Consumer E-health Solutions: The Cure for Baumol's Disease?

INTRODUCTION

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ABSTRACT

Baumol's disease is the fact that costs in persistently labour-intensive sectors such as healthcare do not drop, despite increased use of technology. The idea of consumer e-health solutions is seductive, because it provides one option for treating Baumol's disease. However, barriers to the implementation of these solutions exist, and the successful treatment of Baumol's disease with consumer e-health solutions rests on more than their removal. In this introduction, the editor-in-chief adds to the conversation four shifts that are critical to reaping the benefits of consumer e-health solutions: moving the focus from privacy to protection; from mere access to the use of information in decision-making; from the patient-provider dyad to one that includes a full formal and informal care team; and from structural solutions in healthcare to ones designed around the goals we have for our health system.

In the 1960s, William Baumol and William Bowen first described what has been called Baumol's disease, that is, the fact that costs in persistently labour-intensive sectors such as healthcare do not drop, despite increased use of technology (Baumol and Bowen 1966). Simply put, despite substantial advances in treatment and care, it still takes lots of doctors and nurses to provide care and lots of administrators to organize that care.

If for no other reason, the idea of consumer e-health solutions is seductive. If we were able to organize and share consumers' own health data with them, and if we could establish systems where these data support self-care and the care provided by clinicians, we could move away from Baumol's disease to a world where self-management becomes the norm and technology increases productivity rather than just costs.

The authors of the lead paper and the following commentaries in this issue of Healthcare*Papers* agree on the importance and transformative potential of consumer e-health solutions. They also argue for a fundamentally different set of priorities that favour patient over provider and the use of data over large provider-centric e-health architectures. The only area where some of the papers disagree is how and when to tackle system problems around the sharing of data and the shifts in initiative and responsibility from provider to patient. Thus, it's fair to say that we have general agreement about the importance and potential value of consumer e-health solutions. They provide the only apparent solution to curing Baumol's disease. They also provide a huge opportunity to improve the quality of care and move the focus of the health system upstream to self-care and health promotion, a move that has been on the horizon since the Lalonde Report in 1974 (Lalonde 1974).

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So let's consider what's stopping us. A few of the authors make clear the policy and regulatory barriers that stand in the way of more use of consumer e-health solutions, while some note that there is enough of a regulatory framework and technology infrastructure already in place to begin the journey. There is a lot of truth on both sides of this discussion. We could be doing much more with consumer e-health solutions today, and the potential benefits are real. A recent study of Kaiser Permanente enrollees in Southern California and Hawaii showed real benefits in efficiency and quality by supporting even simple solutions such as email communication between patients and their physicians (Chen et al. 2009; Zhou et al. 2010). At the same time, there are a lot of structural barriers that discourage greater use of consumer e-health solutions. A list of usual suspects for slow development could include weak progress on implementation of electronic health records, privacy legislation and privacy concerns, poor innovation in e-health solutions generally and a rigidly organized health system that discourages any sort of innovation. All of these suspects have been thoroughly described elsewhere. They are real barriers.

However, the successful treatment of Baumol's disease with consumer e-health solutions rests on more than removing these barriers. To the discussion described above, I would like to add four shifts that are critical to reaping the benefits of consumer e-health solutions. These shifts are as much about the culture of our system as they are about policy or practice, although both will be necessary to change our culture. They involve moving focus: from privacy to protection; from mere access to the use of information in decision-making; from the patient-provider dyad to one that includes a full formal and informal care team; and from structure to goals.

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The first shift is from privacy to protection. Privacy and security are – and will remain – critical elements of any shift toward greater uptake of consumer e-health solutions. But by their very nature, consumer e-health solutions will generate new information that, in itself, can create risks. Much like the growth in the availability of genome sequencing has driven calls for genetic non-discrimination bills, the growth of consumer e-health solutions will produce flows of information that may help or hinder individuals' abilities to obtain health insurance coverage or even different jobs. When people share information about their health, they should not have to worry that the information will be used against them in employment or insurance decisions. As we hopefully support more and more consumer e-health solutions, we need also to pay attention to how these new flows of information evolve and ensure that policies, such as non-discrimination legislation, reinforce the appropriate use of data to improve health, not corporate profits.

The second shift is from mere access to information to its use in decision-making. It is true that increased access to our information should drive better uptake of consumer e-health solutions and eventually better health. At the same time, however, we should not assume that access will lead to informed and supportive use by providers and managers. The new flows of information and opportunities for interaction do not fit into our current health system. There is no billing code for, as Will Falk says (PricewaterhouseCoopers 2014), prescribing an app. To get the best results from these new technologies, we should assist providers and managers in learning how to use these new technologies and support their patients. Likewise, we should not assume that managers will know how to use the volumes of data that will begin to accumulate. Capacity development on using big data, particularly consumer-driven data, will be important.

The third shift is toward consumer e-health communities that include all caregivers. As our populations age, the consumers needing to access these solutions will include both the individuals receiving support or care and their family, friends and other caregivers. Companies such as Tyze are learning how to explore this type of network, but the opportunity for e-health solutions to support new communities in providing care should not be neglected. Recent surveys have shown that we can find and mobilize informal caregivers through the Internet and applications like Facebook, rather than through traditional linkages of family or neighbourhood (Seeman and Brown 2012). We should not let our old model of relationships in healthcare define how we approach consumer e-health solutions.

These sorts of cultural shifts will help us reap the full benefits of consumer e-health solutions by ensuring that patients feel comfortable sharing information, by making certain that providers can participate and by reflecting the way that care continues to be provided. However, this change in culture does not mean that we will see the full extent of these benefits. Many of the debates in health policy continue to focus on structural questions rather than the pursuit of goals such as better health. Early evidence from accountable care organizations and other experiments currently under way in the United States suggests that when providers become responsible for the costs and quality of care, they are much more able to innovate and engage patients in care, with good results for costs and quality. Consumer e-health solutions should be able to support this sort of transformation, whereas a continued focus on the structure of the system will frustrate it.

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