

# Chapter 3

## Foundations of Trust for e-Health

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### ABSTRACT

*Trust has always been an important element of healthcare. As healthcare evolves into ehealth, a question arises: What will the nature of trust be in ehealth? In this chapter the authors provide the reader with a foundation for considering this question from a research perspective. The authors focus on one ehealth domain: online websites. The chapter begins with a high-level overview of the body of offline trust research. Next, findings related to online trust are presented, along with a working definition. Trust research in the context of online health care is then examined, although this body of work is in its infancy. A detailed discussion of our research in the area of online trust is then presented. Finally, with this background, we take the reader through some possible research questions that are interesting candidates for future research on the nature of trust in ehealth.*

### INTRODUCTION

Sixty-one percent of American adults in 2008 used the Internet to obtain health information, up 21 percent from 2001 (Fox & Jones, 2009). The information they sought ranged from identifying ways to stay healthy to descriptions of

specific disease symptoms and treatments. In addition to this fast growing, widespread use, ehealth consumers report that they consider the Internet to be a better, more accurate, and more reliable source of information than television or print. Forty-one percent also consider the Internet to be a ‘frequently accessed, useful source of [medicine-related] information’, second only to health care providers (Werbler & Harris, 2009).

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These figures indicate an underlying trust in online health information by consumers. But what is the nature of this trust? Our focus in this chapter will be on this key factor of trust, which we believe must be considered when dealing with information dissemination of any type online. Online trust is important in the business transactions occurring online every day, but in the context of health, we believe it will take on even more significance.

Building trust is particularly important in ehealth since a lack of trust can be so harmful. We all know that trust is an important factor in traditional health care systems. One need only to look at the relationship between patients and their healthcare providers to illustrate this point. Trust has repeatedly been shown to be critical to such things as patient engagement and compliance. However, what happens to trust when millions of people go online for their healthcare information? A simplistic example illustrates this question.

*Bob is 49 years old – 50 is looming in his near future, a fact on which he regularly reflects. His age is even more poignant to him as his father died of a heart attack at the age of 55. So Bob decides that he needs to start taking better care of himself. He begins by going online for health information about how to improve his heart health. He visits a website that recommends reducing cardiac risk by reducing his salt intake. Though this information is accurate, he is very skeptical of the website. He notices that the ‘last updated’ date on the website is three years ago and assumes the information on the site is outdated. The website also seems very amateurish to him. So he does not trust the site or the information on it, and does not follow up on the recommendation to reduce his sodium intake. He picks up a bag of potato chips, downs a couple of handfuls, and promises himself that he’ll search online again another time.*

In Bob’s case, he did not follow a correct recommendation because of a lack of online trust. How often does this occur? No one knows. But

these kinds of scenarios made us wonder about trust and ehealth. How will *offline* health care trust translate into *online* health care trust? How could online trust be developed? While it is obvious to us that trust is very important in the context of ehealth, we found that it is equally unclear what the nature of trust will be as health information and care move online.

The intention of this chapter is to examine the concept of online trust and to consider its place in ehealth research. In order to do so, we begin by examining the nature of trust in the real world, that is, the offline world. We will then move to an overview of research that has studied trust in the online world, and finally we will take a look at the state of trust research in ehealth. Along the way, we will examine the concept of trust itself, touch on some of the confusions that exist with other similar concepts, and provide a working definition of online trust. Then we discuss some of the research we have conducted related to online trust. Finally, we examine the implications for ehealth researchers, and speculate about some of the research questions that could help us understand and maximize the effectiveness of ehealth trust.

Before moving on to a discussion of trust, we pause to clarify our terminology. In this chapter, we will use the term ‘online’ to indicate websites that are hosted on the Internet and are accessed across a network using a browser. Online trust refers to trust assigned to a website online. While the term ehealth generally is a broader term that includes all possible ways to digitally deliver health care-related activities, we will use it more narrowly to simply refer to health information being delivered via online websites.

## **A DEFINITION OF TRUST**

Before talking about the state of online trust research, we need to take a look at the concept of trust itself. Trust is complex, and as a complex concept it has been possible to study it from

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