Lessons from other Industries for Transforming Health Care

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April 22, 2009
Lessons from Other Industries: Purpose

• Provide some examples that raise fundamental questions

• “De-anchor”. Hopefully without giving offence

• Be leading edge while remaining relevant to the challenges of today

• Have some fun with it!
Reorganizing and Restructuring: What do We Have to Learn from Telecoms?

Source: The Colbert Report
Not Much! Healthcare Leads the Way.

Pre-1994
1 Provincial Health Ministry
128 acute care boards
25 public health boards
40 long-term boards

1994
17 Health Regions

2003
9 Health Regions
+ Mental Health
+ Addictions
+ Cancer

2008
1 Health Services Board
Healthcare Has A Core Belief in: The Straight Line of Death!

Major Demographically Driven Program as Share of GDP: National Total

CAGR 2%
Service intensity growth, before inflation

Source: “Boomer Bulge”, Robson, January 13, 2009
We believe this because of our history.

Costs: Health Spending vs. GDP

Figure 5  Total Health Expenditure as a Percentage of Gross Domestic Product, Canada, 1975 to 2008

- CAGR 3.16%
- CAGR 4.83%

Note: CAGR calculated based on Total Health Expenditures (constant 1997 $)

Sources: National Health Expenditure Database, Canadian Institute for Health Information; Gross Domestic Product, Statistics Canada.
Lessons from Other Industries…
Another Straight Line: Dow Jones 30,000!

Source: Yahoo! Finance
Costs: Lesson from the Computer Industry

Moore’s Law: Transistor count doubles every two years

What is its application to health care?

Source: Four students from MGT 2017 (J. Clayman, S. Yang, A. Lo, T. Looi)
Case Study #1: Centre of Excellence in Cataracts

Cost
- 40% reduction in cost (from 2005 to 2008)

Quality
- >40% reduction of resident’s falls at KEI (other measures of comfort, outcomes, and safety also improved)

Access
- KEI responsible for 58% Decrease in wait times in <2 years, volume of 7200/yr, capacity of 12,000/yr

Value

Source: Four students from MGT 2017 (J. Clayman, S. Yang, A. Lo, T. Looi)
Case Study #2: Diagnostic Imaging Across Canada

- Clinicians in urban centres can review images of patients in rural areas instantly, reducing lag time for diagnosis, need for travel and lowering costs

- **On average, DI delivers 25-30% improvement in radiologists’ productivity**

- More than half of referring physicians indicate DI improved efficiency of clinical decision-making by 30 to 90 minutes per week; capacity increase equivalent of up to 500 additional specialists across Canada

- 39% of radiologists now reporting for new remote sites; improved remote reporting enables radiologists to support care delivery and improve access for remote geographies and populations

- **30-40% improvement in turnaround times** (clinical decisions and subsequent treatment of patients now occurs 10-24 hours sooner)

- Eliminates 10,000-17,000 patient transfers each year

*Source: Dick Alvarez at MGT 2017*
Case Study #3: Moore’s Law and the Genome

- Sequencing equipment has been improving even faster than Moore’s law!
- In the last decade the pace has been increasing.

Source: “Getting Personal”, The Economist, April 16, 2009
Costs: What’s really happening?

Things become clearer when you consider trends over longer periods of time…

- Surgery and Diagnostic Imaging
- Cardiac Devices?
- Lab Tests?
- Individual drugs?

Lessons:
- We have mistaken rising total costs for rising unit costs. Many unit costs are actually declining!
- We need to manage at the cost per unit & basket level
- Some VERY good news in our future around the end of the next decade – “The Healthcare Dividend?”
Lessons in Costs:
It Costs More Because We Want More!

Comparison of Cost Drivers, 1975-2005

- Aging and population only account for 0.8% and 1.0% per year cost growth; inflation accounts for 2.5%

- The real challenge is in financing the enrichment of health care: new drugs, surgical techniques, DI technologies, and end-of-life care (30-50% of health care expenditures happen in the final year of life)

- Canadians now receive 1.5X the health care of Canadians 30 years ago

- Even with medium growth in GDP, health care costs are controllable within the current basket; the tough decisions will be in managing the “enrichment” of services offered. We need to create room to buy more!

Source: “How Sustainable is Medicare”, CCPA, September 2007
“Hi Daniel, it’s Will. How are you?”

“Good. What’s up? I am in the middle of a closing.”

“My neighbour’s runway crosses on to my farm for fifty feet. Am I OK if he names me as an insured? Anything else I need to do?”

“Probably should get him to acknowledge that he doesn’t have any ownership by right of continued use.”

“Could you draft me something?”

“Sure. When do you need it? Send me the details by email.”
New Customer Service Technologies: Lessons from My Accountant

He emails me with advice and I pay his bills!

Imagine how it would affect OUR productivity (both his and mine) if I had to go see him for this question…

From: Allan Jubenville [ajubenville@kbllp.ca]
Sent: Monday, January 12, 2009 9:58 AM
To: Falk, William F.
Subject: RRSP Limits

WF – 9,999
KF – 9,999

If you have any questions, please let me know.

Regards,
Allan Jubenville, C.A.
Manager
Kraft Berger LLP
ajubenville@kbllp.ca
www.kbllp.ca
Technology Adoption in Context

• We are spending billions to implement modern eHealth systems and we will not let providers use 19th and 20th century technology in their daily practice

• This is purely a false economy that results in HHR shortages and deadweight loss to consumers who have to physically see their provider for a visit to happen

• Kaiser Permanente published evidence that its digital efforts have cut visits per patient by an average of 26% thanks to more e-mail & telephone consultations… patients seem to like it too¹

• If we don’t act, we will now see extra-billing and a two tier system

• WE COULD FIX THIS!

Lesson:
• We have the technology; we just don’t use it (or can’t)

Source: ¹ Health Affairs as quoted in The Economist
Huge # of new innovations in the next 2-5 years

This material can be purchased from Gartner
Solving HR Problems: Lessons from Nannies and Strippers

• In 2004, Canada imported¹:
  – 5,000 live-in caregivers
  – 1,560 university professors
  – 661 exotic dancers

• According to CNA, we will be short by 113,000 nurses by 2010
• Philippines over-graduates nurses for export
• Capital Health figured this out first and hired 600+ in 2006 and then went back again
• In Nov. 2008, Philippine government signed a bilateral agreement with Canada to supply as many as 57,000 to 113,000 nurses until 2011²

Surprisingly, there has been little press coverage of this initiative in Canada!

Sources: ¹ Washington Post, December 5, 2004
² Manila Times, December 7, 2008
Solving HR Problems: Stimulus and Medical Tourism

- 62-year-old retired Bank of America executive needed surgery for a double hernia
- Private health insurance policy had a steep $10,000 deductible
  - Operation would have cost $14,000 stateside
- Paid only $3,900 in hospital and doctor’s bills in Costa Rica, and was home four weeks later with no complications

<table>
<thead>
<tr>
<th>Surgery Abroad</th>
<th>Heart valve replacement with bypass</th>
<th>Hip replacement</th>
<th>Knee replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average costs of three procedures, including hospital and doctor fees but excluding travel and lodging.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S.</td>
<td>$75,000</td>
<td>$33,000</td>
<td>$30,000</td>
</tr>
<tr>
<td>Thailand</td>
<td>25,000</td>
<td>12,700</td>
<td>11,500</td>
</tr>
<tr>
<td>Singapore</td>
<td>22,000</td>
<td>12,000</td>
<td>9,600</td>
</tr>
<tr>
<td>India</td>
<td>9,500</td>
<td>10,200</td>
<td>10,200</td>
</tr>
</tbody>
</table>

Source: Healthy Travel Media

- Cost of surgery performed overseas can be as little as 20% of the price of the same procedure in the United States

Should Canada be a medical tourism destination for the US? What about remote diagnostics?

Quality: Lessons from Aviation (Checklists)

The WHO developed a 19-step surgical safety checklist that is shocking in its simplicity. Mortality dropped from 1.5% to 0.8% across the 8 WHO hospitals.

### SURGICAL SAFETY CHECKLIST (FIRST EDITION)

<table>
<thead>
<tr>
<th>SIGN IN</th>
<th>TIME OUT</th>
<th>SIGN OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>Before induction of anaesthesia</td>
<td>Before skin incision</td>
<td>Before patient leaves operating room</td>
</tr>
<tr>
<td>PATIENT HAS CONFIRMED</td>
<td>CONFIRM ALL TEAM MEMBERS HAVE INTRODUCED THEMSELVES BY NAME AND ROLE</td>
<td>NURSE VERBALLY CONFIRMS WITH THE TEAM:</td>
</tr>
<tr>
<td>• IDENTITY</td>
<td></td>
<td>• THE NAME OF THE PROCEDURE RECORDED</td>
</tr>
<tr>
<td>• SITE</td>
<td></td>
<td>• THAT INSTRUMENT, SPONGE AND NEEDLE COUNTS ARE CORRECT (OR NOT APPLICABLE)</td>
</tr>
<tr>
<td>• PROCEDURE</td>
<td></td>
<td>• HOW THE SPECIMEN IS LABELLED (INCLUDING PATIENT NAME)</td>
</tr>
<tr>
<td>• CONSENT</td>
<td></td>
<td>• WHETHER THERE ARE ANY EQUIPMENT PROBLEMS TO BE ADDRESSED</td>
</tr>
<tr>
<td>SITE MARKED/NOT APPLICABLE</td>
<td></td>
<td>• SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE REVIEW THE KEY CONCERNS FOR RECOVERY AND MANAGEMENT OF THIS PATIENT</td>
</tr>
<tr>
<td>ANAESTHESIA SAFETY CHECK COMPLETED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PULSE OXIMETER ON PATIENT AND FUNCTIONING</td>
<td>ANTICIPATED CRITICAL EVENTS</td>
<td></td>
</tr>
<tr>
<td>DOES PATIENT HAVE A:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KNOWN ALLERGY?</td>
<td>SURGEON REVIEWS: WHAT ARE THE CRITICAL OR UNEXPECTED STEPS, OPERATIVE DURATION, ANTICIPATED BLOOD LOSS?</td>
<td></td>
</tr>
<tr>
<td>• NO</td>
<td>• ANAESTHESIA TEAM REVIEWS: ARE THERE ANY PATIENT-SPECIFIC CONCERNS?</td>
<td></td>
</tr>
<tr>
<td>• YES</td>
<td>• NURSING TEAM REVIEWS: HAS STERILITY (INCLUDING INDICATOR RESULTS) BEEN CONFIRMED? ARE THERE EQUIPMENT ISSUES OR ANY CONCERNS?</td>
<td></td>
</tr>
<tr>
<td>DIFFICULT AIRWAY/ASPIRATION RISK?</td>
<td>HAS ANTIBIOTIC PROPHYLAXIS BEEN GIVEN WITHIN THE LAST 60 MINUTES?</td>
<td></td>
</tr>
<tr>
<td>• NO</td>
<td>• YES</td>
<td></td>
</tr>
<tr>
<td>• YES, AND EQUIPMENT/ASSISTANCE AVAILABLE</td>
<td>• NOT APPLICABLE</td>
<td></td>
</tr>
<tr>
<td>RISK OF &gt;500ML BLOOD LOSS (7ML/KG IN CHILDREN)?</td>
<td>IS ESSENTIAL IMAGING DISPLAYED?</td>
<td></td>
</tr>
<tr>
<td>• NO</td>
<td>• YES</td>
<td></td>
</tr>
<tr>
<td>• YES, AND ADEQUATE INTRAVENOUS ACCESS AND FLUIDS PLANNED</td>
<td>• NOT APPLICABLE</td>
<td></td>
</tr>
</tbody>
</table>

THIS CHECKLIST IS NOT INTENDED TO BE COMPREHENSIVE. ADDITIONS AND MODIFICATIONS TO FIT LOCAL PRACTICE ARE ENCOURAGED.
How Do We Create Value?

- Don’t kill the patient
- HSMR measures hospital risk of dying
- Good value based competition measure
- UHN is now down to 73!!
- Raw unadjusted mortality is down 40 per month
Supply Chain: Lessons from Walmart

- Purchase a flashlight at Wal-Mart
- Cash register reads the bar code
- Within 14 seconds, the Wal-Mart central warehouse is notified that the retail store needs a new flashlight
- Manufacturer is also notified
- Even the raw material suppliers are notified

Can this be applied to medical supplies?
What about medical providers for patient flow?
Service: Lessons from FedEx

• Parcel is picked up and tagged, and scanned
• Scanned at each connection point
• I can go online at any time and see the progress towards the end destination

*We should be able to see where a patient has received care starting from the initial diagnosis*
Efficiency: Lessons from NASCAR

- Team fixes problem and is out of the way within 20 seconds
- Area is then free for next problem

Can this concept of flexible work areas be applied in hospitals?
How do we overcome the Barriers

• Why don’t we learn from these examples from other industries and adopt the techniques?

• We Do!

• But we could do more:
  – Expect cost declines; insist on them
  – Reward those who build a better mousetrap
  – End fuzzy thinking on public/private
  – Continue investing in capital
  – Restrain the guilds in the public interest
  – Act for patients and regain the high ground
Financial Incentives: Lessons from Telecom in the 80’s

Rate of Return Regulation

Incentives:
• Buy overly expensive equipment
• Employ excessive human capital
• Make volume forecasts unrealistically low

Price Cap Regulation

Incentives:
• Keep equipment costs low
• Improve human capital efficiency
• Lower prices to boost demand
• Capital efficiency leaped
• Human capital costs dropped by 45%¹
• Prices dropped dramatically

1980s Deregulation

• Cost-plus keeps prices high

Lessons:
• Global budgets are raising total costs
• We can change this and make a difference

¹ http://www.cranbrook.kent.sch.uk/site/economics/A2/Docs/Unit%204/General/70281.pdf
Financial Incentives: Lessons from Loblaw

What would you do for 5¢?

- In January ‘09, Loblaw started charging 5¢ for each plastic bag
- 55% reduction in plastic bags used

Lesson: Small incentives really matter to people

Source: CBC News, January 12, 2009
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