Patient Activation: Research Findings and Practical Applications

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Agenda

– Evidence that PAM (Patient Activation Measure) is linked with health outcomes
– Key insights and implications from research
– Implications for individual and population health management
– How are health care delivery systems using PAM measurement to improve care?
An activated consumer:

- Has the knowledge, skill and confidence to take on the role of managing their health and health care

- First insights.....

- Full range of activation in any population group

- Demographics tend to account for 5% to 6% of PAM score variation
Three Characteristics that Make PAM Different from Other Measures

• Interval level measurement
• Guttman-like scale
• Uni-dimensionality (one underlying construct)
Patient Activation Measurement (PAM)

Difficulty Structure of 13 Items

1. Does not yet believe they have active/important role
2. Lack confidence and knowledge to take action
3. Beginning to take action
4. Maintaining behavior over time

Level 1

Level 2

Level 3

Level 4
### Activation Measure Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Disagree Strongly</th>
<th>Disagree</th>
<th>Agree</th>
<th>Agree Strongly</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 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>
<td>N/A</td>
</tr>
<tr>
<td>2. 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>
<td>N/A</td>
</tr>
<tr>
<td>3. I know what each of my prescribed medications do</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
<tr>
<td>4. 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>
<td>N/A</td>
</tr>
<tr>
<td>5. 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>
<td>N/A</td>
</tr>
<tr>
<td>6. 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>
<td>N/A</td>
</tr>
<tr>
<td>7. 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>
<td>N/A</td>
</tr>
<tr>
<td>8. I know how to prevent problems with my health</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
<tr>
<td>9. 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>
<td>N/A</td>
</tr>
<tr>
<td>10. 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>
<td>N/A</td>
</tr>
</tbody>
</table>
Activation is developmental

Level 1: Overwhelmed & disengaged
10-20%

Level 2: Becoming aware, but still struggling
10-20%

Level 3: Taking action
25-30%

Level 4: Maintaining behaviors
20-25%

0-100 point scale
Over a Decade of Research Shows that the Patient Activation Measure (PAM) Is a Good Predictor of:

- Most health behaviors
- Many clinical outcomes
- Health trajectories
- Overall costs
- Unnecessary costly utilization
- These findings hold true after controlling for demographics and health status
- Results are found across populations and within condition specific groups
Activation and Behavior

Hypertension Self-Care Behavior

- Level 1
- Level 2
- Level 3
- Level 4

Take Rx as recommended
- 31%
- 55%
- 73%
- 88%

Know what BP should be
- 13%
- 17%
- 27%

Monitor BP weekly
- 6%
- 16%
- 14%

Keep BP diary
- 0%
- 9%
- 8%
- 21%

Source: US National sample 2004
Read about side-effects with New drug

Bring a list of questions to office visit

Persistence in asking when don’t understand

Look up doctor’s qualifications when choosing new doctor

Activation and Behavior in Medical Encounter
Insights

- Many of the behaviors we are asking of people are only done by those in highest level of activation

- When we focus on the more complex and difficult behaviors—we discourage the least activated

- Start with behaviors more feasible for patients to take on, increases individual’s opportunity to experience success
Activation is not disease specific: Medication Adherence and patient activation level

<table>
<thead>
<tr>
<th></th>
<th>Level 1 &amp; 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>57</td>
<td>62</td>
<td>86</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>45</td>
<td>61</td>
<td>73</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>44</td>
<td>57</td>
<td>86</td>
</tr>
<tr>
<td>Hypertension</td>
<td>46</td>
<td>73</td>
<td>98</td>
</tr>
</tbody>
</table>

Use of Medications by Level of Activation
Impacts of Being Engaged are Enduring: PAM in 2010 Predicts Outcomes 2 Years Later: Odds Ratios

<table>
<thead>
<tr>
<th></th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDL</td>
<td>*</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>*</td>
</tr>
<tr>
<td>Not Smoking</td>
<td>*</td>
</tr>
<tr>
<td>Not Obese</td>
<td>*</td>
</tr>
<tr>
<td>PAP Smear</td>
<td>*</td>
</tr>
<tr>
<td>Mammogram</td>
<td>*</td>
</tr>
<tr>
<td>PHQ9</td>
<td>* *</td>
</tr>
<tr>
<td>No ED Visits</td>
<td>*</td>
</tr>
<tr>
<td>No Hospitalizations</td>
<td>*</td>
</tr>
</tbody>
</table>

Models included controls for age, sex, number of chronic conditions, income, and percent of care that was received in-network. * Significantly different from PAM Level 1 at p<0.05  Health Affairs Mar 2015
When Activation Changes Costs Change in Expected Direction:
Predicted Average Per-Capita Costs 2 Years Later by Change in PAM Level

Predicted costs are based upon regression models with log transformed costs that control for age, sex, chronic conditions, natural logarithm of income and percent of care that was received in-network. Costs were retransformed from log dollars using the Duan smear factor.
Less Activated Patients have Higher Total Healthcare Costs

- After controlling for demographics and health status, $1987 per patient annual cost differential between those patients who stay high in activation and those who stay low in activation over time. That represents a 31% difference.

Patient Role & Outcomes

- Study Findings indicate the importance of the patient role in outcomes and cost
- As payments become more closely linked with patient outcomes, understanding how to increase patient activation will become a priority
Summary of Key Insights from Research

• When activation changes multiple behaviors change in the expected direction
• Least activated gain the most when appropriately supported
• It is the higher activated that show up when self-management resources are offered
• Some clinicians are better at supporting self-management than others.
Two Key Challenges Under New Payment Models

• Slow the development and progression of disease
• Reduce costly and wasteful care

How Can PAM Help?
Managing Risks and Costs in a Patient Population

Fairview-- a Pioneer ACO, N = 98,142
PAM scores from 2011, predicting outcomes in 2012, 2013, and 2014
Illness Progression: a diagnosis of new chronic disease 1 to 3 years later
ACS ED, and hospital. Preventable utilization

Published in HSR Aug 2016
Odds Ratios from Logistic Regression Analysis
Predicting a New Chronic Condition 1 Year Later By
Baseline PAM Level

Adjusted for age, gender, income tercile, and presence of chronic conditions at baseline

Differences significant at the .01 level
Less Activated Patients More Vulnerable to the Development of Diabetes

- New study shows progression of illness is faster among less activated diabetes patients
- Less activated are more likely to develop pre-diabetes in a 3 year observational study

ACS ED and Hospital Utilization

Does PAM level predict this type of costly utilization that could have been prevented?

First time PAM has been examined in relationship to ACS utilization

Odds of ACS Hospital Use by PAM Level – 1 Year Later

Multivariate analysis controlled for age, gender, income, risk and depression
Why would less activated patients have more avoidable hospitalizations and ED visits?

- Less likely to recognize “red flags”
- More likely to ignore symptoms
- Less likely to know what to do to handle symptoms
Among High Risk Patients-- a Baseline PAM score Predicted Costly Utilization 1 year later

• Among high risk patients hospital costs were 62 % higher among those at PAM level 1 as compared to PAM level 4- Even when the risk score was controlled for.

Implications

• A one size-fits all is inefficient and wasteful
• Focusing on less activated patients—represents an opportunity to reduce this type of costly and unnecessary utilization.
It is possible to increase PAM scores: Studies show that Well Designed Interventions can Increase PAM scores and Improve Outcomes

- This means meeting patients where they are
- Tailoring support to the patient’s level of activation has been successful in increasing activation and improving outcomes
- Less activated patients need more support for gaining confidence and learning new skills
Tailoring Support to the Patient’s Activation Level

Level 1: Build Knowledge Base, Self-Awareness & Initial Confidence
- Increase in Knowledge, Initial Skills Development, Grow Confidence

Level 2: Improve health
- Skills Development, Pursue Guideline Behaviors

Level 3: Increase self-management ability
- Achieve/Exceed Lifestyle Behavior Guidelines, Develop Techniques to Prevent Relapse

Level 4: Reductions in unwarranted utilization of service
Innovative Delivery Systems

• PAM score is a Vital Sign
• Tailored coaching/ support
• Using PAM as a measure of risk, along with clinical risk measures to manage patient populations
• More efficient use of resources: target those who need more help
• Used as an intermediate outcome of care measure
• Used as a way to assess provider performance
Examples of how delivery systems are applying Activation Strategies

• Tailored care pathways
• Extra help for less activated patients (patient portal; trained MA; mammograms)
• Segmenting their populations (cancer care)—person-mediated support vs. Electronic supports
FIGURE 1. MODEL OF PHM FOR PRIMARY CARE

1. Low Disease Burden
   High Activation
   VIRTUAL CARE MANAGEMENT

2. High Disease Burden
   High Activation
   VIRTUAL CARE MANAGEMENT

3. Low Disease Burden
   Low Activation
   HIGH TOUCH

4. High Disease Burden
   Low Activation
   HIGH TOUCH

Risk of progression
Measuring Enables you to....

• Be more precise in your approach
• Use standardized approaches with higher and lower activated patients
• Have early feedback on progress with patients
• Benchmark to other similar programs and populations
• Employ a new type of accountability
It is all about meeting patients where they are

By understanding PAM levels, it is possible to:

- Better target those who need more support
- Communicate more effectively with different segments
- More effectively support behavior change
- Ultimately, improve health, patient experience, and reduce costs.