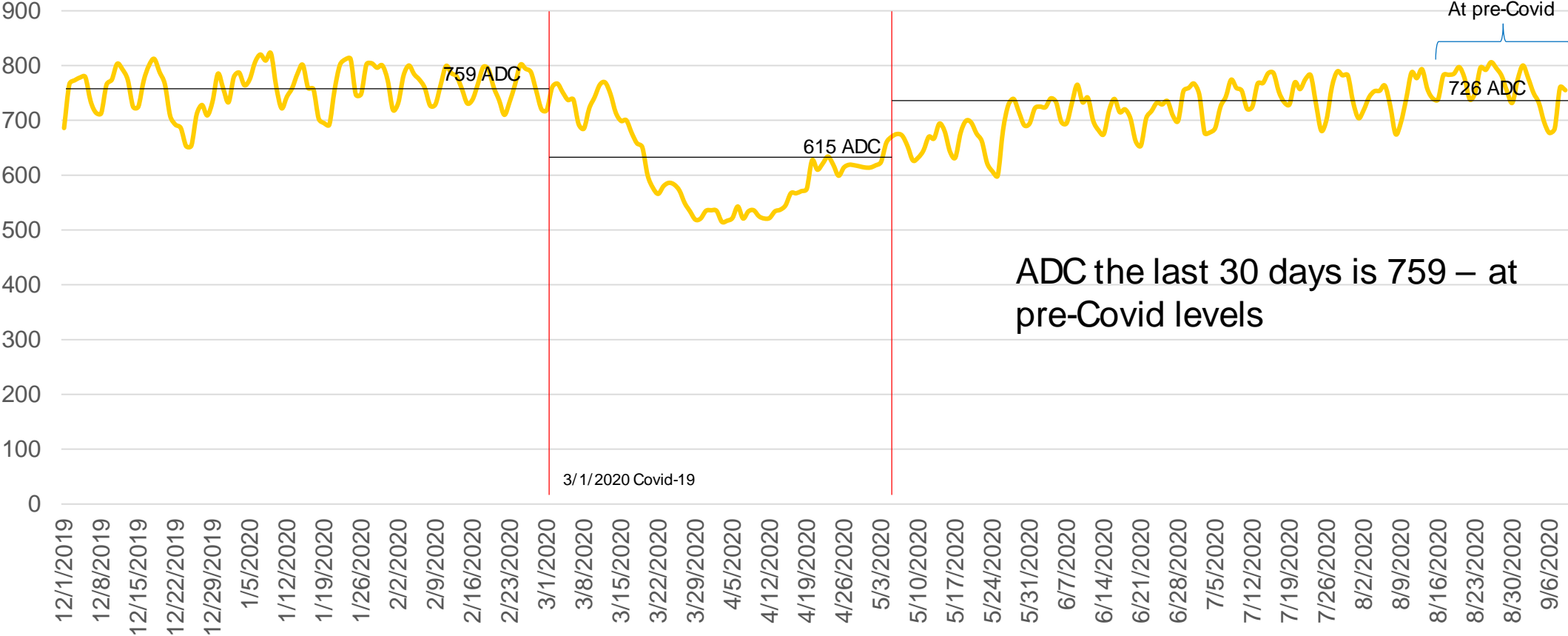


# UIHC Inbound IP Transfers – CMI

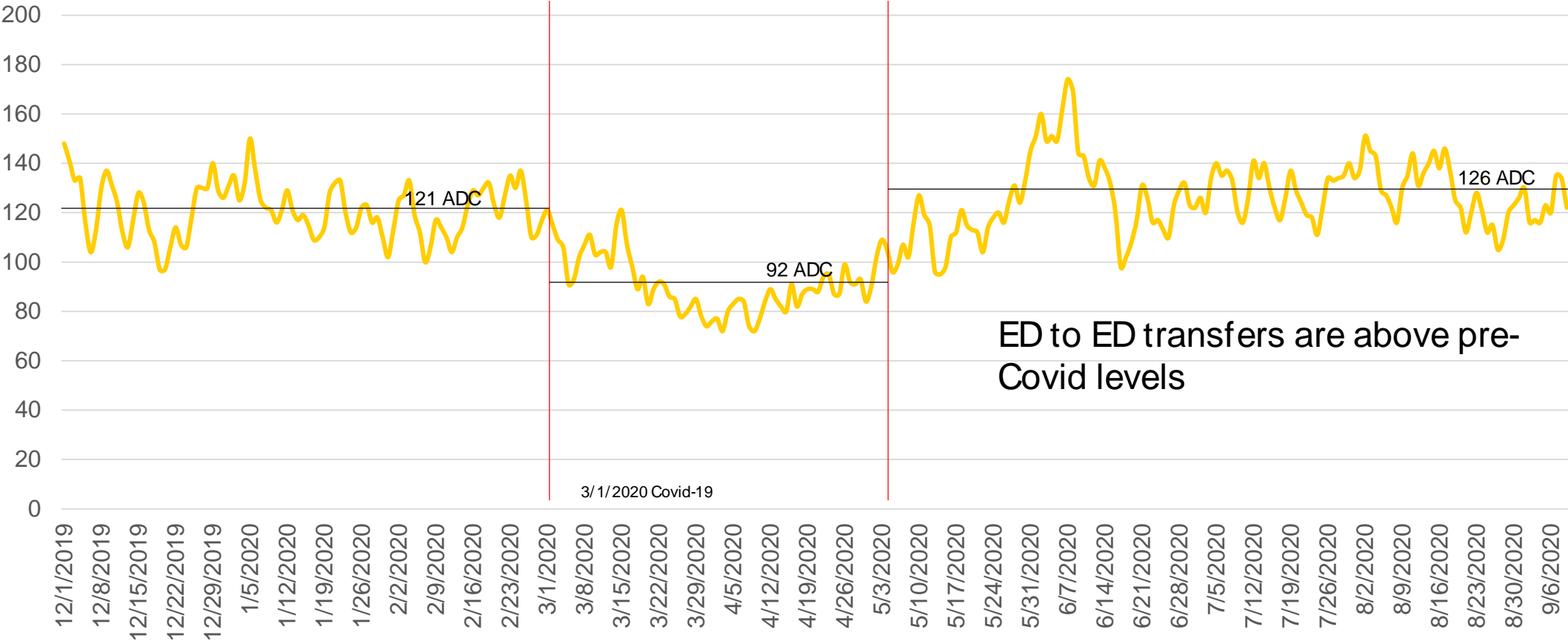


CMI is up 6% since initial Covid declines

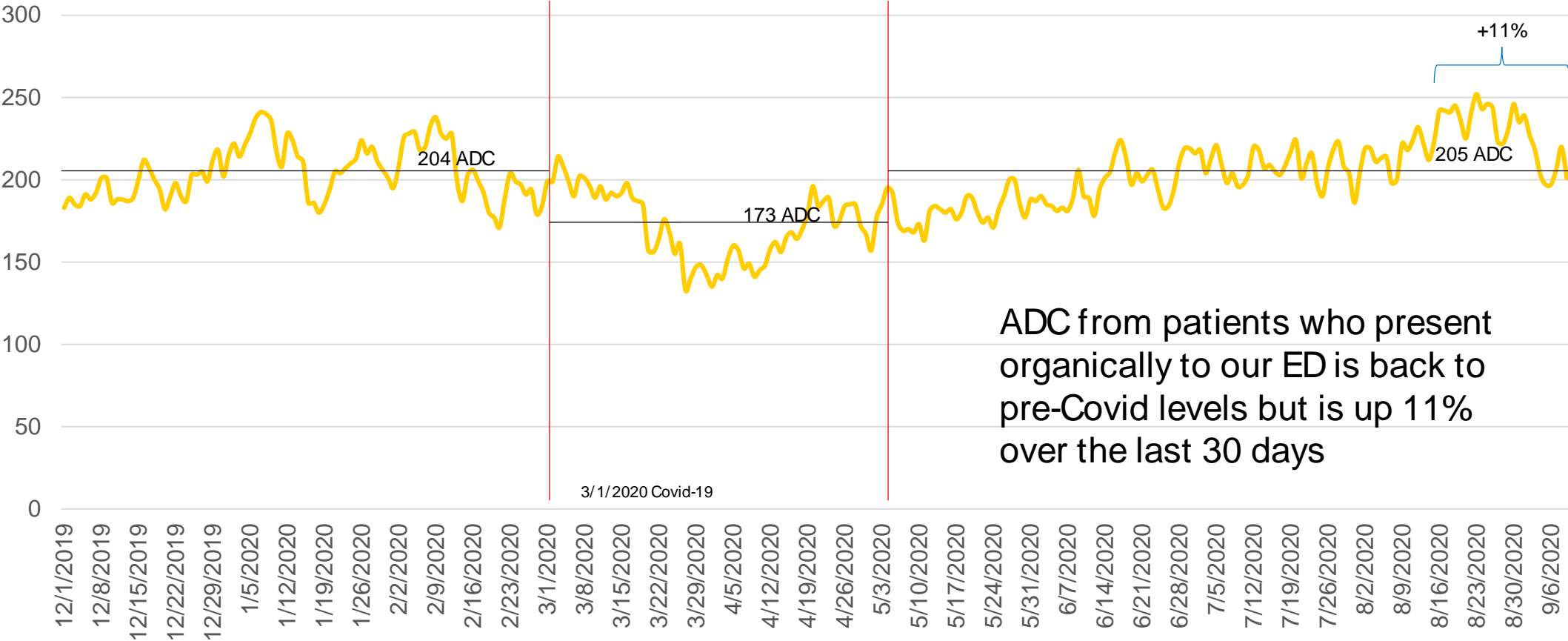
# UIHC Average Daily Census has Returned to Prior Levels



# UIHC Emergency Department Transfers Have Increased



# UIHC Admissions Through the Emergency Department Are Up Recently



ADC from patients who present organically to our ED is back to pre-Covid levels but is up 11% over the last 30 days

# Efforts to Fortify UIHC During the Pandemic

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- Our space capacity issues pre-date the pandemic, but are made worse during these times.
- We had 2 months of the worst Left Without Being Seen Rate in our Emergency Department because of space constraints.
- We are working to manage the increasing volumes of behavioral health patients that are in distress and need care.
- We are working with hospitals across the state to improve the transfer process but many remain dissatisfied with our capacity constraints.
- We are confident that we can gain more space through better efficiency, but increasingly patients are having to wait longer.

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# Coronavirus Research

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**Stanley Perlman, MD, PhD**

Mark Stinski Chair in Virology

Professor of Microbiology and Immunology

Professor of Pediatrics

# Research questions in general

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- Why is SARS-CoV-2 (the agent causing COVID-19) so contagious?
- Why does COVID-19 preferentially cause disease in people over 70 years of age and spare children less than 10 years of age?
- What are the prospects for broadly useful anti-viral therapies?
  - Identification of oral drug that we can use early on in the infection, like Tamiflu, would be ideal.
- Will vaccines work as well as we would like?
  - Will vaccines allow us to fully re-open the University of Iowa?
  - Will re-infection occur to a substantial extent after vaccination or natural infection?

# 1: Animal models

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- We have developed mouse models to study COVID-19 based on our previous studies of mouse coronaviruses and of other human respiratory coronaviruses (SARS (severe acute respiratory syndrome) and MERS (Middle East respiratory syndrome)).
  - These are based on the principle that these viruses either poorly infect mice or do not infect mice at all.
  - We need to provide the human molecule to mice to allow infection to occur.
  - We then need to further adapt the virus to mice so that it causes a range of diseases that duplicates human disease.
  - We have described three different approaches to making mice useful for these studies.



## 2: Role of aging

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- A general finding is that age is a risk factor for severe human respiratory coronavirus disease.
  - In SARS, no one under 24 years of age died, while mortality was greater than 50% in those over 60 years of age.
- Part of this risk occurs because the immune system ages (immunosenescence).
- We also found that the environment in the lung changes during aging and that this, independent of the immune system, leads to worse outcomes.
  - We identified a single molecule (prostaglandin D2) whose molecule increases in aging.
  - Prostaglandin synthesis is inhibited by agents such as aspirin and ibuprofen but the effects of these drugs are too broad to be useful in this setting.

# 3: Inhibition of Prostaglandin D2 (PGD<sub>2</sub>) signaling

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- When COVID-19 was first recognized, we were approached by a company, Bioage, who had developed or licensed a drug that inhibited PGD<sub>2</sub> function.
- We showed that the drug inhibited death in mice infected with SARS-coronavirus, especially when delivered after the infection began.
- We are now testing the drug in mice infected with SARS-CoV-2.
- If successful, we will proceed to clinical trials.

# 4: Vaccine and anti-viral drug development

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- We have a small research grant from Lilly to test monoclonal antibodies that are already in use clinically.
- We performed testing for AbbVie for drugs with anti-virus effects as part of a research contract. Some of these are repurposed from use in HIV patients
- We are working with investigators from Kansas State to characterize and bring to market a drug that inhibits the ability of the virus to grow.
  - This drug inhibits the protease of the virus, which is essential for virus reproduction
  - It is safe because it does not inhibit any human cell proteases.
  - The UI is a co-owner of a patent on this drug.

# 5: Other projects

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- We are studying the basis of the loss of the sense of smell (anosmia) in patients with COVID-19.
  - Anosmia (and loss of sense of taste) occurs in people with no other symptoms of COVID-19.
  - May be useful diagnostically.
  - Infected mice develop this sign of disease.
  - We are working with the military on this project.
- We are working on understanding the basis of the excessive inflammatory response observed in patients with severe COVID-19.
  - We are working with clinicians at the UIHC.
  - We are also studying human cells, macrophages, that produce many of these molecules and appear to behave aberrantly after infection with SARS-CoV-2.
  - Inhibiting the function of these cells may be useful clinically.

# 6: Other projects

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- We are continuing to use mice infected with a mouse coronavirus as a model for the human disease, multiple sclerosis.

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# Questions or comments?

→ [perlman.lab.uiowa.edu](http://perlman.lab.uiowa.edu)

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# Thank you

→ [uihc.org](https://uihc.org)

