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Testimony to
Meaningful Use
Committee

- What are the key data challenges to improving America's health system from the perspective you represent?

Patient Activation: How measurement can be used to improve care and outcomes

There is growing understanding of the importance of patients being more engaged and activated around their health and health care. The emphasis centers efforts on the development of the necessary knowledge, skills and confidence to self-manage. This new direction suggests innovative and different ways to intervene and ultimately to improve health behaviors and health outcomes.

The concept of activation is measured using the Patient Action Measure (PAM). The PAM is a uni-dimensional, interval level, Guttman-like measure that assesses an individual's knowledge, skill, and confidence to manage their health and health care. It is a 13 item (10 and 6 item versions are also available) survey, that is scored on a 0-100 scale. Four levels of activation (from low to high) are used to segment populations and inform intervention approaches that are tailored to the needs of people at different points along the activation continuum.

Activation, Health Behaviors, and Health Outcomes

Multiple cross-sectional studies from a variety of settings and different populations, indicate that PAM scores are correlated with a full range of health behaviors and many health outcomes. For example, the PAM score is significantly correlated with most preventive behaviors (screenings, immunizations, etc.); healthy behaviors such as diet and exercise; health information seeking behaviors; and disease-specific self-management behaviors, such as medication adherence and condition monitoring (Hibbard et al 2005; Hibbard, Mahoney, Stock 2007; Fowles et al 2009; Mosen et al 2007; Becker and Roblin 2008). Higher activation scores have also been linked with having less unmet medical need, having a regular source of care, and higher participation in physical therapy after spine surgery (Hibbard and Cunningham 2008; skolasky et al 2008). These findings remain statistically significant even after controlling for socio-demographic factors and insurance status. Findings have also been replicated in studies conducted in other

countries (Coulter and Ellins 2006; Steinsbekk 2008). Further the PAM is predictive of outcomes within condition-specific populations, such as those with a serious mental health diagnosis, heart disease, multiple sclerosis, cancer, hypertension, asthma, and diabetes. (Stempleman et al 2010; Green et al 2009; Mosen et al 2006). It appears that activation is relevant whenever the individual has a significant role to play in the care process.

Fairview Health System in Minnesota routinely collects PAM scores from patients as they receive primary care. The PAM score is entered into the electronic medical record. A recent study of 16,000 primary care patients at Fairview shows that PAM scores are significantly correlated with 12 of 14 quality and outcome measures found in the electronic medical record. After controlling for chronic illness, income, age, and gender, higher PAM scores are linked with: higher rates of preventive screenings; lower rates of obesity and smoking; lower use of hospitalizations and ER visits; and a greater likelihood that blood pressure, cholesterol, and A1C are in normal range (Green and Hibbard in press).

Another study, assessing patients with multiple chronic conditions, also reported that higher PAM scores were correlated with lower the use of costly health care services, such as emergency department use, hospitalizations, and being re-hospitalized within 30 days of discharge (AARP, Public Policy Institute 2009).

A longitudinal study examined whether activation scores could predict future behavioral and health outcomes for diabetes patients. This Kaiser Permanente study followed diabetic patients from 10 states over a two-year period. The findings indicate that baseline PAM scores were significant predictors of whether or not patients had good glycemic control, were adherent to diabetic testing, and whether or not they had had a hospitalization in the following two years (Remmers et al 2009).

Finally, several studies show that patients who are more activated and engaged also rate their experiences with care higher than lower activated patients. Perhaps this is because higher activated patients have expectations of care that are more appropriate, or that they are more knowledgeable and skillful in getting what they need from their providers (AARP, 2009; Becker et al 2008).

Changing Activation

It is possible to change activation and a change of just 3-5 points is correlated with behavioral changes (Fowles et al 2009). A study in a disease management program showed that by tailoring coaching to the patient's level of activation, participants had significant improvements in activation scores, medication adherence, clinical indicators, and reductions in ER and hospital use, as compared to the usual coached group. The improved outcomes were observed within a 6 month intervention period (Hibbard and Greene 2009).

By measuring patient activation, individual providers and clinical teams can have actionable information on which to manage individual patients and better allocate resources to manage whole patient populations. For example, Peace Health in Oregon uses the PAM in their Patient Centered Medical Home. They use it as a "vital sign" that all clinical team members can use to

support patients appropriately. For example, if a clinical team knows which patients lack the skills and confidence for self-management (low activated), they can allocate more of their team resources for reaching out and supporting those patients. Instead of just segmenting on acuity, as is often done, clinical teams can more efficiently use resources by also segmenting their population on the dimension of activation or engagement. Further, clinicians can also provide more targeted support for patient when they have information indicating the patient's level of activation. For example, for the higher activated patients, support would focus on maintaining self-management behaviors and preventing behavioral relapses, while for the lower activated patients, support would focus on building patient confidence, though a small steps approach, and developing the most basic self-management skills.

The basic idea of tailoring support for activation, is that at different levels of activation patients need different types of support. The lowest activated have little confidence in their ability to self-manage and have limited problem-solving skills. They feel overwhelmed with the task of managing their health. It is not uncommon for a chronic disease patient to be given a long list of behavioral changes they need to make by their primary care doctor. For a low activated patient this is likely setting them up for failure. The idea of tailoring is to try and set them up for success, as this is one of the more powerful ways people gain confidence. By giving permission to suspend the long list of changes for a time, and focusing on small steps (which may not be clinically meaningful yet), individuals gain in confidence, and motivation, and build basic skills they will need as they move on to the next challenge.

Similarly, because people who are low activated are passive and are not likely to take advantage of health programs in the community or offered by health systems/plans, a more high touch approach may be needed to draw them in. For example, a recent study shows that it is the high activated that are more likely to use the patient portal. To get lower activated patients on the patient portal, it may take a more personal outreach effort. By segmenting patient populations by activation level, it is possible to support and communicate with these segments differentially, and likely more effectively.

Tailoring Support to Activation Levels:

- At **level 1**, patients are passive, have little confidence, and are overwhelmed. Focus on building self-awareness and understanding behavior patterns, and begin to build confidence through small steps.
- At **level 2**, work with patients continue small steps that are “pre-behaviors,” such as adding a new fruit or vegetable each week to their diet; reducing portion sizes at two meals daily; and begin to build basic knowledge. At **level 3** work with patients to adopt new behaviors and to develop self-management skills. Supporting the initiation of new “full” behaviors (e.g. 30 minutes of exercise 3 times a week) and working on the development problem solving skills.
- At **level 4** the focus is on relapse prevention and handling new or challenging situations as they arise. Problem solving and planning for difficult situations help patients maintain their behaviors

While the PAM was developed for patients with chronic illness, subsequent research shows that it is also predictive of behaviors among people with no chronic illness (Hibbard et al 2005).

Having a PAM score in the EHR means that all health care team members can have information to help them appropriately support patient self-management in each patient. Such a team approach also means that patients get more consistent support and communication from their clinical teams. A PAM score in the EHR also allows the tracking of progress over time for an individual patient, as well as whole patient populations. Some clinical teams are going to be more skilled and attentive to supporting activation in their patients. Comparing the performance of clinical teams on this dimension will also be possible if PAM scores are part of the HER.

Re-assessment of the PAM score is typically done at least once a year, however, among patients where there is active effort to improve self-management behaviors, reassessment of PAM scores on a quarterly basis is appropriate.

In summary, measuring activation as part of meaningful use, makes sense both in terms of an assessment that can be used to inform the medical encounter and the improvement of outcomes, and a measure that is parsimonious, providing insight into different types of outcomes.

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