U.S. Healthcare Spending: International Context, National Trends, and Getting to High-Value Care

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Agenda

- International context: how does US spending and utilization compare with other countries?
- How did the ACA try to address our cost and quality problems? Has it worked?
- What does this mean for MA?
How does US spending compare to other countries?
Total healthcare spending, 2016

- **US**: 17.8%
- **UK**: 9.7%
- **DE**: 11.3%
- **SE**: 11.9%
- **FR**: 11%
- **NL**: 10.5%
- **CH**: 12.4%
- **DK**: 10.8%
- **CN**: 10.3%
- **JP**: 10.9%
- **AU**: 9.6%

Spending on health as a % of GDP
Why?
Hypothesis #1: Too many specialists, not enough primary care
Primary care as % of MDs

FR: 54%
CH: 48%
CN: 48%
NL: 47%
UK: 45%
DE: 45%
AU: 45%
US: 43%
Mean: 43%
JA: 43%
SE: 33%
DK: 22%
Total Spending = Quantity \times Price
Our culture of overuse
Total Spending = \textbf{Quantity} \times \text{Price}
Overutilization theory #1

We are quick to go to the doctor
Physician visits per capita in a given year

- JA: 12.7
- DE: 10
- NL: 8.2
- CN: 7.7
- AU: 7.6
- Mean: 6.6
- FR: 6.4
- UK: 5
- DN: 4.3
- US: 4
- CH: 3.9
- SE: 2.9
Overutilization theory #2

Not enough prevention and primary care leads to too many hospitalizations
Hospital discharges

We spend far fewer days in the hospital
Overutilization theory #3

We use too many tests and procedures
MRI examinations

Examinations per 1,000 population

<table>
<thead>
<tr>
<th>Country</th>
<th>Examinations per 1,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE</td>
<td>131</td>
</tr>
<tr>
<td>US</td>
<td>118</td>
</tr>
<tr>
<td>JA</td>
<td>112</td>
</tr>
<tr>
<td>FR</td>
<td>105</td>
</tr>
<tr>
<td>DN</td>
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<tr>
<td>Mean</td>
<td>82</td>
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<tr>
<td>CH</td>
<td>70</td>
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<tr>
<td>CN</td>
<td>56</td>
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<tr>
<td>UK</td>
<td>53</td>
</tr>
<tr>
<td>NL</td>
<td>52</td>
</tr>
<tr>
<td>AU</td>
<td>41</td>
</tr>
</tbody>
</table>
Total knee replacement per 100,000 population:

- US: 226
- DE: 190
- AU: 180
- CH: 176
- DN: 168
- CN: 166
- Mean: 163
- FR: 145
- UK: 141
- SE: 124
- NL: 118
Total hip replacement

Replacement per 100,000 population

<table>
<thead>
<tr>
<th>Country</th>
<th>Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH</td>
<td>292</td>
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<tr>
<td>DE</td>
<td>283</td>
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<tr>
<td>DN</td>
<td>237</td>
</tr>
<tr>
<td>FR</td>
<td>236</td>
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<tr>
<td>CN</td>
<td>136</td>
</tr>
<tr>
<td>JA</td>
<td>90</td>
</tr>
</tbody>
</table>
Coronary angioplasty

Procedures per 100,000 population

- DE: 393
- US: 248
- NL: 248
- FR: 237
- Mean: 217
- SE: 205
- JA: 193
- DK: 190
- AU: 172
- CN: 157
- UK: 128
So is it utilization?

■ Higher US costs not primarily about utilization
■ We have fewer hospitalizations, doctor visits
■ Tests and Procedures a mixed bag:
  ■ We do a lot more MRIs, TKRs, Angioplasties
  ■ We do fewer hip replacements
■ Bottom line:
  ■ We’re above average on some things
  ■ We’re below average on other things
  ■ On average, we are pretty average
OK—so what is it?
+ Administrative waste
Governance, administration spending

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage of Healthcare Spending</th>
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<tbody>
<tr>
<td>US</td>
<td>8%</td>
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<tr>
<td>DE</td>
<td>5%</td>
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<tr>
<td>NL</td>
<td>4%</td>
</tr>
<tr>
<td>CH</td>
<td>4%</td>
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<tr>
<td>Mean</td>
<td>3%</td>
</tr>
<tr>
<td>CN</td>
<td>3%</td>
</tr>
<tr>
<td>AU</td>
<td>3%</td>
</tr>
<tr>
<td>UK</td>
<td>2%</td>
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<tr>
<td>SE</td>
<td>2%</td>
</tr>
<tr>
<td>DN</td>
<td>2%</td>
</tr>
<tr>
<td>FR</td>
<td>1%</td>
</tr>
<tr>
<td>JA</td>
<td>1%</td>
</tr>
</tbody>
</table>
Total Spending = Quantity \times \text{Price}
Prices
Prices of what?
Pharmaceuticals!
Pharma makes up about 15% of all HC spending
So that can’t be the whole story
Generalist Physician Salaries

- US: $218K
- DE: $154K
- CN: $146K
- UK: $134K
- Mean: $133K
- JA: $124K
- FR: $111K
- NL: $109K
- AU: $108K
- SE: $86K
Specialist Physician Salaries

- US: $316K
- AU: $202K
- NL: $191K
- CN: $188K
- Mean: $182K
- DE: $181K
- UK: $171K
- FR: $153K
- DN: $140K
- JA: $124K
- SE: $98K
Nurse Salaries

- US: $74K
- NL: $65K
- AU: $64K
- DN: $58K
- CN: $55K
- DE: $53K
- Mean: $51K
- UK: $49K
- JA: $44K
- FR: $42K
CT Scan Abdomen

<table>
<thead>
<tr>
<th>Country</th>
<th>Cost ($)</th>
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<td>US</td>
<td>844</td>
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<tr>
<td>New Zealand</td>
<td>483</td>
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<tr>
<td>Switzerland</td>
<td>383</td>
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<tr>
<td>South Africa</td>
<td>233</td>
</tr>
<tr>
<td>Spain</td>
<td>85</td>
</tr>
</tbody>
</table>

International Federation of Health Plans 2015
Appendectomy

<table>
<thead>
<tr>
<th>Country</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>US</td>
<td>$15,930</td>
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<tr>
<td>New Zealand</td>
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<td>Switzerland</td>
<td>$6,040</td>
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<td>$3,814</td>
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<td>Spain</td>
<td>$2,003</td>
</tr>
<tr>
<td>South Africa</td>
<td>$1,786</td>
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So what makes US HC so expensive?
Summary

- Hypotheses unlikely to explain difference:
  - Primary care/specialist mix
  - Overutilization

- High costs driven primarily by:
  - Administrative costs
  - High prices

- We can still save money by reducing quantity
What have we largely focused on?
Total Spending = \textbf{Quantity} \times \text{Price}
Causes of our system dysfunction

- Fragmentation
- How we pay for care (FFS, lack of incentives)
- Inadequate transparency
- Inadequate competition
- Inadequate patient “skin in the game”
What did the ACA do to fix things?

- Change how we pay for things
  - Hospital readmissions reduction program
  - Value-based purchasing
- Hold providers accountable
  - Patient-centered medical home
  - Accountable Care Organizations
- Centrally manage innovation
  - CMMI
- Investment in Health IT
So has the ACA worked?
Value-based payment has had little effect

Figueroa et al. BMJ 2016

VBP Hospitals
Non-VBP Hospitals
Value-based payments in hospitals

- Readmission rates have fallen about 2.5%
  - About 2/3 of that is due to coding
  - Some (weak) evidence that it made mortality worse
  - Impact overall quite controversial

Ibrahim et al. JAMA Internal Medicine 2017; Gupta et al. JAMA Cardiology, 2017; Jha & Pronovost, NEJM, 2015
Primary Care Initiative (CPCI)

- CPCI targeted 502 primary care practices in 7 U.S. regions
- Spending did not decrease enough to cover care management fees
- After 4 years, no change in overall spending growth, modest impact on quality
- 2% lower growth in ED visits

Peikes et al Health Affairs 2018
EHR impact on mortality, 2008-2013

- **Average (5.7 baseline functions, 0.6 added functions/year)**
- **Below Average (0 baseline functions, 0.6 added functions/year)**
- **Above average (5.7 baseline functions, 2 added functions/year)**
Bundled Payments

The findings are mixed

- **For medical conditions**: no change in spending or quality
- **For surgical conditions**: associated with decreases in spending and small quality improvements
  - 4%-20% decrease in per-episode spending for joint replacement

Why?

- Different spending patterns
- Different services provided in post-acute settings
- Different types of patients

Dummit JAMA 2016, Joynt et al NEJM 2018, Navathe JAMA 2017, Navathe Health Affairs 2018
Number of ACOs continues to grow

Center for Medicare and Medicaid Services
Impact of ACOs on Quality & Cost

How are they doing? Two alternative views:

- McWilliams et al. consistently find 2-5% savings, by cohort:
  - 2012: 4.9%
  - 2013: 3.5%
  - 2014: 1.6%

Impact on quality?

- A few positive changes in pt experience, little on outcomes

All the savings are in physician-led ACOs
A summary of where we have been

- ACA spurred LOTS of activity
- Some of it is making a real difference
- Much of it has focused on quantity
  - Medicare led
  - Prices are fixed
  - Relative prices are not…
What’s next?

- Push towards price transparency

- Payment Reform:
  - More risk to providers
    - Bundled payments, ACOs, Capitation
  - More risk to payers (from CMS):
    - MA

- More engagement of consumers
  - Tiering coming to Medicare?

- Some efforts on prices
  - But probably not enough
What does this mean for MA?
The future of MA healthcare

- Value-based care is important
  - Promote more bundles
  - Promote more ACOs
  - Intensively study which models work and don’t – and adjust accordingly

- Value-based strategies not nearly enough

- We must deal with the 800 pound gorilla: prices
  - Price regulation versus competition
Thank you

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