

Improving Individual Engagement in Care with Big Data

Peter Meyer^{1*} and Dawn M. Gross²

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1 The Meyer Group, Washington DC, USA
2 University of California, San Francisco, USA

Engagement and Outcomes

To get better outcomes, you can help individuals engage in their own wellness. This is easier said than done, so we are going to propose something that would not have been possible even a few years ago: a practical way to generate and use big data to do this.

Why bother? Because when a plan member engages in her own care, your care team can effect more wellness in less time. That helps the individual, helps improve the quality of work life for the care team, and helps your health plan or agency as well. Let's start with the individual member.

Why Big Data? Individuals, Patients, Care Teams

With recent tools and improved analytics, we not only have enormous quantities of data coming in, we now have new tools to decide what healthcare data to generate as well as receive. In practice you can now go beyond clinical data. You can collect human values data that will affect wellness and treatment plans, and do so before you need it. This in turn allows your team to approach individuals starting with both their personal values and their clinical health. And you can start before a clinical event occurs.

To be clear, we are proposing that individuals help generate data before they become patients. In any health plan the members interact with the system each year. Why not use those interactions to collect data with simple smartphone applications? For many members, this data will never be used for care. However if a clinical event occurs, the data would be readily available to the care team.

The process is outlined below, but the key points are that this patient information is gathered before it is needed and that it is values-based information to supplement clinical data. Please see **Table 1** for some examples of the kind of data our proposed applications would capture [1].

Strings and Health Delivery

This proposal starts with string. You may have tried to open a bag of grain or seed that was sewn shut. When you pull on the string from one end, opening the bag gets more and more difficult and

*Corresponding author: Peter Meyer

✉ Peter@MeyerGrp.com

Principal, The Meyer Group, Scotts Valley, California, USA.

Tel: 831439 9607

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potentially frustrating. The harder you pull, the more difficult it gets. Adding more facts, more emphasis, or more argument does not make the contents more available [2].

However, if you move around to the other side of the bag and pull on the other end of the string, the bag opens quickly and easily.

So the question becomes: How do you get the patient more engaged before you present treatment information? How do you find the correct end of the string?

The usual start for these conversations is clinical data reviewed at the time a treatment plan is prescribed. We have a lot of this kind of data, and it is easy to see science at work here. This end of the string fits with the way we train care providers. For the patient, however, clinical data is probably the difficult end of the string to grasp.

What is the easy end of the string? It may be different for patients compared to the care team. That suggests that while it may be different, it makes sense to look at medicine as customer-focused. That perspective can increase engagement and success. To be patient-focused means to start with the easy end of the string: What the individual wants in life, not how she wants to experience morbidity. The right end of the string might start with asking the her to express what is important, what she values [3].

Asking the member to identify what she wants before she becomes a patient allows her to feel engaged before critical

decisions need to be made. Your plan can start to collect data that will help build better treatment strategies. Now, while we can use plan and provider staff, it is easy to get answers with inexpensive smartphone and tablet apps designed to do this.

Since engagement starts when a member is well, information can be captured early and delivered as it is needed. Just as important, if the process operates well the member feels heard and even valued. The loyalty engendered improves outcomes if a clinical event occurs [4]. It also reduces member turnover for the plan. This matters if the plan wants to retain more individual and family members while they are healthy. Reducing that churn can significantly trim the cost of delivering wellness and critical care.

Again, the information collected is human values-driven. Doing it is not breaking new ground. Current examples of easy smartphone tools to do this include Choice Map, Trackyourhappiness.org, and the Stop COPD app. Although different, each is effective at capturing values [5].

The information is generated and stored pre-EHR, and distributed to the EHR structure with specific member consent. Since it is not HIPPA protected until distributed, it can be encrypted and stored using corporate security methods.

A Solution in Two Parts

If these benefits seem obvious, then we propose that several health plans self-select and conduct trials of this project. When you start, you will find that two efforts are all that is required:

1. Choose to start collecting and storing member data and commit to allowing secure data portability. This is a policy decision.
2. Develop and trial a tool similar to Choice Map, Trackyourhappiness.org or the Stop COPD app. Even a limited trial can have positive effects, be relatively inexpensive to operate, and be quick to work or fail [6].

Any health plan or agency could implement this proposal using a software tool from vendors such as Apple or Google or by contracting with an independent developer to build a tool. Although the cost would have been prohibitive 30 months ago, it is reasonable now and becoming more so.

The first health plans to do this will gain a competitive advantage in cost reduction and increased member loyalty. However the key benefit is that individuals will be engaged in their own care and in extending their wellness. Those who become patients will have better outcomes, and while care teams will become more effective, at the same time they will increase their own smiles per day (Table 2).

You can engage individuals in their own wellness care and treatment without adding a burden to either members themselves or staff. Increasing wellness and providing better experiences for patients and care teams are what we seek first. This is the perfect time to try it.

Table 1: Values to Query and Track.

Values to Query and Track
• Does this individual tend to actively engage in plans or just accept them?
• Is nutrition stable for the individual?
• Is housing stable for the individual?
• Is the individual more likely to embrace the care team's plan or do her own research?
• Does the individual have strong self-discipline in her life (athletics, difficult hobby, etc.?)
• Is the individual habitually driven by outside rules or internal rules?
• Does the individual place community above self or self above community?
• Can this individual rely on family and community support for A3+C33her plan?
• Is the individual good at focusing?
None of the questions will ever be phrased this way, but by crafting standard values questions and repeating the topics over time the data will reflect the core values of the plan member before the stress of a treatment plan is added.

Table 2: Potential Benefits from the Information and Patient.

Values to Query and Track
• Does this individual tend to actively engage in plans or just accept them?
• Is nutrition stable for the individual?
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• Is the individual more likely to embrace the care team's plan or do her own research?
• Does the individual have strong self-discipline in her life (athletics, difficult hobby, etc.?)
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