Health Care Reform & Policy
Key Drivers, Response, Mini-Dive and Research

Helen Macfie, Pharm.D., FABC
Chief Transformation Officer
Certified Lean Leader

For Nursing Research Conference, May, 2016
This presenter has nothing to disclose.

Session Outline, Goals

- The new healthcare drivers for this decade
- What does that mean? What are we doing?
- Mini Dive: Overdiagnosis & overtreatment
- Connecting to science of care – PI, research and innovation
"Key Drivers"

- Financial
- Political
- Market
- Value
- Penalties
- Risk
- Choice

Price Cuts Continue Unabated

Hospitals Bearing the Brunt of Payment Cuts

<table>
<thead>
<tr>
<th>Year</th>
<th>Adjustments</th>
<th>Savings</th>
<th>Cuts to Critical Access Hospitals</th>
<th>Total Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>($4B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>($14B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>($24B)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2016</td>
<td>($29B)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2017</td>
<td>($38B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>($54B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>($67B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>($76B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>($86B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>($94B)</td>
<td></td>
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</tr>
</tbody>
</table>

New Proposals Continue to Emerge

- Reduction in Medicare bad debt payments: $30.8B
- Savings from moving to site-neutral payments: $29.5B
- Cuts to teaching hospitals: $14.6B
- Cuts to critical access hospitals: $720M

Presidential Candidates Focusing on Health Care

**The Politics**

**“Go Further”**
- Senator Bernie Sanders
  - Implement single-payer health care system
  - Empower Medicare to negotiate drug prices
  - Allow states flexibility in designing health care programs

**“Tweak”**
- Secretary Hillary Clinton
  - Lower out-of-pocket expenses, especially for prescription drugs
  - Guarantee transparency and avoid surprise bills
  - Fight back against premium hikes and scrutinize mergers
  - Promote value-based care

**“Repeal”**
- Republican Field
  - Increase consumer choice
  - Reduce government intervention
  - Allow health insurance plans to be sold across state lines

**Heard on the Campaign Trail**

- "Build on what works"
  - Hillary Clinton
- "[Obamacare] robs you of your ability to control your own life"
  - Dr. Ben Carson
- "Repeal and replace with something terrific"
  - Donald Trump


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**The Market**

All Purchasers Looking to Curb Spending

1. **Government**
   - Medicare doubling down on risk
   - Medicare Advantage poised for reform
   - Medicaid experimenting with risk, consumerism

2. **Employers**
   - Private exchanges increasing pricing pressure
   - Self-insured employers focusing on utilization control

3. **Consumers**
   - Continued premium sensitivity on public exchanges
   - Price sensitivity increasing at point of care

Source: Health Care Advisory Board interviews and analysis.
Historic Payment Targets Demonstrate Commitment to FFS

Aggressive Targets for Transition to Risk

Percent of Medicare Payments Tied to Risk Models

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>30%</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>

FFS Increasingly Tied to Value

Percent of Medicare Payments Tied to Quality

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>30%</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>

Providers should compare ACO earnings not with what they could earn in today's fee-for-service payment environment but with what they could expect to earn in the future if they didn't participate in such alternative payment models.”

Senior CMS Officials

Ex: Voluntary to Mandatory

CMMI Program Requires Orthopedic Bundling in 75 Select Markets

The Comprehensive Care for Joint Replacement (CCJR) Model

Key Program Features

- Focus on joints
- Average expenditure varies from $16,500 to $33,000 by geography
- Mandatory in 75 markets
- No application process; CAHs¹ and BPCI² Phase II participants exempt

Program Timeline

July 2015
- Program announced; accepting comments through September 8th

January 2016
- First performance year begins; no episode discount for first year
- 2017-2020
- Downside risk incorporated; 1% discount in 2017, 2% for 2018 onward

$153M
- ESTIMATED SAVINGS TO MEDICARE
- OVER THE 5 YEARS OF THE MODEL

Source: Centers for Medicare and Medicaid Services; Health Care Advisory Board interviews and analysis.

¹ Critical Access Hospitals
² Bundled Payments for Care Improvement Initiative
Readmissions, HAC Penalties Outweighing VBP Bonuses

After Accounting for Penalties, Few Receive VBP Bonuses

<table>
<thead>
<tr>
<th>Hospitals in VBP Program</th>
<th>3,087</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals Received Bonus Payment</td>
<td>1,700</td>
</tr>
<tr>
<td>Hospitals Received Net Payment Increases</td>
<td>792</td>
</tr>
</tbody>
</table>

Estimated Net Impact of P4P Programs, FY 2015

- **28%** Hospitals receiving a net bonus or breaking even
- **50%** Hospitals receiving net penalties between 0% and 1%
- **6.5%** Hospitals receiving net penalties of 2% or greater

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The Penalties (and Incentives) Continuum of Medicare Risk Models

- **Pay-for-Performance**
  - Hospital VBP Program
  - Hospital Readmissions Reduction Program
  - HAC Reduction Program
  - Merit-Based Incentive Payment System

- **Bundled Payments**
  - Bundled Payments for Care Improvement Initiative (BPCI)
  - Comprehensive Care for Joint Replacement (CCJR) Model

- **Shared Savings**
  - MSSP Track 1 (50% sharing)

- **Shared Risk**
  - MSSP Track 2 (50% sharing)
  - MSSP Track 3 (up to 75% sharing)
  - Next Generation ACO Model (full risk option)
  - Next Generation ACO Model (80-85% shared savings option)
  - Medicare Advantage (provider-sponsored)

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The Move to Risk Track 3, Pioneer, and Next Gen ACO Filling Out the Continuum

Continuum of Medicare Risk Models

Increasing Financial Risk

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1) Hospital-Acquired Condition Reduction Program, Hospital Readmissions Reduction Program.
2) Value-Based Purchasing.
3) Pay-for-Performance.
The Choice
Consumers Demonstrating Three Responses to Elevated Cost

1) $1,200 Single; $2,400 Family.
2) $2,500 Single; $5,000 Family.

The Choice

So: a Dizzying Array
Cost Control Efforts, While Maintaining/Growing Value

Government
Employers
Consumers

SHP
MSSP
Value-Based Purchasing
COEs
Private exchanges
Patient-Centered Medical Home
BPCI
Reference-based pricing
Second opinion services
Next Generation ACO
Onsite clinics
Narrow networks
Personal health navigators
IPPS payment cuts
High-performance networks
DSH payment cuts
Hospital-Acquired Condition Reduction Program
Employer-centered medical homes
PPS payment reductions
Transparency tools
Site-neutral payments
MIPS
Next Generation ACO
Reference-based pricing
Site-neutral payments
Schedule-based pricing
Reduced admissions
Reduced readmissions
Readmissions Reduction Program
Employer-centered medical homes
PPS payment reductions
Hospital-Acquired Condition Reduction Program

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Source: Health Care Advisory Board interviews and analysis.
“What is MemorialCare Doing About It?”

- Partnership
- Growth
- Value Creation
- Integration
- Population Health

Roadmap

First Direct Employer Contract:
Strategic Moves → Value

FROM

Pay for procedures
Fee-for-service
More facilities/capacity
Physicians/Hospitals acting independently
Physicians and Hospitals working in parallel
Hospital centric
Treat disease/episode of care

TO

Pay for value
Case rates/budgets/capitation
Better access, appropriate settings
Physicians/Hospitals collaboration: global risk
Physicians and Hospitals working in a highly integrated manner
Continuum of Care (Population centric)
Maintain health
## Key Statistics

**Total Assets**
- Annual Revenues: $2.2 billion
- Bond Rating: AA- stable

**Hospitals**
- Patient Discharges: 69,000
- Patient Days: 288,000
- ER Visits: 199,000
- Births: 10,500
- Surgeries – IP/OP: 32,900

**Ambulatory Access**
- “At Risk” Lives/ACOs: 246,000
- Seaside Health Plan: 39,200
- Medical Group Visits: 600,000
- Ambulatory Surgeries: 35,000

**Workforce**
- Employees: 11,200
- Affiliated Physicians: 2,300
- Employed Physicians: 230

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## Growth Diversification

### Diversified Revenue Growth

<table>
<thead>
<tr>
<th></th>
<th>FY 2011</th>
<th>FY 2012</th>
<th>FY 2013</th>
<th>FY 2014</th>
<th>FY 2015</th>
<th>FYTD 16 Annualized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seaside</td>
<td>1,500,000</td>
<td>1,750,000</td>
<td>1,850,000</td>
<td>1,900,000</td>
<td>1,950,000</td>
<td></td>
</tr>
<tr>
<td>Wave</td>
<td>500,000</td>
<td>600,000</td>
<td>700,000</td>
<td>750,000</td>
<td>800,000</td>
<td></td>
</tr>
<tr>
<td>Beach</td>
<td>250,000</td>
<td>300,000</td>
<td>350,000</td>
<td>400,000</td>
<td>450,000</td>
<td></td>
</tr>
<tr>
<td>MMF IPA Naut</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
BOLD GOALS

• 250,000 lives by December 2016
• 500,000 lives by December 2021

246,000 Lives Today

Value Creation
Bolder Goals

Touching Lives, CY2015

<table>
<thead>
<tr>
<th>Bold Goal</th>
<th>MHS &amp; *MCMG</th>
<th>LMMMC &amp; CHLB</th>
<th>MCH</th>
<th>OCMMC</th>
<th>SMMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sepsis Mortality</td>
<td>394</td>
<td>220</td>
<td>n/a (adult)</td>
<td>66</td>
<td>36</td>
</tr>
<tr>
<td>Other Diseases/Mortality (Crimson)</td>
<td>732</td>
<td>442</td>
<td>27</td>
<td>150</td>
<td>113</td>
</tr>
<tr>
<td>Perfect Care</td>
<td>1,480</td>
<td>308</td>
<td>305</td>
<td>252</td>
<td>315</td>
</tr>
<tr>
<td>VTE (dvt prevention), Stroke</td>
<td>203</td>
<td>n/a (245%)</td>
<td>136</td>
<td>12</td>
<td>48</td>
</tr>
<tr>
<td>OBGYN C-Section use (NIV rate)</td>
<td>1,733</td>
<td>608</td>
<td>343</td>
<td>309</td>
<td>373</td>
</tr>
<tr>
<td>Notes: IM, WP, PH, SCP/Refined</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Codes Outside ICU</td>
<td>1,950</td>
<td>1,303</td>
<td>48</td>
<td>428</td>
<td>171</td>
</tr>
<tr>
<td># RRT calls last 12mo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient Safety &amp; Infections</td>
<td>32</td>
<td>40</td>
<td>n/a (adult)</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Falls to Floor, HAPU</td>
<td>178</td>
<td>45</td>
<td>39</td>
<td>25</td>
<td>21</td>
</tr>
<tr>
<td>Infections</td>
<td>7,481</td>
<td>1,419</td>
<td>1,185</td>
<td>1,454</td>
<td>2,728</td>
</tr>
<tr>
<td>Med Reconciliation</td>
<td>2,196</td>
<td>1,314</td>
<td>1,411</td>
<td>1,422</td>
<td>2,446</td>
</tr>
<tr>
<td>Total Annualized Lives Touched</td>
<td>3,802</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>based on CY2015 volumes (these</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>indicators)</td>
<td>15,668</td>
<td>3,772</td>
<td>2,368</td>
<td>2,341</td>
<td>3,385</td>
</tr>
</tbody>
</table>
Value Creation: Focus on Best Practice

Making a difference in sepsis care

Mortality Rate - Severe Sepsis and Septic Shock

- Mortality Rate
- BOLD Goal

Value Creation: Focus on Best Practice

Making a difference in diabetic care

67-71%
**Ex: PI Radar Dashboard – Harm, Mortality**

**Early Warning & Response**

**Target & Early Warning & Response**

FY'16 Goal to reduce Codes Outside of ICU by 50%.

**Current State:**

- **Key Analysis and Activities**
  - Rapid Response Teams
  - Overall Codes outside ICU reduced from 28/10,000 in 2005 to 15-20/10,000 in 2015
  - Modified Early Warning System (MEWS) A3 rollout completed
  - Pediatric Early Warning System rollout Feb’16

**What We’re Working On, Will See Next:**

<table>
<thead>
<tr>
<th>Initiative/Tactic</th>
<th>Who</th>
<th>Target</th>
<th>Action/Status</th>
</tr>
</thead>
</table>
| MEWS - Modified Early Warning, Epic + Workflow | IT Liaisons, A3 team, F.Kalowes | 2Q’16 | Insourcing House Sups on how to add to MyList
| PEWS - Pediatric Early Warning | PEWS Lead, T.Ladbury | 2Q’16 | Monitor PEWS rollout
| OB System for L&D (NHSW) | WH, C.Chuen | 2Q’16 | Evaluating ACOG recs, creating build request
| Observed to Expected Mortality (all discharges) | H. Macfie | 1Q’16 | Added to drilldown, consider for FY’17 Bold Goal tracking

**Note:** Observed to Expected Mortality from Crimson, all discharges, all ages (no filters applied)

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**Value Creation Long-Term IMPACT**

**Adding up our impact, “just” from Bold Goals**

<table>
<thead>
<tr>
<th>Year</th>
<th>MHS &amp; MCMF</th>
<th>LBMMC &amp; CHLB</th>
<th>MCH</th>
<th>OCMMC</th>
<th>SMMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>2,805</td>
<td>1,635</td>
<td>545</td>
<td>625</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>5,765</td>
<td>2,812</td>
<td>252</td>
<td>1,419</td>
<td>1,282</td>
</tr>
<tr>
<td>2009</td>
<td>6,165</td>
<td>3,179</td>
<td>243</td>
<td>1,282</td>
<td>1,461</td>
</tr>
<tr>
<td>2010</td>
<td>6,084</td>
<td>3,129</td>
<td>347</td>
<td>1,292</td>
<td>1,316</td>
</tr>
<tr>
<td>2011</td>
<td>6,406</td>
<td>3,440</td>
<td>235</td>
<td>1,539</td>
<td>1,292</td>
</tr>
<tr>
<td>2012*</td>
<td>9,161*</td>
<td>3,630</td>
<td>533</td>
<td>2,020</td>
<td>1,260</td>
</tr>
<tr>
<td>2013*</td>
<td>9,809*</td>
<td>2,478</td>
<td>1,859</td>
<td>2,051</td>
<td>2,060</td>
</tr>
<tr>
<td>2014*</td>
<td>32,180*</td>
<td>12,329</td>
<td>2,821</td>
<td>6,827</td>
<td>8,728</td>
</tr>
<tr>
<td>2015*</td>
<td>15,668*</td>
<td>3,772</td>
<td>2,368</td>
<td>2,341</td>
<td>3,385</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>93,882</strong></td>
<td><strong>36,404</strong></td>
<td><strong>8,658</strong></td>
<td><strong>19,316</strong></td>
<td><strong>18,114</strong></td>
</tr>
</tbody>
</table>

*Note: MI, HF, PN, SCIP Retired

**TOTAL**
Value Creation
↓ Preventable Harm

More to do

**LEAN WORKS!**
- Focus on customer
- **P**roductivity, **L**ean, **U**tilization & **C**are Model Redesign
- Culture shift:
  - People, process and relationships
- Breakthrough + CQI
  - Scientific method
  - Experimentation
  - By Monday
  - Visibility, huddles
- Taps into everyone’s passion!
  Joy @ work.

**Past the Tipping Point:**

**Lean Mindset**
- Improvement Kata
- Coaching Kata

**Lean Methods**
- 5S, Rapid Process Improvement (RPI) & Design (RPD)
- Lean Management System (LMS)

**Lean Management System**
- Visibility Boards
- Frequent Huddles

"At the beginning of this process, I didn’t want to change anything. But now I want to change everything! It makes my workload manageable."

Allan David, Lean team member
Value Creation
Pay for Performance

Integration
Systemness

Systemness Confers Distinct, Compounding Advantages
Integration
Strategic Focus

- Clinical
  - MHVI
  - Ortho-Spine
- Pediatrics
- Ancillary
  - Pharmacy
  - Perioperative

Population Health
Another Roadmap, True North
Population Health Risk Across the Continuum

CONTINUUM OF CARE

Wellness & Prevention
- Health Coaching
- Preventive Screenings
- Vaccination Outreach

Disease Management
- Risk Stratification
- COPD - CHF - Diabetes

Hospital Care
- 24/7 Hospitalists
- HBAT (Hospital Based Admitting Team)
- Discharge Clinic

High Risk
- Virtual Case Conference
- Complex Case Management

Late Stage
- Palliative Care Hospice

Population Health A Few Outcomes

MORTALITY
- Ratio by 0.27 to 0.72
  For observed vs expected in-hospital mortality ratio

ER VISITS
- ↓ to 14.4/1,000
  For Commercial lives, Medical Group
  Comparative: 40/K

% 9s/10s
- ↑ to CMS top 25th percentile
  For Overall Rating of Hospital Experience

OUTCOMES
- 89-95%
  For Anthem PPO ACO - cholesterol, URI, vaccination rates
  Comparative: 86%

READMITS
- ↓ to 8.1%* - 11.5%**
  *Commercial, **Seniors
  Comparative: 15-16%

RATINGS
- ↑ to IHA top 10th percentile
  For Overall Rating of Doctor, Medical Group
“Mini-Dive: Overdiagnosis & Overtreatment”

- Mini Dive

Encouraging Creativity

Innovation is a GOOD thing!
Our message today

- Best Practice is what we stand for
- Most of medicine is good for patients
- Some of medicine leads to overdiagnosis
- New math needed to figure out the difference
- Awareness is the key imperative

What is “Overdiagnosis”? 

- **Overdiagnosis**:  
  - The diagnosis of a condition or abnormality which will, if left alone, never cause symptoms, complications, or shortened life

- **Overtreatment**:  
  - By definition, treatment cannot possibly help patients who are overdiagnosed
  - The only potential outcomes of treatment are either no effect or adverse effects, and increased cost to the patient and healthcare system
When does it happen?

- **Examples of conditions with frequent overdiagnosis**
  - Hypertension
  - Hypercholesterolemia (elevated cholesterol)
  - Prediabetes
  - Prostate cancer
  - Thyroid cancer
  - ...and many more

- **How to Overdiagnose**
  - Change the rules
  - Improve technologies to see more
  - Look harder
  - Stumble onto incidental findings
  - Confuse DNA with disease

Example: Prostate Cancer

- **Traditional diagnosis:**
  - Elevated PSA or abnormal digital rectal exam → Biopsy (a really fun procedure) → Diagnosis

- **Traditional treatment:**
  - Radical prostatectomy (robotic, if you’re lucky), vs. radiation therapy → high risk of incontinence and long-term erectile dysfunction

- **Ways to diagnose more prostate cancer:**
  - Take more biopsies (6 vs. 12 vs. 24)
  - Redefine the level at which PSA is abnormal
How Much Does Diagnosing Prostate Cancer Matter?

New Diagnoses and Deaths from Prostate Cancer in the United States: 1975–2005

From "Overdiagnosed", H. Gilbert Welch, MD, with permission

RRR, ARR, NNT, and POEMs

“There are lies, damn lies, and statistics.”

--Unknown source, misattributed to Mark Twain who misattributed it to Benjamin Disraeli
Overdiagnosis
Understanding risk reduction vs harm

WE DO TOO MUCH
• Physician Society Campaign 2013→2016
• Advocacy
• Education
• Choosing Wisely
• ARR vs RRR, NNTB

Example:

<table>
<thead>
<tr>
<th></th>
<th>Mortality in Control Group = 4%</th>
<th>Mortality in Treatment Group = 1%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RRR: Relative Risk Reduction</strong> – the relative reduction in adverse outcome with a given treatment</td>
<td>(4% - 1%) ÷ 4%</td>
<td>RRR = 75%</td>
</tr>
<tr>
<td><strong>ARR: The absolute reduction in likelihood of the adverse outcome</strong></td>
<td>(4% - 1%)</td>
<td>ARR = 3%</td>
</tr>
<tr>
<td><strong>NNTB: How many patients you have to treat to achieve the desired outcome or benefit?</strong></td>
<td>1 ÷ ARR – 1 ÷ 0.03</td>
<td>NNTB = 33.3</td>
</tr>
</tbody>
</table>

Prostate Cancer Screening

Prostate Cancer Early Detection
by PSA testing and palpation of the prostate gland
Numbers are for men aged 50 years and older, not participating vs. participating in early detection for 11 years

1000 men without early detection:
- Men who died from prostate cancer: 7
- Men who died from any cause: 210
- Men who experienced a biopsy and a false alarm: – 180
- Men who were diagnosed and treated for prostate cancer unnecessarily: – 20
- Remaining men: 790

1000 men with early detection:
- Men who died from prostate cancer: 7
- Men who died from any cause: 210
- Men who experienced a biopsy and a false alarm: – 180
- Men who were diagnosed and treated for prostate cancer unnecessarily: – 20
- Remaining men: 610

PREVNAR® - The CAPiTa Trial

84,500 patients

- Mean follow-up was ~ 4 years
- Relative Risk Reduction (RRR) in Pneumonia (reported) 45.56%
- Absolute Risk Reduction (ARR - not reported) 0.097%
- NNT to prevent one case of pneumonia in 4 years: 1,030 (also not reported)
- Cost to prevent one case of pneumonia in 4 years: $159,438
- Cost to vaccinate all US adults ≥ 65 years old: $6.3 billion (and then $590 million per year)

How most studies are presented

- Pulling the wool over our eyes
  - Relative Risk Reduction
  - Odds Ratio
  - Risk Ratio
  - Relative Risk Ratio
- What truly matters: NNTB, NNTH, POEMs, and $/POEM
How most studies are presented

POEMs: Patient-Oriented Endpoints that Matter

<table>
<thead>
<tr>
<th>Surrogate Measure</th>
<th>Measures that Matter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood pressure lowering</td>
<td>Heart attack, Heart Failure, Stroke, Kidney Failure, Death</td>
</tr>
<tr>
<td>LDL Cholesterol Lowering</td>
<td>Heart attack, Stroke, Death</td>
</tr>
<tr>
<td>Blood Sugar or HbA1c</td>
<td>Heart Attack, Kidney Failure, Vision loss, Limb loss, Death</td>
</tr>
</tbody>
</table>

How to inform yourself:
www.theNNT.com

Blood Pressure Medicines for Five Years to Prevent Death, Heart Attacks, and Strokes
175 be prevented death

In Summary, for those who took anti-hypertensives:

**Benefits in NNT**
- 1 in 125 were helped (prevented death)
- 1 in 67 were helped (prevented stroke)
- 1 in 100 were helped (prevented heart attack*)

**Harms in NNH**
- 1 in 10 were harmed (medication side effects, stopping the drug)

*Total and non-fatal myocardial infarction and sudden or rapid cardiac death

Source:
Root of the Problem

- We can't tell in advance which patients will benefit
- So we default to treating many to benefit a few
- Overdiagnosis/Overtreatment increases as we lower the treatment threshold
- Overdiagnosis/Overtreatment diminishes as precision in diagnosis and prognostication improve

The Promise of Precision Medicine

Consider...

- What are the incentives to become more precise in our diagnosis and treatment?
- Is it those who profit from diagnostic technologies and from treatments?
  - Pharmaceutical manufacturers?
  - Device and testing manufacturers?
  - Providers in a Fee-for-Service system?
- No... so what can we do?
- Can we look to Evidence-Based Medicine to help?
Down the Rabbit Hole

Publication Bias
Gag Clauses
Marketing Ploys
Failures of Government Regulators
Conflicts of Interest
Study Design: Stacking the Deck

Publication Bias: What is Likely to Get Published?

- 2010 Study of 5 different subject areas:
  - Industry sponsored trials – 85% positive
  - Government-funded trials – 50% positive
- 2007 study of statin studies
  - Industry-sponsored trials 20x more likely to be in favor of the test drug
- Two 2003 systematic reviews of publication bias
  - Industry-sponsored trials 4x more likely to produce positive results
Publication Bias

- “Negative data goes missing, for all treatments, in all areas of science
  - The regulators and professional bodies we would reasonably expect to stamp out such practices have failed us.”
- Publication bias – in which negative results “go missing” – is endemic throughout the whole of medicine
  - Researchers are free to bury negative results with impunity
  - Exposes patients to untold harm
  - Wastes many billions of dollars

Overdiagnosis Strategy

MemorialCare Physician Society

- Where to Next
  - **Increase physician awareness** of the concept of Overdiagnosis & Overtreatment (Town Halls, Leadership Summit)
  - Provide **education on accurate interpretation of medical literature** (Best Practice website, rounds, newsletter, podcasts…)
  - Where possible, **build more alerts into EMR for inpatient and AEMR** (Choosing Wisely+)
  - Requiring **research to be published**

One-third of clinical trials never published in peer-reviewed journals, study finds

*Bloomberg News* (2/17, Spalding) reports that a study revealed that one-third of clinical trials conducted in the US “were never published in a peer-reviewed journal or in a government registry online.” Researchers looked at 4,347 clinical trials completed between October 2007 and September 2010 and found that “only 29 percent had results published within two years of finishing data collection, and 13 percent were posted on the government database ClinicalTrials.gov within the same period, the study found.” The findings were published in the BMJ
Choosing Wisely
Hardwiring in to our EMR

American College of Physicians
Five Things Physicians and Patients Should Question

- Don’t order screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.
- Don’t order imaging studies in patients with non-specific low back pain.
- In the evaluation of simple syncope and a normal neurological examination, don’t order brain imaging studies (CT or MRI).
- In patients with low pretest probability of venous thromboembolism (VTE), obtain a high-quality D-dimer measurement as the initial diagnostic tool before ordering imaging studies as the initial diagnostic test.
- Don’t order postoperative chest radiography in the absence of a clinical suspicion for intrathoracic pathology.

Remaining Challenges
To Overcome

- Broadly disseminating the scientific rationale
- Overcoming influence of Pharma
- Near religious belief that earlier and more screening is better
- Improving the comfort level of providers to speak openly and honestly about potential harms of screening and treatment
  - Fear of medical malpractice
- Building public awareness of the problem of overdiagnosis without appearance of rationing care
- Need for advocacy with organizations promulgating P4P measures
“Connecting to Science of Care”

- Stewardship

Stewardship

The careful and responsible management of something entrusted in one’s care

We are Stewards of Precious Resources
Where to next?

- Continued focus on Partnership, Growth, Value Creation, Integration & Pop Health
- Discussion on intersection with PI, Research, Innovation

Breadth of Aim

“*It’s a Wrap*”
Providers Must Demonstrate Affordability and Desirability

Baseline Requirements

<table>
<thead>
<tr>
<th>Cost</th>
<th>Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Low unit prices relative to competitors</td>
<td>• Geographic coverage that aligns with purchaser of interest</td>
</tr>
<tr>
<td>• Willingness to further reduce prices in return for steerage</td>
<td>• Ability to meet convenience demands of consumers (after-hours, weekend access; virtual care; etc.)</td>
</tr>
<tr>
<td>• Investment in infrastructure that signals ability to control cost trend</td>
<td></td>
</tr>
</tbody>
</table>

Elements of an Attractive Network

<table>
<thead>
<tr>
<th>Clinical Quality</th>
<th>Service Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Better outcomes than competitors</td>
<td>• High patient satisfaction ratings</td>
</tr>
<tr>
<td>• Adherence to evidence-based clinical practices</td>
<td>• Strong brand reputation</td>
</tr>
</tbody>
</table>

Differentiators

Thank you!

• Questions?

• Contact Information:
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    • Certified Lean Leader
    • Hmacle@memorialcare.org