Chapter III
Development of a Health Information System in a Post-Communist Country

Ranko Stevanovic
Croatian Institute of Public Health, Croatia

Ivan Pristas
Croatian Institute of Public Health, Croatia

Ana Ivicevic Uhernik
Croatian Institute of Public Health, Croatia

Arsen Stanic
Orthopaedic Clinic, Croatia

ABSTRACT

Between 2001 and 2003, a project conducted in Croatia aimed to establish and develop a health information system based on the latest technologies. Extraordinary results in the trial run give the authors the ground to recommend such an approach to all transitional post communist countries. The development of such systems is feasible in transitional countries because most of them are still having one main insurer.

INTRODUCTION

Between 2001 and 2003, a project conducted in Croatia aimed to establish and develop a health information system based on the latest technologies. The most important experience and idea applied in the Croatian project was based on the concepts developed by Professor Andrija Stampar. According to these, primary healthcare is a venue where the major health problems of a population are resolved, and a point at which outcomes of changes in the system are most

significantly reflected. A central health information system should be established and developed in parallel with the primary healthcare activity. Extraordinary results in the trial run give us the ground to recommend such an approach to all transitional post-communist countries. The development of such systems is feasible in transitional countries because most of them still have one main insurer. In developed countries, however, developing these could be difficult for they have a number of insurance companies that do not find their business interest in the full integration of health information and data. Indeed, for countries with a single dominant, basic insurance company, the above is the only positive alternative. Subsequent linkups of supplemental, auxiliary, and other future insurers with the single information system on the national level will be much simpler to make.

At the beginning of 2004, that is, 6 months after software for primary healthcare was tested in Croatia, the European Public Health Alliance published a document titled *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions. E-Health: Making Healthcare Better for European Citizens. An Action Plan for a European E-Health Area* (text with EEA relevance). As made clear in this document, European Union (EU) member states will start implementing in 2007 the solution Croatia reached in 2003. Establishing and developing this information system in transitional countries is one of the strategic projects for the coming years. Without rapid, reliable, and comprehensive information availability, developing, implementing, and monitoring any healthcare development strategy and system reform would be difficult. One would be unreasonable to expect a poor health system to keep and save enough money for "computerization to happen spontaneously." One should do exactly the opposite: Computerization should be installed in the system as a money keeping tool and implemented with the aim of exerting total control over the consumption as well as the rationalizing of it in order to save substantially more money than the cost of installing the information system.

In fact, the share of investment in information systems is directly proportional to the financial effectiveness of the system (e.g., banks and insurance systems spend 5 to 6% of their total budgets on the computerization of business operations). Whereas EU member states spend at least 2 to 3% of the health budget on computerization, in the United States, this share varies around 4 to 10% (Bates, Ebell, Gotlieb, Zapp, & Mullins, 2003). Among transitional countries, it is difficult to find one investing more than 0.2 to 0.5 % of its health budget. This raises the question of whether this might be the starting point for the vicious circle of ineffectiveness in transitional countries' health systems.

The elements of new organizations (new business rules) cannot be set, nor can the foundation of a redesign be made without investing in the computerization aligned with modern concepts (Stevanovic, 2002a, 2003), under which information (processed data) becomes a business resource (Krcmar, Stevanovic, Kovacic, & Merzel, 2001). At the same time, the information communication system for primary healthcare warrants the confidentiality of data on patients and the standardization of good practice for most common acute and chronic mass diseases (Stevanovic & Erceg, 2003). The system should provide the basic contents for the establishment of effective management.