

## Chapter 17

# Crucial Role of Nursing Profession in the Era of Genomics Medicine

### ABSTRACT

*In this chapter, the crucial role of nursing profession was explored, regarding the current healthcare delivery system nationwide. In collaboration with the National Institutes of Health and other national institutes, nursing scholars have developed the blueprint which should guide the integration of genomic science into nursing curriculum not only in the United states but also internationally. Assiduously, effort was devoted to espouse the life-threatening risks associated with nursing profession even at the outbreak of deadly emerging infectious disease such Ebola virus which has a very high case fatality rate. Besides, this pathogenic disease is without known cure. Many of the self-fulfilling psychological attributes, and prospects of the profession were discussed and as well as the overt challenges.*

### UNIQUE AND COMPREHENSIVE TRAINING OF NURSES

The unique and comprehensive training of nurses in several scientific and behavioral disciplines have amply prepared them to promptly integrate innovative -genomic medicine into healthcare services designed for their patients. The length of time in their academic and professional training and their preparation to pass their board examination are the other clinical attributes for nurses to provide nursing care with so much proficiency in the age of genomic science.

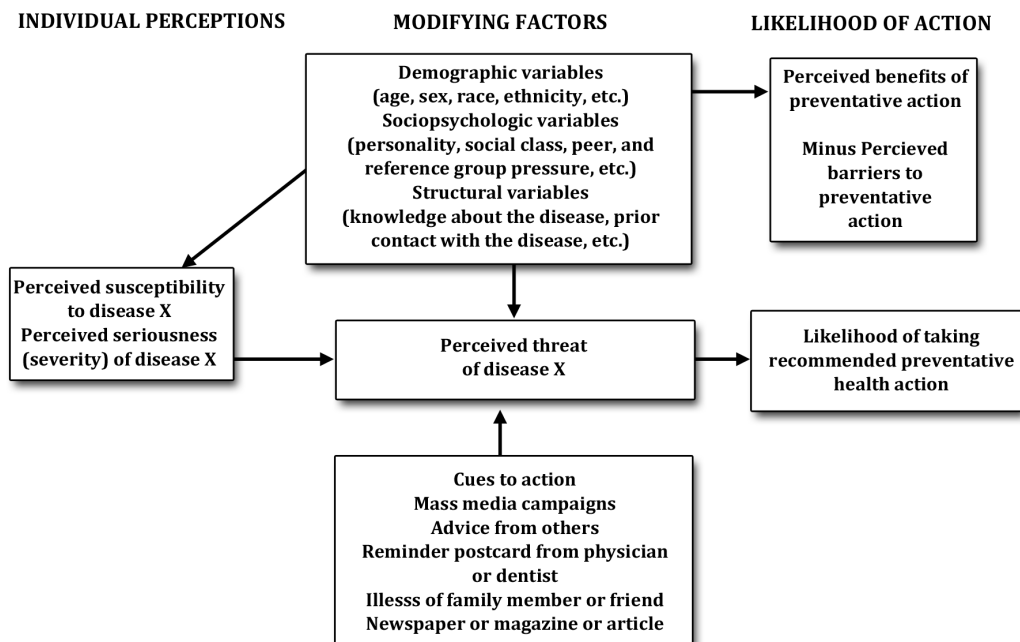
The exposure of nurses to numerous behavioral and theoretical models also becomes the value-added attributes of nursing profession. In many nursing academic institutions, patients in general usually have the choice and almost immediately, to develop their comfort zone while under the care of an assigned nurse. The nursing staff is not only the most trusted to do the right thing, but public perception presumes them to be the guiding angel while under the care of the multidisciplinary health care team.

Nursing staff functions as the professional intermediary between the patient and assigned physician (Figure 1). In comprehensive and accredited nursing institutions, nursing students are usually trained not only in the sciences, but in the following behavioral models, which include: the (1) Health belief

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*Figure 1. Health Belief Model*

**Source:** Geoffrey Hochbaum, 1958.



model, (2) Innovation diffusion model, (3) the phenomenological approach in nursing care and (4) Social cognitive theory (5) the theory of reasoned action and planned behavior and (6) the socio-ecological model and precede-proceed framework among others. Being academically trained in these intervention techniques, the nurse intuitively can start thinking about the chain of events which may have lead to the onset of diseases in the newly admitted patient. Based on her/his awareness, previous encounter and years of experience, treating patients with similar and probably un-identical health issues; the nurse intuitively is better able to contribute to patient treatment plan mostly in health center where collaborative medical intervention is the norm. However, regarding solicited and unsolicited health counseling, the nurse has a duty to provide such counseling almost every time and every day. Very product clinical care of patients in the age of genomics, if efficiently and prudently implemented at a cost that the general patients can afford, is supposed to be more precise, more efficacious, and cost-effective, with a lessened frequency of iatrogenic diseases and nosocomial infections and a reduced readmission after patients had been discharged. Efficient and dependable hospital-based clinical care of in-patients lies highly on nurses among the other clinicians.

## **Knowledge of Nurses about Theoretical Models in Behavioral Sciences**

Professor Geoffrey Hochbaum (1958) meticulously suggested that health behavior is influenced by cues to action. To him, cues to action, are specific events, people, innovative discoveries that motivate people to change their behaviors. With several nursing schools introducing their students to in-depth knowledge about several theoretical models, they are better able to function as vital members of healthcare team. To illustrate, currently, innovative genomic epidemiology consistently reveals several lethal variants

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