Disruptive Healthcare Is Good for Patients

AHA Leadership Summit

Gina Altieri, SVP Chief of Strategy & Integration
Stephen Lawless, MD, MBA, SVP Chief Clinical Officer
Bernie Rice, VP Chief Information Officer
Please note that the views expressed within are those of Nemours Childrens Health System and do not necessarily reflect the views of the American Hospital Association and Health Forum.
Nemours at a Glance

- Nonprofit devoted to children's health, providing care, research, and education
- Enduring legacy of Alfred I. duPont

Patient care by the numbers:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>350,000</td>
<td>Patients/1.3 million annual encounters</td>
</tr>
<tr>
<td>3,800</td>
<td>Trainees annually</td>
</tr>
<tr>
<td>1,600</td>
<td>Residents, fellows &amp; students</td>
</tr>
<tr>
<td>724</td>
<td>Employed physicians</td>
</tr>
<tr>
<td>228</td>
<td>Researchers</td>
</tr>
<tr>
<td>60</td>
<td>Pediatric care locations in five states</td>
</tr>
<tr>
<td>42</td>
<td>Specialties and subspecialties</td>
</tr>
<tr>
<td>40</td>
<td>Employed hospitalists</td>
</tr>
<tr>
<td>19</td>
<td>Collaborating hospitals</td>
</tr>
</tbody>
</table>

Wilmington, Delaware

Orlando, Florida
@ Nemours

Nemours Center for Children's Health Media

- 260 million+ visits annually to KidsHealth.org
- #1 licensor of pediatric health education to 200+ hospitals and health systems

Nemours Prevention & Population Health

- 23 states impacting 1,000,000+ children
- Childhood obesity
- Asthma management
- Reading readiness

Nemours. Children's Health System
Disruptive Healthcare is Good for Patients
Our aim is to expand a more accessible continuum of care within our communities in order to be a more proactive partner in guiding and empowering parents throughout their children’s development.
WHAT...

Create Consumer Insights & Digital Strategy

- Analyze our consumers’ digital footprint
- Optimize leveraging of our digital assets
HOW...

- Apply design thinking and agile to our work
- Create an innovation group
- Restructure to leverage digital assets
- Partner/collaborate
Center for Health Delivery Innovation

- Unique Nemours ecosystem of assets
- HIMSS Stage 7 (HIMSS Davies Award Recipient)
- Continuous Improvement
- Agile methodology
WHY...

Center for Health Delivery Innovation

- Unique ecosystem of digital assets
- Millennial consumerism
- Collaborating & integrating
Nemours Consumer Digital Properties
Merged Under Corporate Services Umbrella

MyNemours  Nemours  Reading Brightstart!  KidsHealth  CareConnect
Smart Patient Portal

Digital backbone

- Building on MyNemours
- Online scheduling
- Telehealth (Nemours CareConnect)
- Connected devices & apps
- Fully-integrated KidsHealth content

Nemours. Children’s Health System
Nemours Online Appointment Scheduling

Mobile View

Desktop View
Nemours CareConnect

Multi-use telehealth platform

- Clinician-to-Partner Facility
- Clinician-to-Family
- 24/7 On-Demand Visits (DTC)
- Store & Forward Reads
Nemours in the Community

Reaching children where they are

- NemoursLink *(Access to Nemours’ HER by school nurses and referring physicians)*
- Nemours CareConnect *(Telehealth)*
- Nemours BrightStart!
- KidsHealth in the Classroom
Demonstrate
Asthma Proof of Concept
Disruption Enabling Better Care

Bernie Rice

Vice President and Chief Information Officer, Nemours
What Is A Digital Strategy?

A digital strategy is often characterized by the application of new technologies to existing business activity and/or a focus on the enablement of new digital capabilities to their business.
Why?
Applying New Technology to Enable
Technologies That Enable Performance...

743
50%
22%
26%
218

74% of ALL searches returned at least one provider. Of those searches, 50% returned at least one available appointment.
Technologies That Enable A Better Patient Experience
Technologies That Enable Better Care
The Logistics Center

Technology For When Every Second Matters

- Trained paramedics monitor patients 24/7
- Monitor up to 400 patients at both hospitals from a single location
- Immediate video intervention to visually monitor patients
- Capacity to monitor non-Nemours facilities
- 1st in the world in pediatrics
IT Design Considerations

• Get Connected…Leverage the Network
  • IP, Wireless, PoE, IPTV

• Leverage Strategic Partnerships
  • EHR Vendors
  • Networking/Telecom
  • Servers, Database, etc

• Leverage Others Experience
  • Hospitals
  • Universities
  • Other Industries
High Tech Enables High Touch

A Little TLC Goes a Long Way
Precision Medicine – The New Disruptor

Stephen Lawless, MD, MBA
Senior Vice President and Chief Clinical Officer, Nemours
The New Disruptor is Genomics

- Acute care
- Chronic Care
- Population health
Financial Impact of “Genetic-based” Disease Management

Source data:
Nemours internal 2016
Am J Hum Genetics, 2004
The Classic Disease Course…

Current State → Trigger → Therapy starts → Diagnosis → Adjust → Outcome
Applying It All at the Bedside

- Electronic medical record adoption
- Decision support
- Variation in care not decreasing
- Safety and quality bar rising
- Drug therapy is a cost with trial and error
The New State, Genomics

Precision Medicine & Genes

Current State

Gene Therapy

Therapy starts

Diagnosis

Adjust

Screen

Target

Monitor

Predict

Targeted Ancillary Harm

Short-term Outcome

Long-term Outcome

Recurrence

Precision Medicine & Genes

• Gene Therapy

• Targeted Ancillary Harm

• Short-term Outcome

• Long-term Outcome

• Recurrence

Nemours. Children’s Health System

Proprietary
Genomics is The New Black

Proposed Impact of Precision Medicine – Data Modeling, Genomics, Education

Impact of Precision Medicine

Predicted

Cumulative Resources Used

Time

Proprietary
Initiation

- Watson Crick 1940’s
- Human genome project 1990’s
- Technology explosion 2000’s
- Commodity ($77-99)
- Public policy (21st Century Cures Act)
Genomics Now a Commodity

Cost per Genome

Moore's Law

NIH National Human Genome Research Institute

gene.gov/sequencingcosts
Genomics – Not Just In The Lab Anymore

- Technology explosion
- Prescription impact
- DNA analysis becoming affordable over the counter
- Education is needed
- Fears of privacy
Links to Other Facts of a System Strategy

• Consumer
  - More directed care, more right care

• Value
  - Less costly/less variant approaches to care

• Growth
  - A new niche?
  - Data system accessible for cost

• Retention
  - Physician development and research opportunity
  - Workload decrease
More to follow...