

The Telehealth Divide

Mary Schmeida

The Cleveland Clinic Foundation, USA

Ramona McNeal

University of Illinois at Springfield, USA

INTRODUCTION

In the United States, the public is accessing the Internet to provide information and deliver services, and to interact with citizens, business, and other government agencies (Bimber, 1999; Pardo, 2000; West, 2003, 2004). As with any change between citizen-government interactions, e-government is accompanied by speculation on its impact to both citizen and government. E-government capability of continual service delivery can make government efficient and transparent to the public (Norris, 1999; West, 2003), and more responsive to public needs through fast and convenient communication options (Thomas & Streib, 2003). It permits quicker material update than traditional distribution methods (Pardo, 2000).

However, other literature suggests e-government will not live up to these prospects. A separation exists among citizens that use and do not use the Internet. This separation is based on a number of factors, including inequalities in Internet access “digital divide” and technological skills, along with psychological and cultural barriers. Literature extensively shows the differences in United States Internet use to fall along important socioeconomic and demographic factors, such as age, race, education, and income (Mossberger, Tolbert, & Stansbury, 2003; Neu, Anderson, & Bikson, 1999; Pew Internet & American Life Project, 2003c; U.S. Department of Commerce, 2002; Wilhelm, 2000). E-government may create inequalities in the delivery of government information and services.

Telehealth is a specific form of e-government aimed at improving the accessibility and quality of healthcare, and reducing service costs (Schmeida, 2004a). It relies on electronic information and telecommunication technology innovation (H.R. 2157, 2001). As nations contend with expensive healthcare, the promise of better healthcare service delivery at a reduced cost has made telehealth an increasingly attractive policy option in the United States and internationally.

Telehealth advancement greatly reflects the dramatic changes in the telecommunication industry. In the 1990s, we witnessed considerable advancement, such as the use

of digital technology—interactive video and Internet. Interactive video, for example, can link doctors and medical students afar improving medical education. Rural citizens can interact with specialist(s) through interactive video rather than traveling great distances for a medical consultation. The Internet can bring health related information into the home for better healthcare decision-making.

Telehealth can be conceptualized as both an administrative reform policy and regulatory policy. As a hybrid policy type, it mostly exhibits the characteristics of administrative reform, such as e-government (McNeal, Tolbert, Mossberger, & Dotterweich, 2003; Schmeida, McNeal, & Mossberger, 2004) driven by the goals of cost reduction and increasing efficiency, paramount to telehealth adoption and implementation. Administrative reform policy does not involve the direct and coercive use of government power over citizens and are therefore associated with low levels of conflict (Ripley & Franklin, 1980). Regulatory policy, on the other hand tends to be politically salient among citizens as well as controversial among the actors within the policy community.

Traditionally, those interests who are regulated have been important players in the policy process. Important telehealth players are physicians, nurses, pharmacists, and health insurers. Since telehealth straddles both administrative and reform policy areas, it is difficult to predict the actors that will play the greatest role in assisting or impeding its implementation. Execution of regulatory policy is highly volatile and controversial with shifting of alliances and players. However, administrative policy innovations are low salience, and as some regulatory policies it involves technical issues, often driven by professional networks and elected officials.

TREND STUDIES ON INTERNET USE AS A HEALTHCARE TOOL

Although policy actors, cost containment and advances in technology are driving the adoption of telehealth, its

impact is contingent on factors, such as Internet access among members of the public. The Internet provides information on various health and medical-related topics through government sponsored and private sector Web sites. Today, more Americans are conducting Internet health and medical-related searches. On an average day, about six million people get online to search for medical-related information (Pew Internet & American Life Project, 2002) for better decision-making on self-care and helping others (Pew Internet & American Life Project, 2003b). Across different health and medical issue topics, Pew (2003b) found online searches for information on a specific disease or medical problem leads the topic areas searched. In addition to using the Internet for health information searches, about 30% of e-mail users have e-mailed their doctors and other health professionals, thus bridging the gap between patient and doctor, particularly specialists over great distances. This elementary form of telehealth (information search, and doctor and patient correspondence) exemplifies the potential of telehealth. Yet, while becoming a commonly important healthcare tool, not all citizens including those most in need of online health and medical-related information (the elderly and poor) are taking advantage of the online services (Schmeida, 2004b).

Research on demographic groups using the Internet to search for health information is sparse and does not establish with any certainty what factors matter in predicting who is taking advantage of this form of e-government (Schmeida, 2004b). However, multivariate statistical research on computer and Internet access does exist and may help us better appreciate the barriers facing the utilization of telehealth. Mossberger, Tolbert, and Stansbury (2003) find both an Internet access and skills divide, indicating inequalities in home Internet access, e-mail use and computer ownership. The research suggests there are gaps based on race/ethnicity with whites more likely than African-Americans and Latinos to have Internet access. Inequalities were also found on education and income with higher income being associated with greater Internet and computer access and ownership. Age was also an important factor with young persons more likely to be connected (pp. 32-35). Compounding the access divide are differences in technological skills. Mossberger et al. (2003) find a skill divide exists closely mirroring the access divide with the poor, older, less educated, and non-whites less likely to have technical skill, that is, technical competence or information literacy. As important as having access at home are the technical skills for computer operations and information literacy to locate and effectively use computer information.

A TELEHEALTH DIVIDE MATCHING THE DIGITAL ACCESS DIVIDE

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Do those who are least likely to have computer and Internet access match that of a potential telehealth divide? Based on literature showing disparities in Internet access and use (Mossberger, Tolbert, & Stansbury 2003; Pew Internet & American Life Project 2003a; U.S. Department of Commerce 2002), it is expected that disparities in Internet use for health searches would also exist. Using the 2000 Pew Internet & American Life (2003b) survey data and controlling for demographic factors with regression analysis, Schmeida (2004b) found several factors important in explaining which citizens are searching for health and medical information online.¹ Persons who are young, white, with a higher education and income, are more likely to search for information online.² Also, females and household healthcare givers are more likely to conduct searches than males and non-caregiver.³ The findings suggest that older persons, who face more health-related problems, ironically are less likely to take advantage of these telehealth services. However, females are more likely to search online, as might be expected since they have been more active in health searches in the Pew Internet & American Life Project (2003b) study and are more likely to be caring for another person(s) at home.

Unexpectedly, race (Asian Americans and African-Americans) was not a significant predictor of a telehealth divide, differing from previous studies showing these minority groups are "have-nots" in Internet access at home. On the state level, McNeal et al. (2003) found racial diversity was not a significant predictor in percentage of state government Web sites providing services to state residents. While, Schmeida, McNeal, and Mossberger (2004) found state racial context mattered in influencing implementation of telehealth policy. This suggests that minority context may matter more for telehealth implementation. Latino (who were found significantly less likely to search for online health information) contextual barriers to computer literacy, such as entrenched resistance to acquiring computer skills (Stanley 2003) may be factors for further research.

CONCLUSION

The policy implementation literature directs us to examine factors, such as political actors, the need/ demand to contain costs and increase healthcare efficiency, important to explaining the adoption and implementation of telehealth. To understand the impact of this policy, we

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