Designing Effective Crowdsourcing Systems for the Healthcare Industry
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ABSTRACT
This article describes how healthcare faces many challenges. Among them is the inability of patients to seek and receive treatment based on their preferences. Patients characteristically pursue solutions to their medical problems that suit their individual needs. However, care providers and other stakeholders including healthcare insurance providers seem to ‘limit’ patients’ ability to access affordable and quality healthcare. Discourse in prior research has indicated that the use of crowdsourcing may provide patients access to treatments that can solve their medical problems. This article is an extension of extant research that describes the main challenges facing healthcare. It advances current research by presenting ideas through which these challenges can be mitigated. The core ideas proposed encompass the elements of crowdsourcing systems that will include participation of individuals in the crowd without any bias, enable knowledge sharing among all members of the crowd, and provide opportunities for testing the solutions proposed by the crowd.

KEYWORDS
Crowdsourcing Systems, Healthcare, Insurance, Patients
INTRODUCTION

Worldwide, healthcare remains a challenge in numerous aspects – quality of care, high costs of care, patient access to care. Crowdsourcing has been suggested as a way to solve healthcare problems (Ghosh and Sen, 2015; Kamajian, 2015), especially when the disease is uncommon and remedies are not readily available (Ghosh and Sen, 2016; Sen and Ghosh, 2018).

Many have defined healthcare as a unique problem (McCartney et al., 2013) – customers or patients have the most ‘stakes’; however, the least power and control to make decisions and choices regarding their care. For example, in the United States people often have to select a physician (care provider) based on their health insurance providers’ recommendations, rather than having the choice to suit their own health needs and preferences. Similarly, during most times, treatment plans are dictated by the care provider’s convenience rather than the patient’s preferences. Crowdsourcing may help alleviate these issues (Blohm et al., 2013; Budescu and Chen, 2015; Ghosh & Sen, 2018; Prpic et al., 2015; Ranard et al., 2014; Xu et al., 2016). When a patient crowdsources their health problem, the inputs from the crowd may not ‘bear’ the bias of stakeholders (such as physicians, insurance providers, pharmaceutical companies), thus providing the ‘latitude’ to patients to make choices that suit their personal preferences and choices. In recent times, crowdsourcing has been typically used to generate ideas to solve medical problems (McCartney 2013), as illustrated with the advent of platforms such as CrowdMed, a crowdsourcing system that engages the crowd to find solutions to rare medical cases.

The healthcare industry faces different types of problems. These have been classified as (1) Known Known (2) Known Unknown (3) Unknown Unknown (4) Unknown Knowns (For more details on these classifications, please refer Ghosh and Sen, 2016). However, each of the four types of healthcare problems has its own challenges based on the different types of obstacles to solving the problem. This paper attempts to classify these problems and provides suggestions for an effective healthcare system that has helpful solutions.

THE FOUR HEALTHCARE CHALLENGES

The “Known Known” Problems: In spite of a solution to a medical problem existing in certain parts of the world, the answer does not appear to be “generalizable”. Sometimes, the opposition to generalizability can come from ignorance based on superstition or beliefs that do not emanate from scientific evidence. On other occasions, the resistance may come from groups that have a vested interest in maintaining the status quo. This could occur when a particular company or sector of the industry will see their sales or profits decline if more globally efficient medical solutions emerge.

The effective antidote to these problems are:

1. Increasing the population of voters within the crowdsourcing system that alleviates the impact of block voting by vested interests (Surowiecki et al., 2007). This can
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www.igi-global.com/chapter/the-role-of-online-health-education-communities-in-wellness-and-recovery/165850?camid=4v1a

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