

## Chapter 13

# Digital Healthcare Strategy

### ABSTRACT

*This goal of this chapter is to introduce digital strategies for healthcare. The chapter begins with an analysis of key indicators of public health and the healthcare sector. Next, the chapter presents key principles for healthcare, focusing on the constitution of the national health system. A case study focusing on Poland is then presented. After this, the chapter puts forth a digital strategy for the national health system. This is followed by an analysis of several health systems: the patient information system, the clinic information system, the pharmacy information, and the hospital information system. Next, the use of big data for healthcare is considered. The chapter concludes by putting forth a model for the national health information system and by discussing important trends in the development of digital health.*

### INTRODUCTION

At one time, 1000 years ago, human life expectancy was a surprisingly short 24 years. At the threshold of the Industrial Revolution in 1820, it rose to 36 years; it then reached 66 years after World War II and rose to 78 years for developed countries in 1999. This incredible extension of life expectancy—a more than three-fold increase—has been achieved thanks to the development of an economy that can develop medicine. Knowledge, including medical knowledge, has proved to be a great driver behind the development of civilization. It is worth noting that the developmental gap between the world's leader, the United States, and Africa is now as much as 20 to 1. What is more, in 1000 CE, the currently developed states (belonging to Western civilization) were more impoverished than those in Asia and Africa (Maddison, 2003).

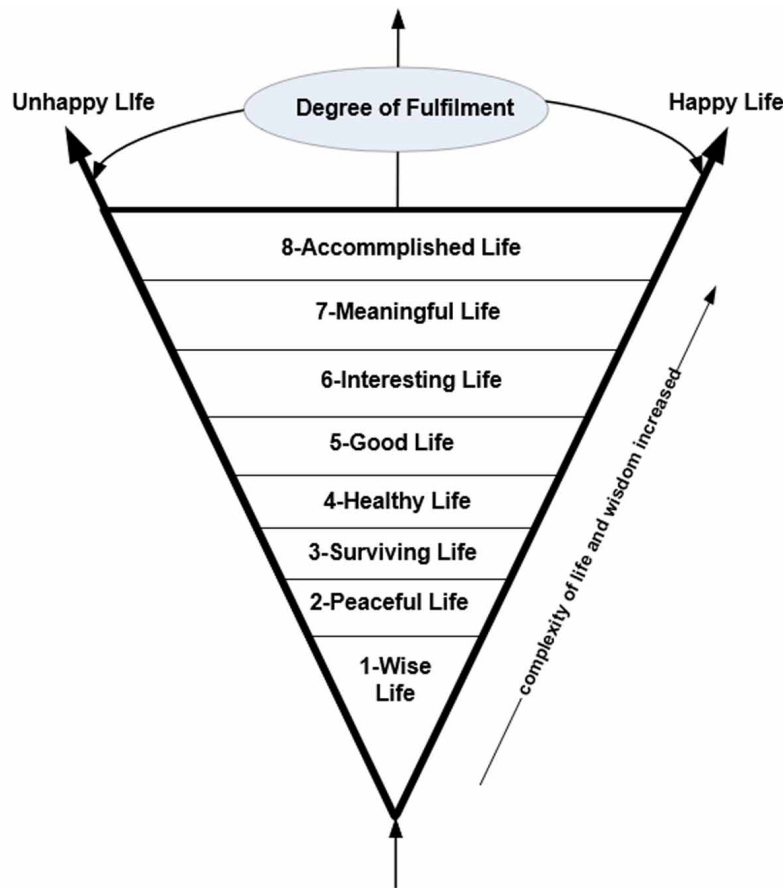
Nowadays, citizens not only dream but demand healthcare services that effectively take care of them so that they can achieve their ambitious goal of increasing their lifespan. The foremost precondition for long life is, of course, good health, without which other dreams are hard to realize. 2350 years ago, Aristotle claimed that people are stupid because they do not know the purpose of their lives; thus, they cannot make wise decisions in everyday life. Well, at that time, the average human lived less than 24 years, and their goals were to survive until tomorrow, not be killed, not die of hunger, and not fall into captivity. Now many people live up to 100 years, but they are “worried” about what to do with such a long life.

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The computerization of health care may help humans realize their dreams of longevity; however, before such a strategy is developed, it is necessary to consider what it should be so as to assure the strategy makes sense and that the expenditures incurred have positive results. Therefore, in this chapter, we will first reflect on the idea of what health services are worth computerizing. Then, we will deal with strategic solutions for its computerization.

A model of the goals of human life (MGL) is presented in Figure 1.

*Figure 1. A model of goals of life in the 21st century (The Targowski Model) (Targowski, 2013, p. 56)*



As the hierarchy of goals in the MGL model shows, living a healthy life, after securing peace, is the basis for achieving several advanced goals in life; however, one must be wise to accomplish these goals, and there are questions surrounding our conventional wisdom of life:

- Do people set appropriate operational and developmental priorities for their communities?
- Where do health services fit in among these priorities?

Patient health and prevention should be at the top of every list for the state and society.

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