**CONTEXT**

- Hospitals seek to heal people, but their energy-intensive buildings and wasteful practices lead to a harmful feedback loop, which hospitals are rectifying with sustainability.

- However, with the COVID-19 virus, hospitals redirected their focus toward COVID treatment, losing track of their sustainability progress. These issues include:
  - Waste from single-use personal-protective equipment (PPE)
  - Frequent water flushing to prevent pathogen accumulation (Water 2021)

- Therefore, I dug into the administrative issues of COVID-era sustainability to suggest ways to improve resilience.

**RESEARCHABLE QUESTIONS**

- How did COVID-19 impact the motivations of hospital sustainability, as well as the limitations?
- What environmentally-sustainable measures can hospitals take to be more equipped for their next crisis?

**METHODS**

- Technical Sales Intern with Nalco Water:
  - I serviced water treatment systems that improved sustainability for hospitals’ heating and cooling systems (see Fig. 1).
  - I also worked with colleagues to identify valuable cost-savings projects for 20 clients.

- 7 semi-structured interviews with healthcare experts:
  - Covering the state of hospital sustainability in the Pacific Northwest, Midwest, and Southeast.

**RESULTS**

**Key Motivations for Sustainable Healthcare**

<table>
<thead>
<tr>
<th>Environmental Stewardship</th>
<th>Community Health</th>
<th>Company Mission</th>
<th>Cost-Savings</th>
<th>Employee Demand</th>
<th>Regulations</th>
<th>Competitive Advantage</th>
<th>Investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-COVID</td>
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<tr>
<td>During COVID</td>
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</tbody>
</table>

- Environmental stewardship remained the primary driver during COVID (see Fig. 2).
- My internship supported cost-savings as a key driver (e.g. sales proposals).
- No significant change in any driver.

**Key Limitations for Sustainable Healthcare**

<table>
<thead>
<tr>
<th>Costs/Lack of Funding</th>
<th>Employee Bandwidth</th>
<th>Leadership Hesitance</th>
<th>Resource Shortages</th>
<th>Shift to Less Sustainable Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-COVID</td>
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<td>During COVID</td>
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</tbody>
</table>

- Cost was the primary limitation pre-COVID, but became second to employee bandwidth during the pandemic (see Fig. 3).
- COVID made leaders less hesitant to change.

**PREPARING FOR RESILIENCE**

- Perform a life-cycle analysis to understand the cyclical nature of harmful practices.
- Start sooner than later—invest in sustainable solutions now to prepare for the next crisis.
- Mission-focused organizations were the most resilient to financial stress during COVID.

- Examples of resilient practices:
  - Reusable gowns (HealthPartners)
  - Transit initiatives + parking fees (Seattle Children’s)
  - Medicine takeback program (HealthPartners)
  - Tree-planting COVID-19 memorial (Advocate)

**RECOMMENDATIONS**

**For Hospital Managers:**

- Dedicate more personnel/time to sustainability projects
- Assess the feasibility of projects that improve environmental health
- Set a clear, ambitious mission(s)

**For Lawmakers:**

- Develop regulations that target weaknesses in hospital sustainability

**For the Public:**

- Advocate for sustainable change in healthcare as YOU are your priority

**ACKNOWLEDGEMENTS**

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