Agenda

• Opening Remarks
• Operating and Financial Performance
• Faculty Presentation: COVID-19 Vaccine and Treatment Trials
Opening Remarks
Presentation to The Board of Regents, State of Iowa | November 2020

Brooks Jackson, MD, MBA
Vice President for Medical Affairs
& Tyrone D. Artz, Dean, Carver College of Medicine
Operating and Financial Performance

Presentation to The Board of Regents, State of Iowa | November 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 – FY21

Operating Margin
• Fiscal Year actual 6.4% vs goal (before COVID risks) of 4.2%

Volume Change
• Year-over-year: Inpatient Discharges -7.8%, Acute Patient Days 2.4%, Surgeries 0.3%, Clinic Visits 17.7%. Traditional visits -6%.

Acuity
• Case Mix Index 2.36

Length of Stay Index
• Adult at .96
• Pediatrics at .96

Revenues
• 5.5% above budget yearto-date
  - Inpatient below budget 6.2%
  - Outpatient above budget 5.0%
  - HHS Cares Funding of $7M

Payer Mix
• Medicare decreased since June
• FY20 YTD: 38.0%, Sept YTD FY21: 36.6%

Accounts Receivable
• Days in Net AR of 44.4

Salary Expenses
• 1.6% above budget yearto-date
• Unpaid Time/Vacation give back of $10.6M

Non-Salary Expenses
• 5.7% above budget yearto-date
• Supply and drug costs above budget
## Comparative Financial Results

### NET REVENUES

<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
<th>Budget</th>
<th>Prior Year</th>
<th>Variance to Budget</th>
<th>% Variance to Budget</th>
<th>Variance to Prior Year</th>
<th>% Variance to Prior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Revenue</td>
<td>$521,949</td>
<td>$498,570</td>
<td>$476,928</td>
<td>$23,379</td>
<td>4.7%</td>
<td>$45,021</td>
<td>9.4%</td>
</tr>
<tr>
<td>Other Operating Revenue</td>
<td>18,907</td>
<td>12,656</td>
<td>13,159</td>
<td>6,251</td>
<td>49.4%</td>
<td>5,748</td>
<td>43.7%</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td>$540,856</td>
<td>$511,226</td>
<td>$490,087</td>
<td>$29,630</td>
<td>5.8%</td>
<td>$50,769</td>
<td>10.4%</td>
</tr>
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</table>

### EXPENSES

<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
<th>Budget</th>
<th>Prior Year</th>
<th>Variance to Budget</th>
<th>% Variance to Budget</th>
<th>Variance to Prior Year</th>
<th>% Variance to Prior Year</th>
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</thead>
<tbody>
<tr>
<td>Salaries and Wages</td>
<td>$214,258</td>
<td>$210,897</td>
<td>$204,842</td>
<td>$3,361</td>
<td>1.6%</td>
<td>$9,416</td>
<td>4.6%</td>
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<tr>
<td>General Expenses</td>
<td>266,073</td>
<td>251,752</td>
<td>225,197</td>
<td>14,321</td>
<td>5.7%</td>
<td>40,876</td>
<td>18.2%</td>
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<tr>
<td><strong>Operating Expense before Capital</strong></td>
<td>$480,331</td>
<td>$462,649</td>
<td>$430,039</td>
<td>$50,302</td>
<td>3.8%</td>
<td>50,292</td>
<td>11.7%</td>
</tr>
<tr>
<td><strong>Cash Flow Operating Margin</strong></td>
<td>$60,525</td>
<td>$48,577</td>
<td>$60,048</td>
<td>$11,948</td>
<td>24.6%</td>
<td>$477</td>
<td>0.8%</td>
</tr>
<tr>
<td>Capital-Depreciation and Amortization</td>
<td>26,056</td>
<td>27,058</td>
<td>25,597</td>
<td>(1,002)</td>
<td>-3.7%</td>
<td>459</td>
<td>1.8%</td>
</tr>
<tr>
<td><strong>Total Operating Expense</strong></td>
<td>$506,387</td>
<td>$489,707</td>
<td>$455,636</td>
<td>$16,680</td>
<td>3.4%</td>
<td>$50,751</td>
<td>11.1%</td>
</tr>
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</table>

### Operating Income

<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
<th>Budget</th>
<th>Prior Year</th>
<th>Variance to Budget</th>
<th>% Variance to Budget</th>
<th>Variance to Prior Year</th>
<th>% Variance to Prior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Income</strong></td>
<td>$34,469</td>
<td>$21,519</td>
<td>$34,451</td>
<td>$12,950</td>
<td>60.2%</td>
<td>$18</td>
<td>0.1%</td>
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<tr>
<td><strong>Operating Margin %</strong></td>
<td>6.4%</td>
<td>4.2%</td>
<td>7.0%</td>
<td>2.2%</td>
<td>-0.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gain (Loss) on Investments</td>
<td>19,956</td>
<td>2,771</td>
<td>2,952</td>
<td>17,185</td>
<td>620.2%</td>
<td>17,004</td>
<td>576.0%</td>
</tr>
<tr>
<td>Other Non-Operating</td>
<td>(2,922)</td>
<td>(3,465)</td>
<td>(3,207)</td>
<td>543</td>
<td>15.7%</td>
<td>285</td>
<td>8.9%</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td>$51,503</td>
<td>$20,825</td>
<td>$34,196</td>
<td>$30,678</td>
<td>147.3%</td>
<td>$17,307</td>
<td>50.6%</td>
</tr>
<tr>
<td><strong>Net Margin %</strong></td>
<td>9.2%</td>
<td>4.1%</td>
<td>7.0%</td>
<td>5.1%</td>
<td>2.2%</td>
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<td></td>
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</table>
## Key Metrics

<table>
<thead>
<tr>
<th>Financial Operations</th>
<th>FY21 YTD Through September</th>
<th>Moody's Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Margin</td>
<td>5.8%</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial – Liquidity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Days Cash on Hand</td>
<td>204</td>
<td>276</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial – Leverage</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt to Capitalization</td>
<td>16.7%</td>
<td>24.4%</td>
</tr>
</tbody>
</table>
Quality Outcomes Update
Operating and Financial Performance
FY20 Non-MBI CLABSI Metric Update

Infections Prevented

<table>
<thead>
<tr>
<th>Baseline</th>
<th>1.22/1,000 Line-days</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY20 Goal</td>
<td>≤1.0/1,000 Line-days</td>
</tr>
<tr>
<td>Current FY20 (through June 2020)</td>
<td>0.8/1,000 Line-days</td>
</tr>
</tbody>
</table>

Cost Savings

$1,087,501

Baseline Time Period: CY2018
Measured Time Period: FY2020
FY20 Surgical Site Infection: Colon and CABG

**Colon** Estimated Infections Prevented

- **Baseline** Surgical Infection Rate: 1.7
- **FY20 Goal** Surgical Infection Rate: ≤1.0
- **Current FY20 (through June 2020)** Surgical Infection Rate: 1.0

**Cost Savings** $115,500

**CABG** Estimated Infections Prevented

- **Baseline** Surgical Infection Rate: 3.8
- **FY20 Goal** Surgical Infection Rate: ≤1.0
- **Current FY20 (through April 2020)** Surgical Infection Rate: 1.2

**Cost Savings** $368,900

Surveillance period is 90 days after procedure. SIR 3.8 (timeframe 10/17-9/18)

Presentation to The Board of Regents, State of Iowa  |  November 2020
HCAHPS Patient Satisfaction

Operating and Financial Performance
“Rate Hospital 0-10”

Discharge Date
- 11/1/2015 to 10/31/2016: Benchmark Period 8/1/2016 to 10/31/2016, Sample Size n=178, Peer Group Size n=2,016
- 11/1/2016 to 10/31/2017: Benchmark Period 8/1/2017 to 10/31/2017, Sample Size n=564, Peer Group Size n=2,222
- 11/1/2019 to 10/31/2020: Benchmark Period 7/1/2020 to 9/30/2020, Sample Size n=2,750, Peer Group Size n=2,572

Average Scores:
- All PG Database: 68.54, 66.97, 65.39, 72.54, 72.51
- Rate hospital 0-10 CAHPS Top Box: 29, 30, 21, 48, 54
“Recommend the hospital”

Discharge Date

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Discharge Date</th>
<th>Date Range</th>
<th>Discharge Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/1/2015 - 10/31/2016</td>
<td>11/1/2015</td>
<td>11/1/2017 - 10/31/2018</td>
<td>11/1/2018</td>
</tr>
<tr>
<td>10/31/2016</td>
<td>10/31/2016</td>
<td>10/31/2018</td>
<td>10/31/2019</td>
</tr>
<tr>
<td>10/31/2017</td>
<td>10/31/2017</td>
<td>10/31/2019</td>
<td>10/31/2020</td>
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</table>

Benchmark Period

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Discharge Date</th>
<th>Date Range</th>
<th>Discharge Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/1/2016 - 10/31/2016</td>
<td>8/1/2016</td>
<td>8/1/2017 - 10/31/2017</td>
<td>8/1/2018</td>
</tr>
<tr>
<td>10/31/2016</td>
<td>10/31/2016</td>
<td>10/31/2018</td>
<td>10/31/2019</td>
</tr>
<tr>
<td>8/1/2017 - 10/31/2017</td>
<td>8/1/2017</td>
<td>8/1/2018 - 10/31/2019</td>
<td>8/1/2019</td>
</tr>
<tr>
<td>10/31/2017</td>
<td>10/31/2017</td>
<td>10/31/2019</td>
<td>7/1/2020</td>
</tr>
<tr>
<td>8/1/2018 - 10/31/2018</td>
<td>8/1/2018</td>
<td>10/31/2019</td>
<td>9/30/2020</td>
</tr>
<tr>
<td>10/31/2018</td>
<td>10/31/2018</td>
<td>9/30/2020</td>
<td>9/30/2020</td>
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</table>

Sample Size

<table>
<thead>
<tr>
<th>Sample Size</th>
<th>Discharge Date</th>
<th>Date Range</th>
<th>Discharge Date</th>
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<tbody>
<tr>
<td>n=179</td>
<td>11/1/2015</td>
<td>11/1/2016</td>
<td>11/1/2017</td>
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<tr>
<td></td>
<td>10/31/2016</td>
<td>10/31/2017</td>
<td>10/31/2018</td>
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<tr>
<td>n=567</td>
<td>11/1/2016</td>
<td>11/1/2017</td>
<td>11/1/2018</td>
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<tr>
<td></td>
<td>10/31/2016</td>
<td>10/31/2017</td>
<td>10/31/2019</td>
</tr>
<tr>
<td>n=599</td>
<td>11/1/2017</td>
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<tr>
<td></td>
<td>10/31/2017</td>
<td>10/31/2018</td>
<td>10/31/2020</td>
</tr>
<tr>
<td>n=3,257</td>
<td>11/1/2018</td>
<td>11/1/2019</td>
<td>7/1/2020</td>
</tr>
<tr>
<td></td>
<td>10/31/2019</td>
<td>10/31/2019</td>
<td>9/30/2020</td>
</tr>
<tr>
<td>n=2,747</td>
<td>11/1/2019</td>
<td>11/1/2019</td>
<td>9/30/2020</td>
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</tbody>
</table>

Peer Group Size

<table>
<thead>
<tr>
<th>Peer Group Size</th>
<th>Discharge Date</th>
<th>Date Range</th>
<th>Discharge Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=2,011</td>
<td>11/1/2015</td>
<td>11/1/2016</td>
<td>11/1/2017</td>
</tr>
<tr>
<td></td>
<td>10/31/2016</td>
<td>10/31/2017</td>
<td>10/31/2018</td>
</tr>
<tr>
<td>n=2,218</td>
<td>11/1/2016</td>
<td>11/1/2017</td>
<td>11/1/2018</td>
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<tr>
<td></td>
<td>10/31/2016</td>
<td>10/31/2017</td>
<td>10/31/2019</td>
</tr>
<tr>
<td>n=2,650</td>
<td>11/1/2017</td>
<td>11/1/2018</td>
<td>11/1/2019</td>
</tr>
<tr>
<td></td>
<td>10/31/2017</td>
<td>10/31/2018</td>
<td>10/31/2020</td>
</tr>
<tr>
<td>n=2,726</td>
<td>11/1/2018</td>
<td>11/1/2019</td>
<td>7/1/2020</td>
</tr>
<tr>
<td></td>
<td>10/31/2019</td>
<td>10/31/2019</td>
<td>9/30/2020</td>
</tr>
<tr>
<td>n=2,564</td>
<td>11/1/2019</td>
<td>11/1/2019</td>
<td>9/30/2020</td>
</tr>
</tbody>
</table>

HCAHPS
"Communication with nurses" Domain

HCAHPS

Discharge Date
- 11/1/2015 to 10/31/2016
- 11/1/2016 to 10/31/2017
- 11/1/2017 to 10/31/2018
- 11/1/2018 to 10/31/2019
- 11/1/2019 to 10/31/2020

Benchmark Period
- 8/1/2016 to 10/31/2016
- 8/1/2017 to 10/31/2017
- 8/1/2018 to 10/31/2018
- 8/1/2019 to 10/31/2019
- 7/1/2020 to 9/30/2020

Sample Size
- n=181
- n=568
- n=611
- n=3,322
- n=2,779

Peer Group Size
- n=2,018
- n=2,226
- n=2,671
- n=2,745
- n=2,587
“Responsiveness of Hospital Staff” Domain

All PG Database

Responsiveness of Hospital Staff CAHPS Top Box

Discharge Date
- 11/1/2015-10/31/2016
- 11/1/2016-10/31/2017
- 11/1/2017-10/31/2018
- 11/1/2018-10/31/2019
- 11/1/2019-10/31/2020

Benchmark Period
- 8/1/2016-10/31/2016
- 8/1/2017-10/31/2017
- 8/1/2018-10/31/2018
- 8/1/2019-10/31/2019
- 7/1/2020-9/30/2020

Sample Size
- n=163
- n=523
- n=564
- n=3,060
- n=2,623

Peer Group Size
- n=1,993
- n=2,203
- n=2,619
- n=2,684
- n=2,541
“Communication with Doctors” Domain

Discharge Date
- 11/1/2015
- 11/1/2016
- 11/1/2017
- 11/1/2018
- 11/1/2019
- 10/31/2016
- 10/31/2017
- 10/31/2018
- 10/31/2019
- 10/31/2020

Benchmark Period
- 8/1/2016
- 8/1/2017
- 8/1/2018
- 8/1/2019
- 7/1/2020
- 10/31/2016
- 10/31/2017
- 10/31/2018
- 10/31/2019
- 9/30/2020

Sample Size
- n=181
- n=568
- n=609
- n=3,314
- n=2,768

Peer Group Size
- n=2,018
- n=2,223
- n=2,666
- n=2,741
- n=2,583

All PG Database

Communication with Doctors

CAHPS Top Box

Peer Group

HCAHPS
"Quietness of Hospital Environment"

<table>
<thead>
<tr>
<th>Discharge Date</th>
<th>Benchmark Period</th>
<th>Sample Size</th>
<th>Peer Group Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n=181</td>
<td>n=2,018</td>
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<tr>
<td>10/31/2016</td>
<td>10/31/2016</td>
<td>n=609</td>
<td>n=2,666</td>
</tr>
<tr>
<td></td>
<td>11/1/2017</td>
<td>n=3,114</td>
<td>n=2,741</td>
</tr>
<tr>
<td></td>
<td>10/31/2018</td>
<td>n=2,768</td>
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</tr>
<tr>
<td></td>
<td>11/1/2019</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

**HCAHPS**

**OPPORTUNITY FOR FOCUS**
UI Hospitals & Clinics
Surge Planning
Operating and Financial Performance
What we are changing through January 3rd

- Additional visitor restrictions
- Modified work restrictions for asymptomatic clinical staff with negative tests
- Expand ILI capacity
- Expand work from home for non-clinical frontline staff
- Expand ICU bed capacity – 10 additional ICU beds on 4RC
- Maintain MSS bed capacity – convert 13 beds on CPRU
- Re-assign staff to support inpatient and ILI areas
- Re-assign staff to assist with call volumes
- Modify surgical and procedural schedules
- Modify clinic schedules
- We need to treat the holiday season differently
Novel Vaccine Platforms for Protection from SARS-CoV-2

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

Patricia Winokur, MD
Executive Dean, UI Carver College of Medicine
Director, Vaccine Treatment and Evaluation Unit
Director, Institute for Clinical and Translational Science
Professor of Internal Medicine—Infectious Disease
Clinical Trials from Test Tube to FDA Approval and Beyond

- **Preclinical**: Drug Approved for Testing in Humans
- **Phase 1**: 20-80 Participants
- **Phase 2**: 100-300 Participants
- **Phase 3**: 1,000-3,000 Participants
- **FDA Review**: To Confirm Safety and Effectiveness
- **Phase 4**: 1,000+ Participants
- **Drug Approved**
EUA vs Full FDA Approval

Emergency Use Authorization:

• Allows FDA to approve medical counter measures when the country is experiencing a public health emergency (chemical, biological, radiological or nuclear threats or threat from emerging infectious diseases).

• Practical terms: Makes a product available to the public with the best available evidence. Careful balance of risks vs benefits.

• Requires ongoing safety and efficacy surveillance

Full FDA Approval:

• Complete assessment of substantial evidence that the product is effective and benefits outweigh the risks.
Operation Warp Speed

- Time from outbreak/identification to Phase I Clinical Trial
- Time from identification to outbreak
- Time from first clinical trial to get a licensed vaccine
- Major outbreak

Covid-19
MERS-CoV
SARS-CoV
Zika
Chikungunya
Dengue
Crimean-Congo
Haemorrhagic Fever
Lassa Fever
Ebola

2020

Presentation to The Board of Regents, State of Iowa | November 2020
SARS and MERS

Antibody produced in response to a vaccine

SARS-CoV-2 coronavirus
Rapidly Changing Landscape

Coronavirus Vaccine Tracker

By Jonathan Corum, Sui-Lee Wee and Carl Zimmer  Updated November 3, 2020

- **36** Vaccines testing safety and dosage
- **14** Vaccines in expanded safety trials
- **11** Vaccines in large-scale efficacy tests
- **6** Vaccines approved for early or limited use
- **0** Vaccines approved for full use
Vaccine Safety Balanced with Efficacy
U.S. Leading Vaccine Candidates

- Moderna
- Pfizer-BioNTech

Both are molecular vaccine platforms using mRNA
mRNA Vaccine Biology
FDA Guidance: October 2020

Efficacy
• 50% reduction in COVID19 infection

Safety
• Focus on adverse events like new immune mediated diseases
• Cases of severe COVID 19

Follow Up
• At least half of subjects have reached 2 months after the full vaccination regimen
• Assessment of enough cases of severe COVID 19 to ensure that the vaccine does not enhance the severity of disease
Where are we today?

**Pfizer**
- Completed Phases 1 and 2
- Completed enrollment of 44,000 subjects: 50% vaccine:50% placebo
  - Started with 18 years & older
  - Added 16-17 year olds
  - Added 12-15 year olds

  Early analysis: 90% Efficacy

**Moderna**
- Completed Phases 1 and 2
- Completed enrollment of 30,000 subjects: 50% vaccine:50% placebo
  - Ages 18 and older

  Early analysis: 94.5% efficacy. Had 11 cases of severe infections all in placebo group

**Now we wait**
- 2 month safety follow up
- Pfizer will likely go to FDA this week
- Moderna is a few weeks behind
Phase 1: Reactogenicity of Pfizer BNT162b2

Ages 18-64

Ages 65-85
Neutralizing titers typically 3-4 times higher than those seen after natural infection.
Vaccine Prioritization Modeling

Distribution will adjust as volume of vaccine doses increases

**Limited Doses Available**
- Constrained supply
- Highly targeted administration required to achieve coverage in priority populations

**Large Number of Doses Available**
- Likely sufficient supply to meet demand
- Supply increases access
- Broad administration network required, including surge capacity

**Continued Vaccination, Shift to Routine Strategy**
- Likely excess supply
- Broad administration network for increased access

Example populations:
- **HCPs**
  - First responders
- **People with high-risk conditions**
- **Older adults, including those living in long-term care facilities**
- **Non-healthcare critical workers**
- **People in congregate settings**
- **All other older adults**
- **Young adults**
- **Other critical workers**
- **All others in the US who did not have access in previous phases**

~21M >150M > 87M
When and How?

• Earliest vaccine availability?
  – December with very limited doses

• Advisory Committee on Immunization Practices will likely decide priority populations

• Coordinated through the Iowa Department of Public Health
More Data is Still Needed

• Long term safety
  – EUA at 2 months post vaccine
  – Continued follow up of study participants
  – Aggressive post marketing safety follow up

• Durability of antibody responses

• Safety of repeat dosing in a year

• Safety in children/pregnant women/special populations
Additional Vaccines in Later Stages of Development

• Janssen: Ad26
• Astra Zeneca: ChimpAd
• Novavax: Protein subunit with adjuvant
• Sanofi: Protein subunit with adjuvant
• Merck: VSV vectored
Questions or comments?

medicine.uiowa.edu/vaccine
Thank you