

# Chapter 46

## ICT Use and Multidisciplinary Healthcare Teams

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### ABSTRACT

*In this chapter, the authors discuss ICTs in the medical field as well as identify the advantages and disadvantages of their use. By applying Retchin's (2008) conceptual framework for interprofessional and co-managed care—one that considers the impact of temporality, urgency of care, and structure of authority—the authors provide guidelines and recommendations for how physicians and other crucial health practitioners can use technology to work with each other. More importantly, they explain how information communication technologies can impact overall patient health care and delivery.*

### INTRODUCTION

The manifestation of Computer-Mediated Communication (CMC), Internet and Computer Supported Collaborative Work (CSCW) in organizations, e-learning, and virtual collaborations have been documented in most professional realms (Olaniran, 2007b). One of the most prevalent discussions surrounding the use of ICTs has been in its potential to increase productivity and effectiveness as well as reduce costs within healthcare. ICT use is especially applicable to physicians and non-physician health providers who have to collaborate across disciplinary lines (Wright, Sparks,

& O'Hair, 2008). The use of ICTs in healthcare delivery is gaining ground in terms of health informatics, telemedicine, and healthcare delivery.

Central to this chapter's discussion is the impact of ICTs on interdisciplinary healthcare groups and teams. The interdisciplinary healthcare team approach can help providers target multiple issues in order to maximize health outcomes. To achieve the best results, team members must be able to communicate with each other, have realistic goals for coordinating group interaction, know how to resolve conflict, and make decisions successfully (Cooley, 1994; Lefley, 1998; Wright et al., 2008). In reality, however, team members

often fail to communicate effectively (Thomas, Sexton, & Helmreich, 2003; Wright et al., 2008). “Reaching resolution can be both time-consuming and distressing as problems can spiral downward and manifest as minor disagreements escalate to significant staff turnover and even litigation” (van Servellen, 2009, p. 297). This problem might be further exacerbated when team members have to meet remotely and use communication technologies with which they are not always familiar or rely on equipment that sometimes does not work properly.

In this chapter, we discuss ICTs in the medical field as well as identify the advantages and disadvantages of their use. By applying Retchin’s (2008) conceptual framework for interprofessional and co-managed care—one that considers the impact of temporality, urgency of care, and structure of authority—we provide guidelines and recommendations for how physicians and other crucial health practitioners can use technology to work with each other. More importantly, we explain how information communication technologies can impact overall patient health care and delivery.

## **BACKGROUND**

Modern ICTs enable patients to work with different doctors and specialists during their care, and technology facilitates medical record keeping and information sharing. The contribution of ICTs makes collaboration among different specialists possible and this collaboration is often referred to as Multidisciplinary Team (MDTM) care. In the following review we discuss the role of MDTMs as well as models that are used to explain the nature of MDTM care. Subsequently, we will explore the development and use of ICTs in health care as well examine how Retchin’s (2008) three-fold conceptual model can provide a framework for the improvement of MDTM care through ICTs.

## **COMMUNICATION IN MULTIDISCIPLINARY HEALTHCARE TEAMS**

Multidisciplinary Team (MDTM) care is defined as an integrated approach where relevant health care professionals from various medical disciplines work together to evaluate medical options and jointly develop treatment plans for their patients (Robertson, Li, O’Hara, & Hansen, 2010). For example, a multidisciplinary team for cancer treatment might consist of surgeons, nutritionists, radiologists, pathologists, oncologists, physical and occupational therapists, and social workers as well as general practitioners. The composition of the team varies depending on the medical specialties, facilities, and types of care given (Ellingson, 2002). Each member of the team is vital to the success of the interdisciplinary clinic model, whether the leadership is authoritarian (with one or more physicians in charge), consultative, or cooperative in nature (Granda-Cameron, DeMille, Lynch, Huntzinger, Alcorn, Levicoff, Roop, & Mintzer, 2010). Although there are a variety of interprofessional approaches besides MDTM, this term will generally be used throughout this chapter to refer to all models of collaborative care.

MDTMs might meet face-to-face or exchange information remotely. Teams generally meet to discuss their patients and create treatment plans that address areas and interventions that team members address. To examine the team process, Bokhour (2006) conducted a qualitative study of teams who performed reviews as patients were admitted; these teams then met monthly for three months and then quarterly. During the reviews team members discussed patients’ current status, needs, future goals, and treatment plans. The nurse manager or nurse practitioner usually led the discussion with each member taking his or her turn to give a primary report, which was the information typically shared at these meetings. While knowledge of such patterns sheds light on

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