



Communicate **Health**

**Green Paper**

# **A Role for Consumer Messaging in Health IT**

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As the best and the brightest among us race to realize the potential of intelligent health IT, we must not lose sight of the person standing on the other side of the finish line: the health care consumer.

Even the most advanced medical technology cannot change patient behavior. But the right clinical data, filtered through smart technology, and combined with tailored consumer messages, hold promise to do exactly that. The key to success lies in harnessing available data and translating it into actionable health intelligence that reaches beyond the clinical encounter and into the hands and homes of consumers.

### From Clinical to Consumer Decision Support

It's widely recognized that clinical decision support (CDS) systems, when well implemented, can improve patient safety and quality of care.<sup>1,2,3</sup> CDS promises to reduce medication errors and adverse drug events, identify evidence-based gaps in care at the point of care, and signal opportunities for interventions to improve patient adherence.<sup>2</sup>

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In other words, we've given clinicians the tools to do their jobs better, faster, and smarter. It's time we did the same for health care consumers. The same analytics that drive *clinical* decision support can be used to enhance *consumer* decision support by presenting clinical data in ways that consumers can understand and use.

### Seeing Consumers as Collaborators

First, we need to reject assumptions about patients' reluctance or inability to be actively involved in their own health care. According to a recent survey, patients' interest in their medical records is prompted by a desire to play an active, collaborative role in their care and share the information with family and friends.<sup>4</sup> Moreover, the same survey found that viewing one's health record frequently translates into care-related decisions and actions, be it requesting specific care or changing self-care routines.<sup>4</sup> (Clinicians take note: patients are more likely to view their medical records in order to have detailed information about their health than to check adequacy of care or seek out a second opinion.<sup>4</sup>)

Next, we need to identify consumer information needs related to optimizing health decision-making and self-care. Consumers don't just want access to data; they want answers to questions. In this regard,

studies have found marked differences between patient and practitioner perceptions of patient information needs.<sup>5</sup> Before we invest in digitizing, personalizing, and delivering clinical data to consumers, let's first make sure we're delivering the right information.

Finally, all of these efforts are in vain unless we abandon medical jargon for plain, everyday language. Not only do consumers prefer familiar words, they prefer less of them. Using short sentences and bullets to break up text increases the likelihood that consumers will read it.<sup>6</sup> Promising practices from the fields of health communication and health IT suggest providing consumers with basic information and enabling them to “drill down” for more details and related resources.<sup>6,7</sup> Further research is needed to develop a user-centered interface design for EHRs and related consumer messages that reflect these principles.

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### Tailoring Content for Consumers

With the integration of clinical analytics, patient messages become more relevant and actionable – and ultimately more effective. Tailoring resources and information to consumers can go a long way toward improving patient understanding and outcomes.<sup>8</sup>

The more personalized the information, the more relevant the message. Consumer messages can be tailored based on a patient's age, sex, pregnancy or disease status, medication regimen, past medical history, and even their readiness to modify their behavior (using stages of change theory).<sup>9</sup> Advances in technology also allow us to tailor the delivery of health messages. With computer systems that integrate pharmacy, medical, lab, and other health data, we have the potential to deliver messages at optimal times, such as prescription pick-up or a few days following an office visit.

Personalized information, however, is not enough to influence behavior change. We cannot expect consumers to make decisions based on medical records, lab results, and bits of parceled personal information.<sup>10</sup> Nor can we expect consumers to accurately interpret information on risk and infer the appropriate behavior in response. Consumers' limited understanding of probabilities and their difficulty reasoning about risk has been well established.<sup>5,11</sup> In order to be effective, clinical data needs to be synthesized into concrete recommendations for consumers.

When it comes to consumer messaging, we must first consider the following questions:

- What are we asking patients to do?
- Are we giving them the information and tools to take action?

### Using Clinical Analytics to Generate Consumer Messages

#### Sample Clinician Alert:

Patients with asthma who use a short-acting beta2-agonist inhaler >2 days a week for symptom relief should be prescribed an inhaled corticosteroid.

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#### Sample Consumer Message:

You may need a new medicine to help keep your asthma under control.

Our records show that you already use an inhaler to help you breathe easier when your asthma acts up. This type of inhaler is called a rescue (or beta2) inhaler.

You need another type of inhaler (called a steroid inhaler) to help prevent asthma attacks. Use your steroid inhaler regularly, even if you aren't having trouble breathing.

#### Take Action:

- Talk with your doctor about a steroid inhaler to control your asthma.
- If you already have a steroid inhaler, be sure to use it regularly. Follow the directions from your doctor or pharmacist.
- Keep using your rescue inhaler.

*Courtesy of Anvita Health*

Evaluating the effectiveness of consumer messages in health care will be challenging, just as it is challenging to quantify the benefits of an empowered patient. Health professionals may disagree on whether the primary goal is to provide understandable, usable information or to promote behavior change. Both are important. Measures such as patient satisfaction, perceived self-efficacy, patient activation, or engagement are each relevant to an individual's propensity to adopt healthy behaviors and should be included in formative evaluation of EHR prototypes and other health IT tools.<sup>7,8,12</sup>

### Conclusion

We must first empower consumers to make healthy choices and contribute to a more effective health care system before we can deliver on the promise of health IT. Fortunately, we have both the opportunity and the analytics to take this critical next step.

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**References:**

1. Agency for Healthcare Research and Quality (AHRQ). (2009). Health Information Technology: Clinical Decision Support. Retrieved April 13, 2010 from [http://healthit.ahrq.gov/portal/server.pt?open=514&objID=5554&mode=2&holderDisplayURL=http://prodportallb.ahrq.gov:7087/publishedcontent/publish/communities/k\\_o/knowledge\\_library/key\\_topics/health\\_briefing\\_01242006122700/clinical\\_decision\\_support.html](http://healthit.ahrq.gov/portal/server.pt?open=514&objID=5554&mode=2&holderDisplayURL=http://prodportallb.ahrq.gov:7087/publishedcontent/publish/communities/k_o/knowledge_library/key_topics/health_briefing_01242006122700/clinical_decision_support.html)
2. Hughes, C. (2009). Using Clinical Decision Support to Improve Health and Achieve Cost Savings. Anvita Health. Retrieved April 27, 2010 from <http://www.anvitahealth.com/pdf/Anvita%20Health%20Report%20-%20CDS%20ROI.pdf>
3. Berner, E. (2009). Clinical Decision Support Systems: State of the Art. AHRQ Publication No. 09-0069-EF. Rockville, MD: Agency for Healthcare Research and Quality.
4. Keselman, A., Slaughter, L., Arnott-Smith, C., Hyeoneui Kim, H., Divita, G., Browne, A., Tsai, C., & Zeng-Treitler, Q. (2007). Towards Consumer-Friendly PHRs: Patients' Experience with Reviewing Their Health Records. American Medical Informatics Association Annual Symposium Proceedings. 2007, 399-403.
5. Keselman, A., Logan, R., Smith, C. A., Leroy, G., & Zeng-Treitler, Q. et al. (2008). Developing Informatics Tools and Strategies for Consumer-centered Health Communication. Journal of the American Medical Informatics Association, 15(4), 473-483.
6. Redish, J. (2007). Letting Go of the Words: Writing Web Content that Works. Amsterdam: Morgan Kaufmann.
7. U.S. Department of Health and Human Services. (2010). Health Literacy Online: A Guide to Creating Easy-to-Use Health Websites. Retrieved July 22, 2010 from <http://www.health.gov/healthliteracyonline/>
8. National Cancer Institute (NCI). (2008). Making Health Communications Work: A Planner's Guide. Washington, DC: U.S. Department of Health and Human Services (HHS). Retrieved April 27, 2010 from: <http://www.cancer.gov/pinkbook>
9. Prochaska, J.O., Norcross, J.C., & DiClemente, C.C. (1994). Changing for good: the revolutionary program that explains the six stages of change and teaches you how to free yourself from bad habits. New York: W. Morrow.
10. Insight Policy Research. (2010) Managing Personal Health Information: An Action Agenda. AHRQ Publication No. 10-0048-EF. Rockville, MD: Agency for Healthcare Research and Quality.
11. Institute of Medicine of the National Academies. Nielsen-Bohlman, L., Panzer, A., & Kindig, D. (Eds.). (2004). Health Literacy: A Prescription to End Confusion. Washington, D.C.: The National Academies Press.
12. U.S. Department of Health and Human Services. (2006). Proceedings of the Surgeon General's Workshop on Improving Health Literacy. Retrieved April 27, 2010 from <http://www.surgeongeneral.gov/topics/healthliteracy/toc.html>