

CRC FOCUS SERIES  
Global Science Education



ADVANCING  
PROFESSIONAL  
DEVELOPMENT THROUGH  
CPE IN PUBLIC HEALTH

Ira Nurmala  
Yashwant V. Pathak



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## **Global Science Education**

Professor Ali Eftekhari

Series Editor

Learning about the scientific education systems in the global context is of utmost importance now for two reasons. Firstly, the academic community is now international. It is no longer limited to top universities, as the mobility of staff and students is very common even in remote places. Secondly, education systems need to continually evolve in order to cope with the market demand. Contrary to the past when the pioneering countries were the most innovative ones, now emerging economies are more eager to push the boundaries of innovative education. Here, an overall picture of the whole field is provided. Moreover, the entire collection is indeed an encyclopaedia of science education and can be used as a resource for global education.

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*Ira Nurmala and Yashwant V. Pathak*

# **Advancing Professional Development through CPE in Public Health**

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# Series Preface

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CONTRARY TO THE COMMON perception, the concept of education is not straightforward; both its purpose and its methods are subject to controversies. Plato was among the first who attempted to articulate the foundation of education by putting an emphasis on disciplines, which can directly help us to understand the universe.

Science education should be revisited in the changing climate and emerging needs of today. Both the concept and methods of education have been considerably evolved in the digital era. In the highly competitive market of higher education, higher-education institutions (HEIs) are too conservative to implement innovative changes. This series attempts to provide practical perspectives on various aspects of science education. In this book, the authors take us on a journey to the fundamental roots of science. With a long and fruitful experience in academia, they tell us where we are, why we are here, and how to survive.

The world is now more connected, and we can learn from a number of different systems, although direct interactions might be challenging due to social and cultural barriers. This series aims to provide a medium for a broad range of audiences to close this gap. I might add that the authors of this series do not necessarily share my opinions or concerns, of course.

The inception of this book series harks back to a friendly conversation with Hilary LaFoe, senior acquisitions editor at CRC Press. I should give at least half of the credit to her because the

initial idea was hers. I would like to thank her because this project could not have materialised without her sincere commitment. I also encourage readers to give us feedback in order to help us take a small step towards furthering the concept of education at all levels according to the changing climate of globalisation.

**Dr. Ali Eftekhari**  
*Global Science Education*

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# Public Health Education in the United States

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## 1.1 INTRODUCTION: PUBLIC HEALTH EDUCATION IN THE UNITED STATES

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The public health field has been recognized in the United States since the 1900s. In the period of 1900–1945, public health had a narrower interest than today (Wilner, 1973). During the 1900s, public health was interested in measuring communicable diseases, educating the community about selected illnesses, handling food and water, recording vital statistics, and treating diseases (Wilner, 1973). According to the American Public Health Association (APHA), public health is “the practice of preventing disease and promoting good health within groups of people, from small communities to entire countries.” Public health professionals come from a variety of backgrounds and work in a variety of settings with the common goal of promoting population health (Gebbie, Rosenstock, and Hernandez, 2003a). The APHA also stated that public health professionals come from many educational



backgrounds with the common purpose of protecting the health of a population by relying on policy and research. The core functions of public health are assessment, policy development and assurance. These functions act as a framework for public health operation. According to the Centers for Disease Control and Prevention, ten core essential services of public health are as follows: evaluate, monitor, diagnose, treat, inform, educate and empower, mobilize community partnerships, develop policies, enforce laws and ensure a competent workforce (Carlson, Chilton, Carso, and Beitsch, 2015).

Public health practice comprises individuals from a wide variety of backgrounds and a wide variety of work settings working together toward one common goal to promote population health. "A public health professional is a person educated in public health or a related discipline who is employed to improve health through a population focus" (Gebbie et al., 2003a, p. 30). Public health practitioners must ensure the quality of service given to the community. This means that public health is everybody's concern. Health and illness are a part of life, but people should be educated about preventing some health problems especially when more people are exposed to a polluted environment or live a certain lifestyle that can cause health problems to themselves or to their community.

In the past decade, many efforts have been conducted toward improving the health of individuals and communities through health education efforts. Health education efforts are not only conducted in schools, but also in public spaces, such as grocery stores and public transportation, among other places. These efforts may vary depending on the urgency of the messages that need to be delivered in these public places. A reminder to wash one's hands in a public restroom is one of simplest health education efforts that have been conducted to raise public awareness of personal hygiene. One of the prominent professions in the public health field that concerns educating individuals and communities to promote health and prevent diseases is called "public health educators (PHEs)." Public health educators are drawn from a

diverse range of disciplines and backgrounds and may or may not have formal qualifications in the field (i.e., no professional preparation or post-graduate qualifications in health education). A public health educator is defined as "a professionally prepared individual who serves in a variety of roles and is specifically trained to use appropriate educational strategies and methods to facilitate the development of policies, procedures, interventions, and systems conducive to the health of individuals, groups, and communities" (Joint Committee on Health Education and Promotion Terminology, 2002, p. 6). According to this definition, public health educators serve the community through education efforts to improve the community's health status.

Currently, at least 250 academic programs exist in colleges and universities that aim to educate professional PHEs. More than 12,000 professionals from these colleges and universities have received the designation of Certified Health Education Specialist (CHES) nationwide (National Commission for Health Education Credentialing, 2006). However, study shows most public health professionals do not engage in activities that can enhance their professional development. The public health workforce is not yet prepared to meet the challenge to ensure the quality of practice in the context of rapid social change (Allegrante, Moon, Auld, and Gebbie, 2001). In addition, 21.2% of public health professionals are up to date on their work of implementing programs, and 60% did not conduct research or professional development activities (Johnson, H. H., Glascoff, Lovelace, Bibeau, and Tyler, 2005). Moreover, there is a gap between the current skills and the skills needed in their professional work.

## 1.2 RESPONSIBILITIES AND COMPETENCIES FOR PUBLIC HEALTH EDUCATORS

To pursue a profession in the field of health education and promotion, more than just acquiring credentials is required. The core responsibilities, competencies, and sub-competencies provide a comprehensive description of the profession, illustrating



the skills necessary to perform the daily tasks as a public health educator or health education specialist.

In the following documents, you can access the “Seven Areas of Responsibility” for health education specialists determined by the latest job analysis studies, which go beyond credentials and into the heart of the profession, including competencies such as planning and evaluation, administration, communication, promotion and more.

The Seven Areas of Responsibility present the required skills and expertise needed for a position in the field of health education and promotion. The Seven Areas of Responsibility were verified by the 2015 Health Education Specialist Practice Analysis (HESPA) project and serve as the basis of both the CHES® and the MCHES® exams. The HESPA study led to an adjustment to the health education model to include the term “health promotion.” The rationale for the terminology change to “health education/health promotion” was that it adds clarity to the scope of the health education specialist’s role both within and external to the profession and would more comprehensively describe the profession (National Commission for Health Education Credentialing Inc., 2013). As professionals, public health educators are also bound by responsibilities that were established since 1985. In 2004, the National Health Educator Competencies Update Project (CUP) Model, which was funded by the American Association for Health Education (AAHE), the National Commission for Health Education Credentialing (NCHEC), and the Society for Public Health Education (SOPHE) revised the Seven Areas of Responsibility for public health educators (National Commission for Health Education Credentialing Inc., 2013). The Competencies Update Project that was conducted from 1998 to 2004 addressed what health educators do in practice, the degree to which the definition of the entry-level health educator role remains up-to-date; and the validation of advanced-level competencies (Gilmore, Olsen, Taub, and Connell, 2005). Each of these Seven Areas of Responsibility has its own competencies (National Commission for Health Education Credentialing Inc., 2013) (Figure 1.1).

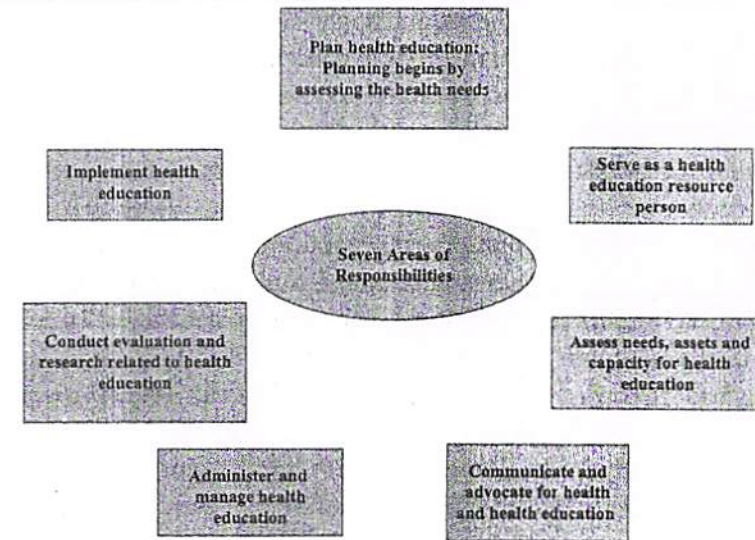


FIGURE 1.1 Seven areas of responsibility of public health workers.

### 1.3 AREAS OF RESPONSIBILITY

#### 1.3.1 Area of Responsibility I: Assess Needs, Assets and Capacity for Health Education

All Seven Areas of Responsibility give a general idea of what health education specialists do without having to provide the details that are necessary to practice health education. One major area of responsibility for health education specialists is the first area of responsibility, which is to assess needs, assets, and the capacity for health education. A need assessment is a systematic process that helps health education specialists determine health problems of the priority population, available assets within that population and their overall capacity to address that particular health issue. The first step in assessment is to identify existing resources, research designs, methods and instruments that are relevant to applying the assessment process.

To successfully conduct the assessment, health educators will need to identify health-related databases and valid sources of data



with appropriate instruments, and apply survey techniques such as quantitative or qualitative methods in collecting health information. Then, health educators will need to examine factors that influence health behaviors and gaps in health education programs that may hinder the priority population's learning process. If there are no hindrances, program planners will continue to determine the available health education programs and analyze the capacity for developing need-based health education. Lastly, health educators need to prioritize health education in the sequence in which they will teach.

In the international work setting, health education specialists may have to stay up-to-date on the emerging health issues through surveys done in hospital and clinical settings, or go from door to door to ask the target population to join the surveys. Health problems that are identified may also be different than in the United States. Instead of dealing with heart disease, obesity and diabetes, health education specialists in these settings may be dealing more with issues such as starvation, malnutrition and parasitic and bacterial infections in a larger population. In addition, health education specialists need to gain support from stakeholders such as administrators, government officials or businesses in the country. When the support of the stakeholders is being obtained, health education specialists will have to prioritize what health education is relevant to the target population.

### 1.3.2 Area of Responsibility II: Plan Health Education: Planning Begins by Assessing Health Needs

Addressing the problems and concerns of the population is the secondary area which should be addressed. Once the need assessment has been determined, the program planning process can be set in motion. It is important to recruit stakeholders or other administrators early on in program planning, so that they can help develop the program. To be effective, the health educators should have strong written and oral communications skills, leadership ability and expertise to help the stakeholders reach consensus on the issues of interest. After getting stakeholder involvement, the

health education specialists need to establish goals and objectives specific to the proposed health education program. Next, health education specialists need to design theory-based strategies and interventions to achieve state objectives. Relevant educational methods should be selected as well as locating resources. Then, the health educators need to plan the scope and sequence to deliver health education and start evaluating if the program's implementation is working.

Planning health education in an international work setting may look a little bit different than in the United States. Health education specialists may have to identify all the different ways that they could distribute information to the priority population. In an international work setting, health educators may have to distribute information through local newspapers, radio, television or mobile communication systems, such as hooking up an old stereo system to a car and driving it through the community. As the car is in motion, it will play the health message aloud so that everyone in the community could hear it. This is why it is important that health educators have the support and interest of the administrators or the government officials because, with their support, the program will have all the resources it needs to be effective. Furthermore, the priority population will see the program as credible when it has been sponsored by a local organization or the government.

### 1.3.3 Area of Responsibility III: Implement Health Education

After the need assessment is conducted and health education is planned, it is time for the health educators to implement the health program. This area of the responsibility is probably the most enjoyable due to the fact that the health educators are finally getting some hands-on experience now that the program is put into action. To effectively implement the program, health education specialists must have a full understanding of the priority population. This will help health educators eliminate cultural and language barriers when implementing health education plans. After obtaining additional information about the priority



population, health education specialists must write objectives that are suitable to the program and select media and methods that are relevant to the target audience. Health educators must also conduct the program as planned and modify the plan of action as needed.

Like the program planning phase, health education specialists must be creative in many ways to implement the health program. The lesson plans should be fun and educational to teach the target audience whether in classrooms or through television broadcasts. Health education specialists must identify health lessons that would be acceptable to the social norms of the community. To achieve this, health educators must know and understand the priority population in order to eliminate cultural and language disparities. This is critical, especially in an international work setting, because culture and custom is a very important factor. Furthermore, the priority population will be most likely to listen to health educators and change their behavior accordingly towards their health problems.

#### 1.3.4 Area of Responsibility IV: Conduct Evaluation and Research Related to Health Education

All health education specialists are expected to have the ability to thoroughly review researched articles and apply the findings to program planning as well as conduct effective evaluations. Health education specialists must be able to conduct evaluation of policy, projects and programs. Before evaluation, the health education specialist must first have realistic and measurable objectives for the health program. After the objectives are in place, the health educators must develop a plan that will accurately assess if the program objectives have been met. Some of the instruments that health education specialists can use in the evaluation process are tests, surveys, behavior observation, tracking epidemiology data, etc. They must be analyzed and interpreted, which can be done through the use of descriptive statistics or qualitative methods. Next, the health education specialists must compare the results

to evaluation or other research findings and propose possible explanations of findings. Lastly, before applying the findings from evaluation to program development, health educators must identify possible limitations of findings. Doing so will help maintain support and funding in a competitive environment.

Good relationships between health educators and their audience will help health education specialists fully understand the issue, because the target population will be more willing to share on a personal level. For this particular reason, health educators will be able to know if the program is really effective. Evaluation of health education programs can be gained through surveys, interviews or going from house to house and asking the target population if the health program is working. After the program evaluation is done, health education specialists put the findings from evaluation into policy analysis and program development.

#### 1.3.5 Area of Responsibility V: Administer and Manage Health Education

Administration, management and coordination are needed in order to have a successful health program. Although some administrative tasks are performed by professionals at an advanced level, administration and management responsibilities are handled by experienced health education specialists who are at the entry level. Health education specialists often become program administrators or staff supervisors. Some of the qualities that a good manager and supervisor may have include effective interpersonal skills and leadership skills with managing fiscal resources, knowledge of budgeting, task assignments and performance evaluation. Health education specialists must obtain acceptance and support from stakeholders who are responsible for health education by explaining to them how program goals align with organizational structure, mission and goals. After gaining the stakeholders' support, health education specialists must identify other potential partners. These potential partners could be health education specialists themselves.



In this area of responsibility, health education specialists with CHES and minimum experience can hold a high-level administrative job because it is rare to have health education specialists with CHES working in the international work settings. Like in the United States work setting, health education specialists in an international work setting must also possess the skills of good communication. They must be able to communicate to the target population as well as to the potential stakeholders in order to get them on board with the health program. In addition, health education specialists must also have the skill of budgeting different resources such as money, and the knowledge of health information. This is especially important because money is scarce and health information is limited; thus, knowing how to prioritize will allow the program to become effective.

#### 1.3.6 Area of Responsibility VI: Serve as a Health Education Resource Person

Health education specialists are often called to serve as resource people to the target population with valid and reliable health information and materials. Health education specialists must be aware of the various resources at the state and national levels and must have the skill to access information from those resources. Being computer literate may help many health educators access health information through the Internet, library databases or other national online databases. Health education specialists must be able to evaluate and select appropriate resource material to educate the intended audience. As part of this process, it is probably necessary for health educators to develop effective educational pamphlets or brochures for distributing information to the priority population. Lastly, being a resource person, health educators must establish advisory relationships in order to facilitate collaborative efforts to achieve program goals.

This responsibility is very critical and often needed in the international setting. Health information and people who are health literate are scarce in the Third World. There are Internet

databases; however, there are very few people who are literate and could use the information and interpret it for the general population to understand. Health education specialists in this work setting must also be knowledgeable about health by staying current about emerging health problems. In addition, health education specialists must have good communication skills to facilitate an effective health program.

#### 1.3.7 Area of Responsibility VII: Communicate and Advocate for Health and Health Education

In this area of responsibility, health education specialists are responsible for providing information to various groups of people, including other health education specialists, health professionals, consumers, students, employers and employees. Health education specialists must identify current and emerging issues that may influence health and health education, and access accurate resources related to the needs assessments. After health education specialists identify health issues among the intended population, they must develop a variety of communication strategies, methods and techniques of how to improve the health problems to distribute to the priority population. Some of the communications strategies that health education specialists can use are mass media communication, such as written or oral. In addition, health education specialists use their professional skills to interpret and filter difficult scientific concepts so that the priority population can understand the information that is needed to improve their health. Health education specialists are also responsible for advocating health and health education to the target population. By advocating, health education specialists initiate and support legislation, rules, policies and procedures that will enhance the population's health. Health education specialists are required to advocate for the health and health education profession as well. Health education specialists advocate for their profession by educating potential employers about the value of hiring professionally trained health education specialists with CHES and MCHES credentials.

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The education division is a prominent part of the public health profession. It focuses on educating individuals and communities to promote health and prevent disease. The educators are drawn from a diverse range of disciplines and defined as professionally prepared individuals who serve in a variety of roles using appropriate educational strategies and methods to facilitate the development of policies, procedures, interventions, and systems conducive to the health of individuals. This unique volume in the Global Science Education Series describes some of the challenges faced by this profession in helping the audience to understand public health and solve health issues.

## FEATURES

- Aids researchers in designing an evaluation study in CPE for health professions and related fields
- Presents data on how public health practice comprises individuals working together toward promoting population health
- Covers continuing professional education in the US and how it can be adopted globally
- Discusses the Kirkpatrick's four-level evaluation model at length
- Demonstrates how questionnaires are preferable in evaluating CPE programs due to their cost effectiveness and user friendliness

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