Building an Integrated Population Health Culture in San Diego County

Sunny Ramchandani MD MPH

"The views expressed are solely those of the author(s) and do not reflect the official policy or position of the US Navy, the Department of Defense, or the US Government."
The “Same Way” Syndrome
A Few San Diego Facts

<table>
<thead>
<tr>
<th>Employer</th>
<th># of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. US Navy / Federal Government</td>
<td>45,500</td>
</tr>
<tr>
<td>2. State of California</td>
<td>42,900</td>
</tr>
<tr>
<td>3. University of California, San Diego</td>
<td>27,391</td>
</tr>
<tr>
<td>4. County of San Diego</td>
<td>15,687</td>
</tr>
<tr>
<td>5. Sharp HealthCare</td>
<td>15,231</td>
</tr>
<tr>
<td>6. San Diego Unified School District</td>
<td>14,603</td>
</tr>
<tr>
<td>7. Scripps Health</td>
<td>14,097</td>
</tr>
<tr>
<td>8. Qualcomm</td>
<td>11,400</td>
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<td>9. City of San Diego</td>
<td>10,057</td>
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<tr>
<td>10. Kaiser Permanente</td>
<td>7,731</td>
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</tbody>
</table>

- 2012 San Diego County Comprehensive Annual Financial Report
## Military/Veterans Chronic Disease Prevalence

<table>
<thead>
<tr>
<th>Conditions</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension (HTN)</td>
<td>48.9</td>
</tr>
<tr>
<td>Diabetes</td>
<td>23.6</td>
</tr>
<tr>
<td>Depression</td>
<td>22.6</td>
</tr>
<tr>
<td>Lower Back Pain (LBP)</td>
<td>22.2</td>
</tr>
<tr>
<td>Asthma</td>
<td>5.9</td>
</tr>
<tr>
<td>COPD</td>
<td>3.7</td>
</tr>
<tr>
<td>Serious, persistent mental illness</td>
<td>3.4</td>
</tr>
<tr>
<td>Ischemic heart disease (IHD)</td>
<td>2.6</td>
</tr>
<tr>
<td>Post Traumatic Stress Disorder (PTSD)</td>
<td>2.0</td>
</tr>
<tr>
<td>Stroke</td>
<td>1.0</td>
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</table>

* MHS Conference, 2011
Population Health Determinants

Institute of Medicine: Committee on Public Health Strategies to Improve Health – Jan 2011
Healthcare Services vs. Social Services

Healthcare Service Expenditures as % of GDP, 2005*

Social Service Expenditures as % of GDP, 2005*

Average life expectancy, 2007

Infant Mortality (deaths per 1,000 live births)

*McGinnis JM, Russo PG, Knickman JR. The case for more active policy attention to health promotion. Health Aff (Millwood) 2002;21(2):78–93
Other Community Based Approaches

[Image: Vermont Blueprint for Health and Newark Health PLAN logos]
Sabermetrics, Anyone?

- Sabermetrics: The empirical analysis of baseball, especially baseball statistics that measure in-game activity.
  - Derived from the acronym SABR:
    - Society for American Baseball Research.
Population Snapshot

1° Prevention Population (1X Avg. $)
- Obese or Overweight
- Tobacco Use
- Lack of Education
- Poor Air Quality
- Food Desert
- Unsafe/Inaccessible Environment

Total Costs: $1.125 B

2° Prevention Population (2X Avg. $)
- Diabetes, HTN, Dyslipidemia

Total Costs: $1.8K

3° Prevention Population (17X Avg. $)
- CVD, COPD

Total Costs: $4K

400K San Diego County TRICARE Beneficiaries
- 23% Ages 0-17
- 63% Ages 18-64
- 14% Ages 65+
- 37% Direct Care / MTF Enrolled

Average PMPY

250K
$0K

47K
$11K
$4K
$1.8K
$4K
$1.125 B
Strategy and Approach

Tertiary Prevention
- Person Focus
  - Coordinated Care
  - Ambulatory ICU
  - Medical Home Integration
  - Advanced Analytics

Initiation: Nov 2012

Secondary Prevention
- Condition Focus
  - Empowerment
  - Clinical Pharmacists
  - Health Coaching
  - Health / Wellness Programs
  - Wellness Technologies

Initiation: Feb 2013

Primary Prevention
- Behavior Focus
  - Engagement
  - Health / Wellness Programs
  - Wellness Technologies
  - Community Partnerships
  - Outreach & Education

Initiation: Jan 2015

Healthcare Delivery Model

Community / Social Services

Medical Home

Personal Health Record

Health / Wellness Services

<table>
<thead>
<tr>
<th>Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>- HEDIS</td>
</tr>
<tr>
<td>- PCM Continuity</td>
</tr>
<tr>
<td>- Missed Visits</td>
</tr>
<tr>
<td>- ER Use</td>
</tr>
<tr>
<td>- Inpatient Admissions</td>
</tr>
</tbody>
</table>
Intensive Services

• Physical Activity & Nutrition
• BMI

Nutrition

• BMI

Controlled Chronic Diseases

• Controlled Chronic Diseases
• Patient Activation Score

Smoking Cessation

• Smoking Cessation

New Model

Community / Social Services

Medical Home

Intensive Services

Health Coach

Health Coach

Health / Wellness Services

Personal Health Record

IHC Portal

Health Coaches

Health Coaches

PAM / Flourish

Enhanced Technology Tools

Medical Home

Personal Health Record

IHC Portal

Health Coaches

Health Coaches
Healthcare / Community Model

Patient-Centered Medical Home

Primary Care Team
PCM / RN / LVN / MA
Admin

Intensive Services
- Case Manager
- Care Facilitator

Health Services
- Behavioral Health
- Pharmacist
- Health Coach
- Social Worker

Virtual Health Services / Technology

Wellness, Community, and Social Services

New Additions
3° Intervention Impact
\( n = 499 \) (as of Apr 2015)

Valuation Periods:
NMCSD 1: Nov 2012 – Oct 2013, 50 patients
NMCSD 2: Jun 2013 – May 2014, 135 patients
NMCSD 4: May 2014 – Dec 2014 (4 mo. Projected), 86 patients
*NProjections are through December 2014 because of the M2 data delay

Total ER Visits (Direct and Purchased Care)

<table>
<thead>
<tr>
<th></th>
<th>Actuals</th>
<th>Projected</th>
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</thead>
<tbody>
<tr>
<td>Annual Avg. for 2 Years Prior</td>
<td>4,413</td>
<td></td>
</tr>
<tr>
<td>1 Year Post Intervention</td>
<td>3,243</td>
<td>910 Fewer Visits</td>
</tr>
</tbody>
</table>

Total Inpatient Admissions (Direct and Purchased Care)

<table>
<thead>
<tr>
<th></th>
<th>Actuals</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Avg. for 2 Years Prior</td>
<td>929</td>
<td></td>
</tr>
<tr>
<td>1 Year Post Intervention</td>
<td>621</td>
<td>257 Fewer Admits</td>
</tr>
</tbody>
</table>
Valuation Periods:
NHCP 1: Dec 2012 – Nov 2013, 10 patients
NMCSD 1: Nov 2012 – Oct 2013, 50 patients
NHCP 2: Feb 2013 – Jan 2014, 16 patients
NMCSD 2: Jun 2013 – May 2014, 135 patients
NHCP 2.5: Jul 2013 – Jun 2014, 51 patients
NMCSD 4: May 2014 – Dec 2014 (4 mo. Projected), 86 patients
NHCP 5: May 2014 – Dec 2014 (4 mo. Projected), 16 patients

*Projections are through December 2014 because of the M2 data delay
3° Intervention Impact
n = 499 (as of Apr 2015)

Valuation Periods:
NMCSD 1: Nov 2012 – Oct 2013, 50 patients
NMCSD 2: Jun 2013 – May 2014, 135 patients
NMCSD 4: May 2014 – Dec 2014 (4 mo. Projected), 86 patients
*Projections are through December 2014 because of the M2 data delay
### Demographics & Biometrics for All Cohorts

#### Age Distribution

<table>
<thead>
<tr>
<th>Age</th>
<th>Count</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>0 - 17</td>
<td>53</td>
<td>11%</td>
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<tr>
<td>18 - 34</td>
<td>77</td>
<td>15%</td>
</tr>
<tr>
<td>35 - 64</td>
<td>188</td>
<td>38%</td>
</tr>
<tr>
<td>65+</td>
<td>181</td>
<td>36%</td>
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<tr>
<td>Total</td>
<td>499</td>
<td>100%</td>
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</tbody>
</table>

#### Gender Distribution

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Female</td>
<td>277</td>
<td>56%</td>
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<tr>
<td>Male</td>
<td>222</td>
<td>44%</td>
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<tr>
<td>Total</td>
<td>499</td>
<td>100%</td>
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</table>

#### Patient Type Distribution

<table>
<thead>
<tr>
<th>Patient Type</th>
<th>Count</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Active Duty</td>
<td>30</td>
<td>6%</td>
</tr>
<tr>
<td>Dependent</td>
<td>296</td>
<td>59%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0.2%</td>
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<tr>
<td>Retired</td>
<td>172</td>
<td>34%</td>
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<tr>
<td>Total</td>
<td>499</td>
<td>100%</td>
</tr>
</tbody>
</table>

#### Condition Type Distribution

<table>
<thead>
<tr>
<th>Condition Type</th>
<th># In All Cohorts</th>
<th>Percent of Total (n= 499)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>31</td>
<td>6%</td>
</tr>
<tr>
<td>Chronic Pain</td>
<td>123</td>
<td>25%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>152</td>
<td>30%</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>203</td>
<td>41%</td>
</tr>
<tr>
<td>Hypertension</td>
<td>223</td>
<td>45%</td>
</tr>
<tr>
<td>Mental Health</td>
<td>224</td>
<td>45%</td>
</tr>
<tr>
<td>Obesity</td>
<td>45</td>
<td>9%</td>
</tr>
</tbody>
</table>
Outcome Metrics

**Primary**
- ER & Specialist Visits
- Readmissions
- Referral Rate to H&W / Clinical Pharmacist Staff
- Caseload of H&W / Clinical Pharmacist
- Network Care Utilization % (vs. Capture Rate)
- Cost: DC, PC, & Total (Aggregate and PMPM/PMPY)

**Secondary**
- Inpatient Admissions
- Length of Stay
- Network Care Utilization %
- Technology Utilization
- Initial Disease Diagnosis (CVD, COPD, CHF, Hypertension, Diabetes)
- HEDIS Metrics (HbA1C, LDL, etc.)
- Provider Continuity / PCMH Continuity

**Tertiary**
- Readmissions
- Inpatient Admissions
- Length of Stay
- Technology Utilization
- Missed Visits Proportion

**Clinical Measures**
- BMI
- Tobacco Use
- HbA1C
- Systolic BP
- LDL
- Initial Disease Diagnosis (i.e., Myocardial Infarction, Stroke, etc.)
- HEDIS Metrics (HbA1C, LDL, etc.)
- Provider Continuity / PCMH Continuity

**Behavior**
- % Attainment of H&W Goals
- PAM 13 Score
- PRT Scores
- Health Assessments
- Poly-Pharmacy Patients
- Primary Care Visits / Yr.
- Missed Visits Proportion
Population Health Mapping

- https://public.tableausoftware.com/views/EnrollmentServicesandRisk/TotalPopulation?:embed=y&:display_count=no
Cultural Health Determinants: Live Well!

The Spread of Obesity in a Large Social Network Over 32 Years
Nicholas A. Christakis, M.D., Ph.D., M.P.H., and James H. Fowler, Ph.D.

ABSTRACT

BACKGROUND

The prevalence of obesity has increased substantially over the past 30 years. We performed a quantitative analysis of the nature and extent of the person-to-person spread of obesity as a possible factor contributing to the obesity epidemic.

METHODS

We evaluated a densely interconnected social network of 12,067 people assessed repeatedly from 1971 to 2000 as part of the Framingham Heart Study. The body-mass index was available for all subjects. We used longitudinal statistical models to examine whether weight gain in one person was associated with weight gain in his or her friends, siblings, spouse, and neighbors.

RESULTS

Discernible clusters of obese persons were present in the network at all time points, and the clusters extended to three degrees of separation. These clusters did not appear to be solely attributable to the selective formation of social ties among obese persons. A person’s chances of becoming obese increased by 57% (95% confidence interval [CI], 6 to 123) if the or she had a friend who became obese in a given interval. Among pairs of adult siblings, if one sibling became obese, the chance that the other would become obese increased by 40% (95% CI, 21 to 69). If one spouse became obese, the likelihood that the other spouse would become obese increased by 3% (95% CI, 7 to 73). These effects were not seen among neighbors in the immediate geographic location. Persons of the same sex had relatively greater influence on each other as compared with those of the opposite sex. The spread of smoking cessation did not account for the spread of obesity in the network.

CONCLUSIONS

Network phenomena appear to be relevant to the biologic and behavioral trait of obesity, and obesity appears to spread through social ties. These findings have implications for clinical and public health interventions.

The Collective Dynamics of Smoking in a Large Social Network
Nicholas A. Christakis, M.D., Ph.D., M.P.H., and James H. Fowler, Ph.D.

ABSTRACT

BACKGROUND

The prevalence of smoking has decreased substantially in the United States over the past 30 years. We examined the extent of the person-to-person spread of smoking behavior and the extent to which groups of widely connected people quit together.

METHODS

We studied a densely interconnected social network of 12,067 people assessed repeatedly from 1971 to 2000 as part of the Framingham Heart Study. We used network analytic methods and longitudinal statistical models.

RESULTS

Discernible clusters of smokers and nonsmokers were present in the network and the clusters extended to three degrees of separation. Despite the decrease in smoking in the overall population, the size of the clusters of smokers remained the same across time, suggesting that whole groups of people were quitting in concert. Smokers were also progressively found in the periphery of the social network. Smoking cessation by a spouse decreased a person’s chances of smoking by 67% (95% confidence interval [CI], 50 to 73). Smoking cessation by a sibling decreased the chances by 35% (95% CI, 14 to 55). Smoking cessation by a friend decreased the chances by 34% (95% CI, 12 to 55). Among persons working in small firms, smoking cessation by a coworker decreased the chances by 34% (95% CI, 5 to 50). Friends with more education influenced one another more than those with less education. These effects were not seen among neighbors in the immediate geographic area.

CONCLUSIONS

Network phenomena appear to be relevant to smoking cessation. Smoking behavior spreads through close and distant social ties, groups of interconnected people stop smoking in concert, and smokers are increasingly marginalized socially. These findings have implications for clinical and public health interventions to reduce and prevent smoking.
Live Well, San Diego!

• 3 – 4 – 50!
  – The key to impact upstream determinants

• Drive from Healthcare to Wellness!

• Era of Economic Austerity
  – The tie of Health to our financial solvency
"The views expressed are solely those of the author(s) and do not reflect the official policy or position of the US Navy, the Department of Defense, or the US Government."
## Technology Pilot Milestones

<table>
<thead>
<tr>
<th>Month</th>
<th>Q4 2014</th>
<th>Q1 2015</th>
<th>Q2 2015</th>
<th>Q3 2015</th>
<th>Q4 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary / Secondary Prevention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finalize IT and Legal Requirements</td>
<td>![Progress Bar]</td>
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<td></td>
<td></td>
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<tr>
<td>Identify Target Populations</td>
<td>![Progress Bar]</td>
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<tr>
<td>Train-the-Trainer</td>
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<tr>
<td>ESC Pilot</td>
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<tr>
<td>Administrator / Champions Pilot</td>
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<tr>
<td>Relay Health Integration</td>
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<tr>
<td>Beneficiary Pilot</td>
<td>![Progress Bar]</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Integration of Technology into H&amp;W</td>
<td>![Progress Bar]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration of Technology into MHP</td>
<td>![Progress Bar]</td>
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<tr>
<td>Advanced Analytics &amp; Reporting</td>
<td>![Progress Bar]</td>
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</tr>
</tbody>
</table>
Proactive IHC List Scorecard

PCMH Team
- PCMH Team 01
- PCMH Team 02
- PCMH Team 03
- PCMH Team 04
- PCMH Team 05

Case Manager
- Case Manager 01
- Case Manager 02
- Case Manager 03
- Case Manager 04
- Case Manager 05

Patient Name
- Patient 36
- Patient 37
- Patient 38
- Patient 39
- Patient 40
- Patient 41

Actionability
- 5
- 1
- 2
- 3
- 4
- (blank)

Cost
- Sum of Direct Care Cost
- Sum of Purchased Care Cost

ER and Inpatient
- Sum of DC ER Visits
- Sum of PC ER Visits
- Sum of DC Inpatient Admits
- Sum of PC Inpatient Admits

Visits
- Sum of DC PM Visits
- Sum of PC PM Visits
- Sum of DC Specialist Clinician Visits
- Sum of PC Specialist Clinician Visits

Flags, Chronic Conditions, and HEDIS
- ER
- Hospitalization
- Missed Visits
- Cost Spike
- Mult. Specialist

Chronic Costs
- Asthma: $0
- Chronic Pain: $1,858
- Diabetes: $22
- Heart Disease: $46,483
- Hypertension: $313
- Mental Health: $443
- Obesity: $0

HEDIS Compliance Percent
- Breast Cancer: 6%
- Cervical Cancer: N/A
- Colorectal Cancer (Type I): N/A
- LDL: N/A
- Osteoporosis: N/A
- Hemoglobin A1C: No

Latest Date
- N/A
- 6/2/2011
- 5/2/2013
- 11/1/2012

HEDIS
- N/A
- Yes
- No
- No

Actionability
- 1
- 1
- 1
- 1
## Integrated Health Community: Program Alignment

<table>
<thead>
<tr>
<th>IHC Prevention Strategy</th>
<th>National and Local Program Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Prevention</strong></td>
<td>• BUMED Medical Home Port&lt;br&gt;• MHS Quadruple Aim&lt;br&gt;• Navy and Marine Corps Public Health Center&lt;br&gt;• NMCSD/NHCP Health and Wellness&lt;br&gt;• Live Well, San Diego!&lt;br&gt;• National Prevention Strategy&lt;br&gt;• 21st Century Sailor &amp; Marine&lt;br&gt;• Total Force Fitness&lt;br&gt;• Operation Live Well, Healthy Base Initiative&lt;br&gt;• Health Wellness Assessment&lt;br&gt;• SDHHSA 3-4-50 campaign&lt;br&gt;• California ‘Health in All Policies’&lt;br&gt;• HHS Million Hearts Initiative&lt;br&gt;• CDC Sodium Reduction in Communities&lt;br&gt;• Let’s Move!</td>
</tr>
<tr>
<td><strong>Secondary Prevention</strong></td>
<td>• BUMED Medical Home Port&lt;br&gt;• MHS Quadruple Aim&lt;br&gt;• Navy and Marine Corps Public Health Center&lt;br&gt;• NMCSD/NHCP Health and Wellness&lt;br&gt;• Right Care Initiative&lt;br&gt;• National Prevention Strategy&lt;br&gt;• Operation Live Well, Healthy Base Initiative&lt;br&gt;• Health Wellness Assessment&lt;br&gt;• IBHC Practice Manual&lt;br&gt;• HHS Million Hearts Initiative&lt;br&gt;• CDC National Heart Disease and Stroke Prevention</td>
</tr>
<tr>
<td><strong>Tertiary Prevention</strong></td>
<td>• BUMED Medical Home Port&lt;br&gt;• MHS Quadruple Aim&lt;br&gt;• HHS Million Hearts Initiative&lt;br&gt;• Health Wellness Assessment&lt;br&gt;• IBHC Practice Manual</td>
</tr>
</tbody>
</table>
"Actionability" Flags:

- Recent ER Use (> 2 visits in last 6 months)
- Recent Inpatient Admission (> 1 admission in last 6 months)
- Recent Cost Spike (> $3000 / month in last 6 months)
- Multiple Specialists (> 2 types of specialist visits in the last 6 months)
- Missed Visits (> 1 missed visit in the last 6 months)
MANiC Intervention Strategy

**MANAGE**
- Evidence-Based Management:
  - Clinical Services
  - Ancillary Services
  - Community / Social Services

**NAVIGATE**
- Patient obtains appropriate, health and health care services when needed
- Patient utilizes optimized, efficient health and health care services

**COORDINATE**
- Organize and synchronize various health and health care services
- Ensure appropriate communication among service decision makers

**ACTIVATE**
- Patient has the knowledge and confidence to take action
- Patient takes action to maintain and improve health
- Patient “stays the course” under stress
Current Enterprise Plan

<table>
<thead>
<tr>
<th>Intervention Strategy</th>
<th>Initiation Point</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>2015</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>2015</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention Strategy</th>
<th>Initiation Point</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>TBD</td>
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## IHC Contract Deliverables

<table>
<thead>
<tr>
<th>Strategic Task Area</th>
<th>Fall 2014</th>
<th>Winter 2015</th>
<th>Spring 2015</th>
<th>Summer 2015</th>
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<tbody>
<tr>
<td><strong>BUMED Contract BPR Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Program Strategy Development</td>
<td></td>
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<tr>
<td>Operational Implementation Guidance</td>
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<tr>
<td>Data Analytics Development</td>
<td></td>
<td></td>
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<tr>
<td><strong>BUMED Population Health Program Funding (Local Contracts)</strong></td>
<td></td>
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<tr>
<td>Communications Implementation</td>
<td></td>
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<tr>
<td>Community Outreach Support (Web Portal, etc.)</td>
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<tr>
<td>Health Promotion Support</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Data Analytic Support</td>
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<td></td>
</tr>
<tr>
<td>Wearable Technology / Health Portal</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Provided by Deloitte LLC until Jan 2015. New BUMED BPR Contract scheduled to initiate Feb 2015.*
PAM: The Premiere Measure

- Hospitals and health care systems in 30+ states administer PAM
- Used in health care systems that serve over a 130 million members
- The PAM is used in over 21 countries
- PAM is required in the ACA section 3026 (Community Care Transition Program)
- 6 VA hospitals currently use PAM
- 135 peer-reviewed published studies, using the PAM, have demonstrated improved patient outcomes and controlled costs

**Top Hospitals and Health Care Systems Using PAM**

| Johns Hopkins | Coventry Health Care |
| United Health Group | MEDICA |
| Blue Cross of California | Oregon Health Authority |
| WellPoint | Washington State Health Care Authority |
| South Carolina Healthy Connections | Ohio Department of Medicaid |
## Patient Activation Measure

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>Disagree Strongly</th>
<th>Disagree</th>
<th>Agree</th>
<th>Agree Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When all is said and done, I am the person who is responsible for taking care of my health</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
</tr>
<tr>
<td>2</td>
<td>Taking an active role in my own health care is the most important thing that affects my health</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
</tr>
<tr>
<td>3</td>
<td>I know what each of my prescribed medications do</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
</tr>
<tr>
<td>4</td>
<td>I am confident that I can tell whether I need to go to the doctor or whether I can take care of a health problem myself.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
</tr>
<tr>
<td>5</td>
<td>I am confident that I can tell a doctor concerns I have even when he or she does not ask.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
</tr>
<tr>
<td>6</td>
<td>I am confident that I can follow through on medical treatments I may need to do at home</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
</tr>
<tr>
<td>7</td>
<td>I have been able to maintain (keep up with) lifestyle changes, like eating right or exercising</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
</tr>
<tr>
<td>8</td>
<td>I know how to prevent problems with my health</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
</tr>
<tr>
<td>9</td>
<td>I am confident I can figure out solutions when new problems arise with my health.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
</tr>
<tr>
<td>10</td>
<td>I am confident that I can maintain lifestyle changes, like eating right and exercising, even during times of stress.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
</tr>
</tbody>
</table>
## PAM: A Measure That Improves Outcomes

The normal distribution of a patient population is spread across all 4 activation levels

<table>
<thead>
<tr>
<th>Organization</th>
<th>Intervention (Based on PAM Level)</th>
<th>Sample Size</th>
<th>Outcomes</th>
</tr>
</thead>
</table>
| PeaceHealth Medical Group           | All Medical Home Clinic Staff Members | Tailored Patient Interaction | 1500 | 47% ↓ ER and Urgent Care Visits  
                                      |                                   |             | 21% ↑ Control Blood Pressure  
                                      |                                   |             | 14% ↑ Patient Appointment Access |
| StayWell Health Management          | Telephonic-Health Coaches         | Tailored Condition-Management Coaching and Care | 1874 | 22% ↓ ER Visits  
                                      |                                   |             | 33% ↓ Inpatient Admission        |
| Washington State Medicaid           | RNs                               | Tailored Care Coordination Processes | 182  | 80% ↓ Cost for ER / Inpatient Admissions         |
AICU / 3° Population

**Population Size**
(153k Total Enrollees to NMCSD and NHCP)

*152,860*
NMCSD and NHCP Enrollees
(*non-opforces, as of 3/1/14)

**Average Annual Cost (FY12-13)**
(Annual Health Care Costs of $300M)

$300M
Costs for Other Enrollees

$20.7 M

15 times the average per member per year costs (PMPY)
PMPY: **$52,245**

Per Member Per Month Cost (PMPM): **$3,400**