The Innovator’s Prescription:
How Disruptive Innovation Can Fix Health Care

Jason Hwang, M.D., M.B.A.
Executive Director, Healthcare

jhwang@innosightinstitute.org

Centralization followed by decentralization in computing
Decentralization through disruption leads to accessibility

Decentralization is common in service industries – and it starts with simplifying technologies that disrupt expertise
The decentralization that follows centralization is only beginning in healthcare.

Disruptive competition that drives decentralization is what reduces costs.

The pursuit of profit and differentiation in sustaining competition amongst similar business models generally adds cost.
The growth of angioplasty

Estimated Inpatient Cardiovascular Procedures, 1979-2002
000s of procedures

CAGR 1995-2002
Balloon Angioplasty/Stenting 15.69%
Bypass -1.51%

Source: United States Centers for Disease Control and Prevention National Hospital Discharge Survey; Innosight analysis.

“Asymmetries of motivation” in treating ischemic heart disease

“When angioplasty was introduced, it captured the imagination of cardiologists and surgeons differently. Surgeons were skeptical about this new procedure. They were used to seeing small arteries in the operating room and questioned how one would be able to introduce a small catheter into the femoral artery, negotiate it via the left main coronary artery into a distal vessel, and dilate it. Cardiologists saw this as an incredible opportunity to treat patients with ischemic heart disease.”

—Chief, Division of Cardiothoracic Surgery, Miami, Florida
Simplifying technologies enable disruption by making work less dependent upon trial-and-error experimentation

Intuitive, trial-and-error problem-solving

Probabilistic Pattern Recognition

Rules-Based

Intuitive Medicine

Empirical Medicine

Precision Medicine

• Infectious Ds
• Oncology
• Immunology

Evidence-based medicine

Imaging & molecular diagnostics

The definition of quality and performance can change over time

General hospitals, Physician practices

Employ the best expertise and deploy the best technologies

Sustaining Innovations

Disruptive Innovations

Diagnose the underlying cause quickly and accurately to get to a precise and predictably-effective therapy

Retail clinics, Care directed by nurse practitioners, Self-management
Business model malpractice: It is often futile to cram new technologies into old business models

Major Established Electronics Markets:
Tabletop radios, floor-standing televisions, computers, telecomm equipment, etc.

Path taken by established vacuum tube manufacturers

Time

Technological Enabler: Transistors vs. vacuum tubes

What is a business model, and how is it built?

THE VALUE PROPOSITION:
A product that helps customers do more effectively, conveniently & affordably a job they’ve been trying to do

RESOURCES:
People, technology, products, facilities, equipment, brands, and cash that are required to deliver this value proposition to the targeted customers

PROFIT FORMULA:
Assets & fixed cost structure, and the margins & velocity required to cover them

PROCESSES:
Ways of working together to address recurrent tasks in a consistent way: training, development, manufacturing, budgeting, planning, etc.
The Traditional General Hospital Is Not a Viable Business Model

Value Proposition: Don’t know what’s wrong? We can address any problem you bring

Profit formula

Resources

Processes

- Polishing Dept.
- Turning machines
- Tapping equipment
- Cut-off saws
- Boring machines
- Annealing furnace
- Stamping machines
- De-burring machines
- Shipping Department
- Office area
- Storage

Path taken by product A
Path taken by product B
A starts here
B starts here
Economies of scale and countervailing costs of product-line complexity

Cost of Complexity: Burden rate increases 27% for each doubling of product families

Economies of Scale: Burden rate drops 15% for each doubling

Sources and magnitude of cost differences: Specialty vs. General Hospitals

<table>
<thead>
<tr>
<th></th>
<th>Shouldice Hospital (hernia repair)</th>
<th>General Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost of materials &amp; supplies</strong></td>
<td>$100</td>
<td>$300</td>
</tr>
<tr>
<td><strong>Cost of direct labor</strong></td>
<td>$600</td>
<td>$670</td>
</tr>
<tr>
<td><strong>Overhead burden</strong></td>
<td>$1600</td>
<td>$6030</td>
</tr>
<tr>
<td><strong>Total cost for equivalent length of stay</strong></td>
<td>$2,300</td>
<td>$7,000</td>
</tr>
<tr>
<td><strong># service families offered</strong></td>
<td>1</td>
<td>75</td>
</tr>
<tr>
<td><strong>Overhead burden rate</strong></td>
<td>2.7</td>
<td>9.0</td>
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Hospitals are expensive conflations of three types of business models

**Solution Shops**
- Consulting firms
- High-end law firms
- R&D organizations
- Diagnostic & intuitive activities of hospitals

**Value-adding process businesses**
- Manufacturing
- Education
- Food services
- Medical procedures following diagnosis

**Facilitated Networks**
- Telecommunications
- Insurance
- eBay
- Provider and patient communities

**Fee for service**

**Fee for outcome**

**Fee for Membership**

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Disruption will end the one-size-fits-all era of health care delivery

**Solution Shops**
- IDEO
- National Jewish Health

**Value-Adding Process Businesses**
- jiffy lube
- minute clinic

**Facilitated User Networks**
- facebook
- patientslikeme

**Generalist physicians disrupt specialist physicians**

**Mid-level providers disrupt physicians, while technicians disrupt health care providers**

**Patients disrupt health care providers**
Disruptive business model innovation in physicians’ practices

Value Proposition: The solution to any problem starts here

Value Proposition: Fast, convenient resolution of rules-based acute disorders

New propositions often require new value networks to gain traction

Appliance Stores
RCA, Zenith
Component suppliers
Discount retailers
Sony, Panasonic
Component suppliers
How will new value networks arise in health care?

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