How Smart Robots Improve Logistics for Better Patient Outcomes

Anthony Pugliese
How Smart Robots Improve Logistics for Better Patient Outcomes

Anthony Pugliese
Senior Vice President
North American Sales
Overview

Logistics is a Difference-Maker in Healthcare
Hospital Business and Operational Objectives

1. High quality patient care

2. Reasonable cost
What This Means for Engineers and Planners

Ensure facilities are designed for optimal operations
Four Challenges Hospitals Face

1. Rising Patient Expectations
Four Challenges Hospitals Face

1. Rising Patient Expectations
2. Increasing Care Requirements
Four Challenges Hospitals Face

1. Rising Patient Expectations
2. Increasing Care Requirements
3. Rising Cost of Care Delivery
Four Challenges Hospitals Face

1. RISING PATIENT EXPECTATIONS
2. INCREASING CARE REQUIREMENTS
3. RISING COST OF CARE DELIVERY
4. SHORTAGE OF SKILLED LABOR
How Engineers and Planners Can Add Value

1. Commit to understanding facility workflows
2. Have a keen eye toward identifying areas efficiency can be improved
Assess the Landscape

The Functional Impact of Workflow Design
## Current Environment

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELAYS IN PATIENT CARE</td>
<td>35%</td>
</tr>
<tr>
<td>BREAKDOWNS IN STAFF COMMUNICATION</td>
<td>37%</td>
</tr>
<tr>
<td>LONG THROUGHPUT TIMES</td>
<td>37%</td>
</tr>
<tr>
<td>LONG WALKING DISTANCES FOR STAFF</td>
<td>26%</td>
</tr>
<tr>
<td>INTERRUPTED TASKS</td>
<td>18%</td>
</tr>
<tr>
<td>DIFFICULTY FINDING SUPPLIES /EQUIPMENT</td>
<td>11%</td>
</tr>
<tr>
<td>NONE</td>
<td>16%</td>
</tr>
<tr>
<td>NONE</td>
<td>16%</td>
</tr>
<tr>
<td>NONE</td>
<td>16%</td>
</tr>
</tbody>
</table>

Source: Health Facilities Management/ASHE 2017 Hospital Construction Survey
Pain Points

Main workflow efficiency issues health care facilities face

- Delays in Patient Care: 35%
- Breakdowns in Staff Communication: 37%
- Long Throughput Times: 37%
- Long Walking Distances for Staff: 26%
- Interrupted Tasks: 18%
- Difficulty Finding Supplies / Equipment: 11%
- None: 16%

Source: Health Facilities Management/ASHE 2017 Hospital Construction Survey
Technology’s Role
Automation in Healthcare
Logistics Solution

Moving Samples, Medication, and Critical Items
Evolution of Tech
Pneumatic Tube System (PTS)
Robotic Conveyance Systems
PTS + ASR - Complimentary Systems
Automated Service Robot (ASR)
Determining the Impact of Automation

The Effects of Process Improvement
Eliminate or Reduce Long Walking Distances

Glen Kegley
Chief Operating Officer
Hutchinson Health
Achieve More Continuous Patient Care

Jamie Schmidt
Lab Team Lead
Hutchinson Health
Minimize Potentially Hazardous Interruptions

Stacey Patrick
Quality Technical Specialist
Hutchinson Health
Conclusion
About Your Speaker

Anthony Pugliese
Senior Vice President
North American Sales
Anthony.Pugliese@swisslog.com

Anthony Pugliese is Senior Vice President of North American Sales for Swisslog Healthcare. Pugliese holds a Bachelor of Science degree in Engineering from the University of Buffalo. As a member of executive leadership, he focuses on company growth and development strategies as well as customer satisfaction initiatives.
Resources

- Life Expectancy in North America, Statista, August 2018 Report, Slide 7
- Total Cost of Care: Key Considerations for Hospitals and Health Systems, H&HN, September 2017, Slide 8
- Future Care for Canadian Seniors: A Primer on Nursing Supply and Demand, The Conference Board of Canada, March 2017, Slide 9
- The US Can’t Keep Up with Demand for Health Aides, Nurses, Doctors, CNN, May 2018, Slide 9
- Nursing Shortage, National Center for Biotechnical Information, May 2018, Slide 9
- Health Care Designers Focus on Efficiency, Health Facilities Management, 2017 Survey, Slide 12 & 13
- Pneumatic Tubes: A Brief History, The Atlantic, August 13, 2013, Slide 16

All product names, logos, and brands referenced herein are property of their respective owners.