

## Chapter XII

# Computer Usage by U.S. Group Medical Practices 1994 vs. 2003 and Type of Usage Comparison to IT Practices in Taiwan

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### Abstract

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*Research on the use of information technology in healthcare has focused on hospitals and health maintenance organizations (HMOs). However little has been done to study the use of IT in group medical practices. In 1994, we conducted a pilot study of group medical practices and then repeated this pilot study in 2003 to obtain a longitudinal picture of the IT services used by these private practices. Researchers can use this to form ideas of the important issues and changes involved in IT usage in group medical practices over the past decade, thus providing a needed benchmark to fill a gap in the existing literature and that can be used to compare domestic as well as international practices. For example, an expanded form of this study was conducted in Taiwan showing some differences in IT integration abroad. Brief analyses of some of these initial findings are presented at the end of the chapter.*

## Introduction

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Healthcare is an information industry. Information technology (IT) is used to capture, organize and distribute data and information to healthcare providers. The efficiency and timeliness of that data affects the outcome of care. Thus it would seem to be a given that the various agents in the health industry (i.e., hospitals and private practices) would leverage IT to a high degree. However, despite rapidly evolving technologies, the healthcare systems in most countries have been slow to adopt these innovations. In the U.S., the healthcare industry lags behind other industries in IT adoption to support daily and strategic supply chain operations. Why is this the case? What barriers do medical professionals face in implementing IT and how has that changed over time? These are some of the issues that need to be better understood.

Studies of the introduction of computer technology in medical settings in the United States have focused on hospitals (Sobol, Humphrey, & Jones, 1992; Griffith & Sobol, 2000; Sobol & Smith, 2001) and more recently on health maintenance organizations (HMOs). In these papers such issues as barriers to the introduction of technology in hospitals, returns to adoption of technology and the market status of the adoption of different technologies have been studied. It was found that there are many barriers to the adoption in hospitals. The longitudinal issues of what the changes have been in the last decade have been studied with the results that certainly there has been an increase in adoptions over the past decade. These increases have occurred in both transactional, informational and strategic uses of technology (Sobol & Woods, 2000). This trend is expected to increase. A survey in 2002 by Sheldon I. Dorenfest & Associates of Chicago indicated that IT spending on healthcare in 2002 would be \$21.6 billion (Dorenfest, 2002).

While the focus has been hospitals and HMOs, very little has been done to study the use of IT in group medical practices both small and large. This is the case even though researchers have for years trumpeted the impact of IT on physicians' practice (Rodger, Pendharkar, & Paper, 1996; Shine, 1996). In 1994, we conducted an initial study of group medical practices of three or more doctors; we completed a later study in 2003 to obtain a longitudinal picture of the IT services used by these private practices. While this is not yet the definitive study of IT in group medical practices, it can be used to form ideas of the important issues and changes involved in IT usage in the smaller group medical practices over the past decade, thus providing a needed benchmark to fill a gap in the existing literature and to start an intensive investigation of changes in IT usage.

In this chapter we look at the differences in computer usage, computer facilities, sources of computer information, and the satisfaction with computer usage in group medical practices from 1994 to 2003. We compare these characteristics and the amount of time spent on business issues by size of practice and years in practice for

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