Chapter 2.14
Networks of Action for Anti Retroviral Treatment Information Systems

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INTRODUCTION

The South African government has an impressive constitution and legislative framework that recognizes the right of its citizens to quality health care (Government of South Africa, 1996). In South Africa, approximately 80% of the population relies on state-provided health care. Health workers in the public health sector provide services at the formal health facilities and to the various outreach programs in the community (i.e., immunization drives). The effective management and delivery of these diverse services requires regular reporting of routine and exceptional information by health care workers. These workers spend a significant amount of time collecting, recording, storing, and transmitting data in various forms.

With the commencement of the Anti-Retroviral Treatment (ART) program in selected clinics throughout South Africa in 2003 (Department of Health, 2003), treating and supporting clients attending ART clinics places great pressure on the health staff, not only because of insufficient human resources and time, but also with the associated severe emotional strain. Pressure is escalating as the number of clients requesting ART is increasing

daily (Stewart, Padarath & Bamford, 2004). An effective Information System (IS) is needed to manage this increase in clients as well as support a variety of reporting requirements.

A national survey in South Africa of health personnel, ambulatory and hospitalized patients, and health facilities substantiates that a weak patient IS (a) was an impediment to ensuring ongoing and correct treatment, (b) increased staff workloads, and (c) led to unnecessary duplication of effort and time. Additionally, Shisana, et al. (2002) argue that ensuring that a single electronic IS is in place to assist in treatment of patients is an essential yet often neglected aspect of the health system.

In 2005, the clinical director of the Batho Pele clinic[1] in the Gauteng province in South Africa requested the assistance of the Department of Informatics at the University of Pretoria in addressing their IS issues. This request fitted the department's research interests in health information systems (HIS), as well the broader research focus and commitment to provide outreach services to the community. Knowing the problems of commencing projects without having planned for sustainability and scalability, the HIS research group elected to use the "networks of action" concept to partner and collaborate with the various role players, institutions, and other ART entities. This process of developing interconnecting networks of human and nonhuman entities in South Africa and beyond its borders raised a number of opportunities, challenges, and tensions in initiating this project.

To provide a background to this process, the next section introduces the concept of "networks of action" and a brief description of the ART clinic. The following section develops the main focus of this chapter, which is the process of developing these networks. The last section suggests the necessity of developing networks of action as a future trend for sustainable IS.

BACKGROUND

Networks of Action

In addressing why so many action research efforts fail in the long term, Braa, Monteiro, and Sahay (2004) argue that the two major challenges in the development of a successful HIS are the interrelated factors of sustainability and scalability. Sustainability refers to making the IS work over time through the institutionalization of routines and the development of local learning processes. Scaling concerns the spreading of a working solution to other sites (Braa et al., 2004). However, scalability is not merely a technical problem but encompasses a sociotechnical network, comprised of people, technology, and processes within an institutional context and relates to a process of specifically what is being scaled and how it is being scaled (Sahay & Walsham, 2006).

As argued by Braa, et al. (2004), scalability requires local interventions to be part of or connected to broader networks in order for sustainability to occur. They argue that local action research interventions need to be conceptualized and approached as one element in a larger network of action in order to ensure sustainability. Sustainability cannot occur just through action at a local level, and scaling needs to occur through the creation of multiple interconnecting networks. A flexible and adaptive process, which accommodates planned and unplanned events, or as Giddens (1984) would say, anticipated and unanticipated consequences, needs to be adopted in order for scaling to occur successfully.

Building on the Scandinavian-based action research's recognition of the need to perform action as part of a network rather than as a sole local venture (Chisholm & Elden, 1993; Elden & Chisholm, 1993), Braa, et al. (2004) argue that the need to develop an institutionalized and sustainable system is not a luxury but a necessity and needs to be part of larger interventions. Networking enables the sharing of experience,

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