The Development of Competencies for Specialists in Dental Public Health

Jane A. Weintraub, DDS, MPH

Abstract

This paper describes the process of developing new competency statements and performance indicators for the specialty of dental public health. These competencies help define the specialty and provide a base for educational curricula and the specialty board examination. The process included a survey of four target groups: all board members, all directors or co-directors of advanced education programs in dental public health, people who had become diplomates in the last three years, and all students currently enrolled in dental public health programs. Many constituencies were represented at the workshop, conducted in May 1997, to develop the competency document. After the workshop, the document underwent a series of review activities. [J Public Health Dent 1998;58(Suppl 1):114-18]

Key Words: dental public health, dental education, dental specialty, curriculum, competency-based education.

Rationale for Developing New and Revised Competencies

At the 1997 annual meeting of the American Association of Public Health Dentistry (AAPHD), participants celebrated the organization's 60th birthday. Many goals and missions of the specialty of dental public health have remained the same during these 60 years; however, disease patterns, health care delivery systems and resources change, and the advancement of science and technology continues. The desire of our specialty to keep pace with these changes and advances also continues. In 1974 the first set of "behavioral objectives" for the specialty of dental public health was developed at a workshop in Boone, NC (1). These objectives helped define our specialty and provided a base for educational curricula and the specialty board examination. These objectives served well for 14 years. In 1988, these objectives were revised at a workshop in Bethesda, MD, and became "competency objectives" (2). As intended, they helped guide the practice of dental public health in the 1990s. In 1996, the impetus for revising the competency objectives came from several sources. The American Board of Dental Public Health (ABDPH) listed the following reasons in its recommendation to the American Association of Public Health Dentistry to initiate this process:

1. The last revision of the competency objectives was completed in 1988 and the board perceived the objectives to be out of date.
2. The proliferation of knowledge is placing an increasing burden on our educational programs. It is becoming more difficult for programs to provide, and for students to gain, sufficient expertise in all of the existing 165 objectives, as well as in new and emerging areas.
3. Educational programs have changed, so there are differences between programs that primarily educate researchers and those that educate public health practitioners.
4. The accreditation standards were last substantially revised in 1985, with minor revisions in 1988. The US Department of Education, one of the accrediting bodies for the American Dental Association's (ADA) Commission on Dental Accreditation, has new requirements. The ADA has requested all specialties to revise their standards to come into compliance. Although the standards used for accreditation are contained in a document separate from the competency objectives, it is appropriate for the curriculum section of the standards to reflect what the profession recommends as its core set of competencies.

The ADA does not require the specialties to have a set of competency objectives. Dental public health has taken a leadership role in this activity. It is the only dental specialty with this type of document. As Mecklenburg described in his keynote address at the 1988 workshop, the document was particularly useful in the mid-1980s when preparing the application to the ADA for the re-recognition of dental public health as a specialty (3).

Planning Process

In the spring of 1996, Dr. Robert (Skip) Collins, president of the AAPHD, asked me to direct this process. I did so with assistance from colleagues and staff at the University of California, San Francisco School of Dentistry (UCSF), the AAPHD national office, and an AAPHD planning committee. In addition to AAPHD's own financial contributions, the AAPHD was awarded a $50,000 procurement from US Health Resources and Services Administration, Bureau of Health Professions. Government Project Officer Dr. Kathy Hayes provided invaluable assistance throughout this process. This report will describe the process of developing these new competency statements.

The government contract required

Dr. Weintraub is project director and Lee Hysan Professor of Oral Epidemiology and Dental Public Health, University of California at San Francisco, School of Dentistry, Department of Dental Public Health and Hygiene, 707 Parnassus Avenue, PO Box 0754, San Francisco, CA 94143-0754. E-mail: janew@itsa.ucsf.edu. Planning Committee: Drs. Eric Bothwell, Brian Burt, Joseph Doherty, Judith Jones, Jayanth Kumar, Reginald Louie, Linda Niessen, Gary Rozier, and Steven Silverstein. Reprints will be available from the AAPHD National Office. This project was supported by the US Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Bureau of Health Professions, and the AAPHD.

that at least four members of the planning committee be board certified as specialists in dental public health. A planning committee was appointed in consultation with the government project officer. The planning committee consisted of Drs. Eric Bothwell, Brian Burt, Joseph Doherty, Judith Jones, Jayanth Kumar, Reginald Louie, Linda Niessen, Gary Rozier, and Steven Silverstein. Dr. Collins also took an active role in this process. An electronic mail list for our group was established at the University of Michigan by Dr. Burt to facilitate communication. Dr. Bothwell served as the liaison to the Public Health Functions Steering Committee and Working Group Subcommittee on Workforce, Training, and Education Competency-based Curriculum Group, which was meeting monthly in the Washington, DC, area.

During the 1996 AAPHD annual meeting in Orlando, several meetings were conducted to discuss the development of this process. I met with the planning committee, with the residency directors, and with anyone who wanted to attend a round table discussion on this topic. These meetings helped clarify needed preworkshop activities. We discussed philosophical and logistical issues, and agreed that a preworkshop survey of specific targeted groups should be conducted. A subgroup of the planning committee met during another meeting in Atlanta and selected participants for the workshop. Selecting participants was not an easy task because our specialty is blessed with a wealth of talent. Our contract specified that certain organizations and constituencies be represented, including: dental public health educators; members of the ABDPH; practitioners of dental public health national, state, and local programs; practitioners of allied dental health fields; experts in managed care issues, dental public health residents; community representatives, particularly from settings with large numbers of vulnerable populations; and a public health practitioner(s) from a nondental field. Not all participants initially selected were able to attend. The list of participants is shown in the Appendix.

Project Director Jane Weintraub leads a discussion during the workshop.

Prior to the workshop, a survey (to be described) was conducted among four target groups and homework assignments were given to workshop participants. For homework, each participant was asked to review the competency objectives in the topical area to which he or she had been assigned, and indicate which items should be kept, deleted, or revised. Respondents were also asked to list the skills currently needed by an entry-level practitioner. Responses to the homework and survey were collated in advance and distributed to the workshop group leaders. Results of the survey were presented during the first plenary session of the workshop.

Seated, l to r: Rebecca King, Kathy Hayes (HRSA project officer), Myron Allukian, Jane Weintraub (project director), Brian Burt, Alex White. Diagonally, back to front, l to r: Stuart Lockwood, Skip Collins, James Leake, Linda Kaste, Scott Tomar, Stephen Corbin (partially hidden), Barbara Gooch, John King, Steven Levy (partially hidden), Aljernon Bolden, Robert Dumbaugh (partially hidden), Scott Navarro, David Alexander, Catherine Horan (ADA speaker, partially hidden), Jayanth Kumar (mostly hidden), Reginald Louie, Ray Kuthy, James Sutherland (mostly hidden), Gary Rozier, Chester Douglass, Jed Hand, Sena Narendran, Bruce Brehm, Ira Parker, Steven Silverstein, Barbara Gerbert, Joseph Doherty.

Preworkshop Survey Methods

The purpose of the survey was to evaluate the current competency objectives and to assess the need for changing the objectives and related aspects of the educational and certification process. The survey instrument was pretested in part at the residency directors' meeting in Orlando, and in more complete form among local dental public health and UCSF colleagues. The survey instrument was e-mailed or faxed to four target groups: all board members, all directors or codirectors of advanced education programs in dental public health, people who had become diplomates in the last three years, and all students currently enrolled in dental public health programs either part time or full time. My staff assistant removed the identifiers before giving me the surveys. Two mailings were conducted. After the second mailing, the members of the planning committee were each assigned several nonrespondents to personally contact to increase the response rate.

Survey Results

The overall response rate was 48 of 68 (71%). Although there are only six board members, seven respondents indicated that they were board members. Thus, the response rate for this category could be considered either 100 percent or 117 percent. Surveys were sent to 23 program directors, of whom three are also board members. Of the 20 not already counted, the response rate was 65 percent. If the three

Group I—Health Policy, Program Management and Administration (l to r, first row): John King, Rebecca King, Robert Dumbaugh, Reginald Louie; second row: Bruce Brehm, Stephen Corbin. Not pictured: Rhys Jones.

Group II—Research Methods (l to r, first row): Barbara Gooch, Linda Kaste, Barbara Gerbert, Gary Rozier; second row: Scott Tomar, Ray Kuthy, Jayanth Kumar. Not pictured: Stuart Gansky, John Stamm.

board members are included, the response rate was 74 percent. The survey was sent to 21 new diplomates, of whom five are program directors. Of the 16 not already counted, the response rate was 63 percent, but 71 percent if the program directors are included. Of the 26 current students contacted, 69 percent responded. There were 19 workshop participants who met the criteria for one or more of the target groups and were sent surveys. The response rate among this group was 100 percent. Unfortunately, people not invited to the workshop were less likely to respond.

Some of the highlights of the survey results were:

- All board members favored the current mix of general and specific competency objectives, compared with 40–46 percent of the other three target groups.
- All groups favored the current format of four topical areas, overall 79 percent.
- Only 43 percent of board members favored separating minimum core competencies from more advanced skills, compared with 70–89 percent of the other groups.
- All board members favored having the same objectives for everyone without special focus tracks, compared with 17–50 percent of the other groups.
- Program directors (92%) were most likely to support changing the eligibility criteria for certification; students, least likely (47%).
- The responses presented in Figure 1 were culled from two questions. Responses were not prioritized. The question from the survey asked about the skills, knowledge, or abilities respondents thought will be most needed by dental public health practitioners in the future. The homework question asked respondents to list the skills needed by an entry-level practitioner today. Many of the skills needed are difficult to teach. Students need mentors and field experiences where they can observe appropriate role models demonstrating many of these skills and abilities.
- The program directors were asked, "How do you use the competency objectives in guiding and developing the curriculum for your residents?" My favorite response was: "They are the Bible." Examples of other responses were: "as a self-test to determine what the resident knows," "as a diagnostic tool for developing the residency plan," and "part of curriculum development."
- The good news was that most students (89%) reported they were very likely or likely to take the board exam in the future. Only one person indicated that he or she was unlikely and one person did not answer the question.

FIGURE 1
Skills, Knowledge, or Abilities Most Needed by Dental Public Health Practitioners

Knowledge of clinical dentistry and public health
Leadership abilities
Communication skills, both oral and written
Interpersonal skills
Ability to work effectively with a multidisciplinary team
Coalition and constituency building
Advocacy skills
Negotiation abilities
Political savvy
Problem solving
Computers, technology, informatics
Marketing
Use of media in health promotion
Research skills
Administrative skills
Assessment, policy development, assurance
Delivery systems, financing mechanisms
Evidence-based dentistry
Grantsmanship
Fundraising
Ethics
Passion and integrity

Competency Workshop

The workshop was conducted May 3–6, 1997, in San Mateo, CA, a community near the San Francisco airport. To lay the foundation for the meeting, several speakers addressed the participants at the first plenary session. After Dr. Skip Collins provided the welcome and introductions, I described the rationale for the workshop, the workshop planning process, results of the preworkshop survey, and presented my recommendations. Dr. Catherine Horan, manager, Advanced Specialty Education Programs for the ADA, presented background information regarding the new Department of Education requirements. These requirements provide the impetus for all specialties to revise their accreditation standards. The new standards will focus on outcomes assessment.

Dr. Bruno Petruccelli, chair, Council of Residency Directors, represented the American College of Preventive Medicine (ACPM). The ACPM has developed competency statements and performance indicators for their specialties. He described the process used by the ACPM to develop their competencies and the issues and challenges that they faced. The issues were all very relevant to dental public health and the document developed subsequently became a model for our deliberations. Dr. David Chambers, associate dean, University of the Pacific School of Dentistry, led the workshop participants through a discussion of what competencies are and how they can be evaluated, described the stages in professional growth from novice to expert, and showed us how to write competencies in a standardized format. After some lively discussion, the group agreed that we would develop competencies expected of a beginning practitioner after completing a two-year advanced education program in dental public health. The next two days were spent alternating between small work groups led by the work group chairs (Rebecca King, Gary Rozier, Brian Burt, Linda Niessen, and Alex White) and plenary sessions. Initially, the 43 participants were divided among four work groups that corresponded to the four topical areas of the 1988 competency objectives (see Appendix).

Some reconfiguring of the work groups took place, as it became evident that the final document was going to differ substantially from the list of 1988 objectives. The 1988 set lists 165 items that are primarily knowledge-based and will continue to serve as a useful document, especially for program directors and residents. The new version provides a relatively short list of 10 competencies in behavioral terms that integrate skill, understanding and values and describe what a graduate of a dental public health program can (and preferably get paid to) do! The competency statements are presented in general terms with specific performance indicators to illustrate the range and depth expected in the competency.

Most of the 1988 competency objectives begin with one of the following eight verbs: describe, define, discuss, explain, identify, list, compare, or understand. The new competency statements all begin with more action-oriented verbs. The new statements place more emphasis on collaboration, advocacy, and monitoring and surveillance activities than did the prior objectives. Both documents emphasize program planning, implementation, evaluation and management, health promotion and disease prevention activities, critical evaluation of the scientific literature, and research methods. The competency development process forced the group to concentrate on the goals in the previous document listing competency objectives and to focus on stating what specialists in public health dentistry should be able to do after completing an advanced education program in dental public health. Although the product that emerged was different from what might have been anticipated given the results of the preworkshop survey, a consensus was reached by participants before the end of the workshop.

Group III—Oral Health Promotion and Disease Prevention (l to r, first row): James Leake, Maritza Cabezas, Brian Burt, Jed Hand; second row: Steven Levy, Bruno Petrucelli, David Alexander, Stuart Lockwood. Not pictured: Candace Jones.

Group IV—Oral Health Services Delivery System (l to r, first row): Steven Silverstein, Skip Collins, Alex White, Chester Douglass; second row: Aljernon Bolden, Scott Navarro, Myron Allukian, Sena Narendran, James Sutherland, Ira Parker. Not pictured: Linda Niessen.

Postworkshop Activities

The draft report was distributed in sequential phases to the planning committee, workshop participants, and key stake holders—such as residency directors—for feedback and comments. Revisions, edits, and comments were incorporated at each phase. An announcement was placed on the electronic mail dental public health list server and referred readers to the AAPHD homepage on the Internet. A final draft was presented to the AAPHD Executive Council at the 1997 annual meeting in Washington, DC. After a few minor edits, the document was approved. Additional information was provided during a round table discussion at the meeting. The document is on the AAPHD homepage. Reprints will be disseminated to key dental and public health organizations and other colleagues.

Summary

The new competency statements are a consensus of what is expected of graduates of two- year advanced education programs in dental public health. It is recognized that all students may not have the opportunity to achieve all of these competencies while in training. Consequently, these competencies are not identical to accreditation curriculum standards. Practitioners are expected to develop these skills after graduation as part of a lifelong learning process. These contemporary competency statements help us define the specialty of dental public health and will serve as a guide to colleagues in other fields, educators, policy makers, employers, and future specialists.

References

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Appendix: Dental Public Health Competency Objectives Workshop Participants

Jane Weintraub, project director
Joseph Doherty, AAPHD National Office
Helen Doherty, AAPHD National Office
Kathy Hayes, HRSA project officer
Catherine Horan, ADA, speaker
David Chambers, University of the Pacific, speaker
Cynthia Klock, Marin County Head Start, community representative
Ricardo Salinas, UCSF staff

Group I: Health Policy, Program Management and Administration
Rebecca King, Chair
Bruce Brehm, recorder, dental public health resident
Stephen Corbin
Robert Dumbaugh
Rhys Jones
John King
Reginald Louie

Group II: Research Methods
Gary Rozier, chair
Barbara Gooch, recorder, dental public health resident
Stuart Gansky
Barbara Gerbert
Linda Kaste
Jayanth Kumar
Ray Kuthy
John Stamm
Scott Tomar

Group III: Oral Health Promotion and Disease Prevention
Brian Burt, chair
Maritza Cabezas, recorder, dental public health resident
David Alexander
Jed Hand
Candace Jones
James Leake
Steven Levy
Stuart Lockwood
Bruno Petrucelli, Preventive Medicine Representative

Group IV: Oral Health Services Delivery System
Linda Niessen, co-chair
Alex White, co-chair
James Sutherland, recorder, dental public health resident
Myron Allukian
Aljernon Bolden
Robert (Skip) Collins
Chester Douglass
Sena Narendran
Scott Navarro
Ira Parker
Steven Silverstein