

Clinical Prevention and Population Health Curriculum Framework

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The Clinical Prevention and Population Health Curriculum Framework is a product of the Healthy People Curriculum Task Force convened by the Association for Prevention Teaching and Research. The project is supported by a grant from the Josiah Macy, Jr. Foundation of New York.

Executive Summary

The Clinical Prevention and Population Health Curriculum Framework is the initial product of the Healthy People Curriculum Task Force convened by the Association for Prevention Teaching and Research. The Task Force includes representatives of seven health professional education associations representing allopathic and osteopathic medicine, nursing and nurse practitioners, dentistry, pharmacy, and physician assistants. Its mission is to accomplish the Healthy People 2010 goal of increasing the extent to which content in health promotion and disease prevention is included in health professional education.

The Curriculum Framework provides a structure for organizing curriculum, monitoring curriculum, and communicating within and between professions. The Clinical Prevention and Population Health Curriculum Framework is designed to provide guidelines for student education in the clinical health professions represented on the Healthy People Curriculum Task Force.

The Framework consists of four components:

1. Evidence Base for Practice
2. Clinical Preventive Services - Health Promotion
3. Health Systems and Health Policy
4. Community Aspects of Practice

The full Curriculum Framework includes a total of 19 domains under the four components. Examples illustrate the types of materials that could fulfill each domain. The aim is to encourage each participating clinical health profession to review its curriculum recommendations and/or requirements and consider changes.

A variety of methods are recommended for teaching the materials and integrating them into degree programs including use of service-learning and problem-based learning as well as more traditional educational approaches. The health professions should take advantage of opportunities to demonstrate the integration of the four components of the Curriculum Framework. The Task Force also encourages innovative approaches to interprofessional education in clinical prevention and population health.

Each clinical profession should address the methods used to evaluate students and to ensure their levels of competency. The Task Force recommends that each profession systematically determine whether appropriate items in the Curriculum Framework are included as part of its standardized examinations for licensure and certification and for program accreditation.

The name Clinical Prevention and Population Health has been carefully chosen to include both individually-oriented, plus population-oriented preventive efforts as well as the interactions between the two. It is recommended that all participating clinical health professions utilize the title Clinical Prevention and Population Health when referring to this area of curriculum.

I. Development and Intent of the Curriculum Framework

This Curriculum Framework has been developed and approved by the Healthy People Curriculum Task Force. The Task Force was first convened by the Association for Prevention Teaching and Research and the Association of Academic Health Centers. The following clinical health professional associations are represented on the Task Force:

Allopathic Medicine	Association of American Medical Colleges
Dentistry	American Dental Education Association
Nursing	American Association of Colleges of Nursing
Nurse Practitioners	National Organization of Nurse Practitioner Faculties
Osteopathic Medicine	American Association of Colleges of Osteopathic Medicine
Pharmacy	American Association of Colleges of Pharmacy
Physician Assistants	Association of Physician Assistant Programs

The Curriculum Framework will serve as the basis for the ongoing work of the Task Force whose mission is to accomplish Healthy People 2010 Objective 1.7, “to increase the proportion of schools of medicine, schools of nursing and health professional training schools whose basic curriculum for health care providers includes the core competencies in health promotion and disease prevention.”

The Clinical Prevention and Population Health Curriculum Framework is designed to serve as a common structure for student education in the clinical health professions that constitute the Healthy People Curriculum Task Force.

The Curriculum Framework consists of three levels of specificity, each with a different implication:

1. The four main components or sections of the Curriculum Framework are recommended to the participating clinical health professional disciplines as a structure for organizing curriculum, monitoring curriculum, assessing individual competency, and communicating within and between disciplines.
2. The numbered domains or categories are designed to outline content to fully reflect both individually-oriented clinical prevention and population health. The numbered categories are intended to allow each participating clinical health profession to identify those categories considered relevant to their educational efforts.
3. The bulleted items are designed to represent examples of the types of materials that a particular clinical health profession may choose to encourage or require in its curriculum.

The Curriculum Framework’s aim is to suggest specific subjects or examples that need to be covered, not to advocate a comprehensive curriculum. The Framework is designed to provide a set of components and domains that, taken together, constitute a national framework for education in clinical prevention and population health. The aim is to encourage each participating clinical health profession to review its curriculum recommendations and/or requirements and consider changes.

The Curriculum Framework is designed to allow considerable flexibility for each clinical health profession to determine the depth of curriculum that is recommended, the timing for teaching the material, and the method(s) of delivering the curriculum. The aim is to provide general recommendations and to identify items that may require greater emphasis than has traditionally been the case. It is also the intent to point out opportunities for interprofessional education and discussion. The Curriculum Framework is designed for degree programs; it is not intended for postgraduate or residency training, though it is hoped that these programs will build upon this curriculum framework.

This entire Curriculum Framework will not generally be taught as one course. It should be regarded as a single curriculum that is systematically integrated into health professional education. Selected portions of the Curriculum Framework may be considered by clinical health professions for inclusion in undergraduate curricula in preparation for admission to graduate degree programs. Each clinical health professional program should consider carefully the content, sequence and teaching methods used to provide this curriculum. It is recommended that schools incorporate community-based experiential methods of learning such as service-learning and community-oriented primary care, in addition to didactic, case-based, or problem-based methods.

The Curriculum Framework should be viewed as providing a foundation for a curriculum that spans the years of health professional training, and is approached in greater depth as professional training progresses. The Curriculum Framework will generally be distributed through more than one component or course in the degree program. Consequently, a mechanism for integrating curriculum is important. This integration provides the opportunity to stress the interactive or ecological nature of the factors that affect health and the development and outcome of disease as stressed in the Institute of Medicine's (IOM) report, "Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century" (1). This might be accomplished through a variety of mechanisms, including an integrative approach, an overview framework that broadens students' understanding of the options for implementation, and/or by case-studies or problem-based learning.

The name, "Clinical Prevention and Population Health," has been carefully chosen to include individually-oriented and population-oriented preventive efforts as well as understanding the interactions between the two. It is recommended that all participating clinical health professions utilize the title, "Clinical Prevention and Population Health" when referring to this area of curriculum.

II. Clinical Prevention and Population Health Curriculum Framework

The following outline presents the Clinical Prevention and Population Health Curriculum Framework. The Framework is organized to enable schools to utilize it as a list to identify the location of each item in its overall curriculum. The Framework is also designed to provide a coherent structure for subdividing the overall curriculum. Several components, particularly cultural competence and ethics, might permeate the entire curriculum rather than be limited to one discrete segment.

The materials that follow the Curriculum Framework are designed to clarify elements of the Framework, particularly the intent and potential methods for implementation. The final sections address curriculum integration, competency assessment, and interprofessional education.

Evidence-Base for Practice

1. Epidemiology and Biostatistics
 - Rates of disease, e.g., incidence, prevalence and case-fatality
 - Types of data, e.g., nominal, continuous, qualitative
 - Statistical concepts, e.g., estimation (relative risk/odds ratio and number-needed-to-treat), statistical significance/confidence intervals, adjustment for confounding variables, causation
2. Methods for Evaluating Health Research Literature
 - Study designs, e.g., surveys, observational studies, randomized clinical trials
 - Quality measures, e.g., validity, accuracy, reproducibility, biases
 - Sampling and statistical power
3. Outcome Measurement, Including Quality and Costs
 - Measures of mortality, e.g., infant mortality rates, life-expectancy
 - Measures that include quality of life/utility, e.g., QALYs, DALYs, etc.
 - Measures that include cost, e.g., cost-effectiveness, incremental cost-effectiveness
 - Measures of quality of health care, e.g., HEDIS, health status disparities
4. Health Surveillance
 - Vital statistics/legal documents, e.g., birth certificates, death certificates
 - Disease surveillance, e.g., passive surveillance (reportable disease), active surveillance for epidemics and bioterrorism
 - Biological, social, economic, geographic and behavioral risk factors
5. Determinants of Health
 - Burden of illness, e.g., distribution of morbidity and mortality by age, gender, race, socioeconomic status, and geography
 - Contributors to morbidity and mortality, e.g., genetic, behavioral, socioeconomic, environmental, health care (access and quality)

Clinical Preventive Services - Health Promotion

1. Screening
 - Approaches to testing and screening, e.g., range of normal, sensitivity, specificity, predictive value, target population
 - Criteria for successful screening, e.g., effectiveness, benefits and harms, cost, patient acceptance
 - Evidence-based recommendations
2. Counseling
 - Approaches to culturally appropriate behavioral change, e.g., counseling skill training, motivation.
 - Clinician-patient communication, e.g., patient participation in decision making, informed consent, risk communication, advocacy
 - Criteria for successful counseling, e.g., effectiveness, benefits and harms, cost, patient acceptance
 - Evidence-based recommendations
3. Immunization
 - Approaches to vaccination, e.g., live vs. dead vaccine, pre vs. post exposure, boosters, techniques for administration, target population, population-based immunity
 - Criteria for successful immunization, e.g., effectiveness, benefits and harms, cost, patient acceptance
 - Evidence-based recommendations
4. Preventive Medication
 - Approaches to chemoprevention, e.g., pre vs. post exposure, time limited vs. long term
 - Criteria for successful chemoprevention, e.g., effectiveness, benefits and harms, cost, patient acceptance
 - Evidence-based recommendations

Health Systems and Health Policy

1. Organization of Clinical and Public Health Systems
 - Clinical health services, e.g., continuum of care – ambulatory, home, hospital, long-term care
 - Public health responsibilities, e.g., public health functions (IOM); 10 essential services of public health
 - Relationships between clinical practice and public health
2. Health Services Financing
 - Clinical services coverage and reimbursement, e.g., Medicare, Medicaid, employment based, the uninsured
 - Methods for financing health care institutions, e.g., hospitals, long-term care facilities, community health centers
 - Methods for financing public health services
 - Other models, e.g., international comparisons
3. Health Workforce
 - Methods of regulation of professions and health care, e.g., certification, licensure, institutional accreditation
 - Discipline-specific history, philosophy, roles and responsibilities
 - Racial/ethnic workforce composition including underrepresented minorities
 - Relations of discipline to other health professionals
 - Legal and ethical responsibilities of health care professionals, e.g., malpractice, HIPAA, confidentiality
4. Health Policy Process
 - Process of health policy making, e.g., local, state, federal governments
 - Methods for participation in the policy process, e.g., advocacy, advisory processes
 - Impact of policies on health care and health outcomes including impacts on vulnerable populations

Community Aspects of Practice

1. Communicating and Sharing Health Information with the Public
 - Methods of assessing community needs/strengths and options for intervention, e.g., Community-Oriented Primary Care
 - Media communications, e.g., strategies for using mass media, risk communication
 - Evaluation of health information, e.g., websites, mass media, patient information (including literacy level and cultural sensitivity)
2. Environmental Health
 - Sources, media, and routes of exposure to environmental contaminants e.g. air, water, food
 - Environmental health risk assessment and risk management, e.g., genetic, prenatal
 - Environmental disease prevention focusing on susceptible populations
3. Occupational Health
 - Risks from employment-based exposures
 - Methods for control of occupational exposures
 - Exposure and prevention in health care settings
4. Global Health Issues
 - Roles of international organizations, e.g., WHO, UNAIDS, NGOs
 - Disease and population patterns in other countries, e.g., burden of disease, population growth, health and development
 - Effects of globalization on health, e.g., emerging and reemerging diseases/ conditions
5. Cultural Dimensions of Practice
 - Cultural influences on clinicians' delivery of health services
 - Cultural influences on individuals and communities e.g., health status, health services, health beliefs
 - Culturally competent health care
6. Community Services
 - Methods of facilitating access to and partnerships for health care
 - Evidence-based recommendations for community preventive services
 - Public health preparedness e.g. terrorism, natural disasters, injury prevention

III. Implementation of the Curriculum Framework

The following discussion parallels the four components and 19 domains of the Clinical Prevention and Population Health Curriculum Framework.

Evidence-Base of Practice

The intent of this component of the Curriculum Framework is to operationalize the background needed to incorporate evidence into practice. The level of quantitative and qualitative analysis and study design understanding needed may vary from one clinical health profession to another; however, the numbered categories are designed to outline core competencies that are considered generally applicable.

This component may be implemented using a variety of educational methods. Reinforcement using the health research literature is key to ensuring that students understand the relevance of these concepts. A case study approach may be useful in integrating these concepts into clinically relevant and accessible formats. This component is critical in helping students understand the relationships between individually-oriented clinical prevention and population-oriented population health.

Generally, instruction in the skills for this component should begin early in health professional education. Reinforcement as part of clinical education is key to retention, continued use and full understanding of these skills.

Epidemiology and Biostatistics: These content areas are considered as core for much of what follows. It is recommended that each clinical health profession review the level of understanding required of their students and the best methods for teaching the materials. This should be done to ensure that students understand the relevance of these methods and are not deterred by an overly mathematical approach. The Curriculum Framework stresses a conceptual approach, aiming to ensure that the concepts of rates, adjustment, confounding, and causation have intuitive meaning to students. Quantitative measures could be limited to those that are required to read research literature such as odds ratio, relative risk and number-needed-to-treat. Even these measures should be taught with an aim to providing intuitive understanding that can be translated into individual and population-based explanations. Graphical presentations of data may be used to complement principles of statistical analysis and illustrate common misinterpretations of data.

Methods for evaluating health research literature: Skills for reading research articles are considered key to clinical training and continuing education. Principles of study design for surveys, case-control, cohort studies and randomized clinical trials should generally be taught to all clinical health professional students. This teaching should be linked to reading actual articles derived from journals read by practitioners of a particular clinical health profession; it should not be conducted as self-contained didactic materials. An understanding of the limitation of research, including biases and limitations of small studies should be integrated into the materials being used as examples.

Measuring outcomes, including quality and cost: In order to understand and participate in the process of quality improvement and cost containment, clinical health professionals need at least an introduction to the terminology and concepts that underlie these efforts. This domain should be taught using examples whose relevance to students is clear.

Health Surveillance: The basic principles of individual and population health surveillance need to be placed in a context that enables students to appreciate the roles played by clinicians in obtaining these key public health data and in utilizing them as the basis for screening and diagnosis. This is an opportunity to stress the relationship between health care and public health. This may be done by emphasizing the key roles played by public health in identifying and controlling epidemics and bioterrorism. The use of risk factors for individualized risk assessment should emphasize the derivation of these data from population-based research. An introduction to vital statistics through birth and death certificates is also recommended.

Determinants of Health: Clinical health professional students need an epidemiological understanding of the relative frequency of disease and how disease frequency varies by age, gender, ethnicity/ race and socioeconomic factors as well as geography. Students should also be able to relate these variations in frequency to underlying risk factors, including genetic, behavioral, socioeconomic, and environmental factors as well as health care access and quality. The concept of interaction of risk factors as predictors of health and disease should be introduced as a method for appreciating the ecological approach advocated as a basis for public health education.

Clinical Preventive Services – Health Promotion

This component of the Curriculum Framework is intended to parallel the structure established by the United States Preventive Services Task Force (USPSTF) (2). The aim of this component is for students to understand the evidence that is needed to produce and interpret evidence-based recommendations for an intervention or service. The approaches to shared decision making and facilitating behavioral change advocated by the USPSTF can also be useful. (3,4) The four categories or domains within this component are intentionally structured in parallel, implying a similar approach.

Each of four categories or domains could be subsumed into broader clinically oriented education. While it is desirable to connect each category or domain of this component with other clinically oriented education, it is important that a coherent approach to teaching principles of screening, counseling, immunization and chemoprevention be preserved. Reinforcement through use and interpretation of evidence-based recommendations as part of clinical education is essential.

The aim of this component is for students to understand the basis for these recommendations and not to have students memorize the recommended interventions. Particular clinical health professions may recommend or require knowledge of the content of specific evidence-based recommendations. However, that knowledge is considered separate from accomplishing the aims of this component.

In-depth case studies focusing on a small number of USPSTF recommendations may be a useful means for illustrating the use of evidence and the implications of recommendations. Interactive formats such as small group or computer based interaction are important to ensure understanding of these concept and approaches.

Screening: A curriculum for screening should build upon an understanding of testing principles applicable to a broad range of uses of tests for average and for high risk groups. Specific criteria for successful screening should be emphasized and illustrated using examples including issues of benefits and harms, cost, ethical implications, and patient acceptance.

Counseling: Counseling as an individually focused preventive effort should be connected with broader efforts to communicate with patients. This item should focus on the presence or absence of evidence for specific preventive interventions for the average as well as the high-risk population. Examples such as counseling for cigarette cessation or breast self-examination might be used to illustrate situations where evidence of effectiveness is and is not available. Newer modes of communication for counseling, such as e-mail and group visits, should be discussed and evidence of their effectiveness presented.

Immunization: Immunization should be built upon a foundation of infectious disease epidemiology and should introduce concepts of live vs. dead vaccine, the need for boosters, techniques for administration, target population and population-based immunity. Understanding the benefits and the limitations as well as the practical barriers to success of immunization efforts should be a focus of this domain.

Preventive Medication: This domain provides an opportunity to teach principles of decision making that incorporates not only benefits and harms but also other relevant considerations such as costs, values and risk-taking attitudes. In addition this item may be used to illustrate the integration of preventive efforts into the broader delivery of clinical services.

Health Systems and Health Policy

A systematic approach to this component of the Curriculum Framework has not been part of most curricula. The development of a coherent curriculum that provides a framework for students to use subsequently as they experience the U.S. health care system is essential to fulfilling the intent of this section.

This component may be particularly attractive for interprofessional educational efforts, since the required level of understanding may often be similar regardless of the specific clinical health professional discipline. Although ethical responsibilities are included under the Health Workforce domain, the integration of ethical issues throughout the framework is recommended.

Organization of Clinical and Public Health Systems: A focus on the concept of the continuum of care is central to the intent of this domain. This is consistent with the IOM's emphasis on patient-centered care in its report, "Health Professional Education: A Bridge to Quality" (5). A basic understanding of relationships and mutual dependence of the clinical health care delivery system and the public health system is fundamental. An understanding of the roles that public health plays has rarely been explicitly taught. The IOM's core functions of public health (6) as well as the essential services of public health (7) help to define public health roles and responsibilities.

Health Services Financing: The intent of the Health Services Financing domain is to introduce students to existing and potential mechanisms for funding. This should allow them to better understand their strengths and weakness and better appreciate the implications of the changes that occur in the future.

When implementing this domain, the Curriculum Framework implies that a global focus be used rather than an exclusively U.S. focus. This is intended to allow students to put the current U.S. system into perspective, and to broaden the options that are considered.

Health Workforce: It is recognized that the curriculum objectives of the Health Workforce domain will differ by discipline, with each clinical health profession seeking to provide its students with a profession-specific background and an understanding of cross-professional approaches. The concepts of confidentiality in general and HIPAA regulations in particular are examples of the types of curricula that may be widely applicable. It is hoped that teaching this domain will contribute to greater inter-professional understanding.

Health Policy: Health Policy is a domain item that the Task Force recognizes is not generally required by current accreditation standards or recommendations, nor included in most clinical health professional education. Nonetheless, the Task Force overwhelmingly endorsed its inclusion as part of this component. The intent is to provide students with a basic understanding of the policies that affect their practice and the health of their patients and communities; the processes through which policies are developed; and the opportunities to participate in policy-making processes. Since this material has not been a traditional part of clinical health professional education, the Task Force encourages the development of curriculum materials to effectively teach this domain.

Community Aspects of Practice

The Community Aspects of Practice component aims to integrate both the individually oriented clinical prevention and the population health focus of the Curriculum Framework. Community is defined broadly to include the local geographically defined community, both national and international, as well as communities defined by shared interests and experiences, e.g., age, risk status, disease.

The need for a community-based learning experience outside the traditional institutional settings is fundamental to this component. Service-learning, community-based clinical rotations (e.g., public health departments and community health centers), community-based research, and international health experiences are all possible means to implement this goal. These might include, for example, education in the evaluation of web-based information, particularly from sites utilized by patients; learning first hand about environmental and occupational exposures; and understanding the structure of international efforts to address current and emerging health problems. The CDC's Guide to Community Preventive Services (8) can help support learning about community aspects of prevention that build upon the individual guidelines approach of the Clinical Preventive Services Health Promotion component.

Communicating and Sharing Health Information with the Public: In general, this domain has not been a major educational focus for clinical health professionals. However, technological advancements such as the Internet coupled with a greater emphasis on shared decision making, require that all clinicians have a better understanding of the communities in which they work and the means of individual and population focused media communications. For example, an appreciation of the types of health information available on the Internet and an ability to assess their quality is essential to developing a clinical practice that effectively relates to and communicates with individual patients, as well as with communities.

Environmental Health: This domain has been intentionally separated from Occupational Health to emphasize its increasingly important implication for clinical practice as well as public health. An environmental health focus includes understanding the implications of environmental regulations, standards, policies, and laws on protecting the public's health; and the roles that individuals and communities have in effective environmental health decision-making.

Occupational Health: This domain is both a traditional and a new area of curriculum emphasis. It may be viewed as a special application of epidemiological principles taught in the first component. It may also be seen as a bridge between nonclinical and clinical education. While a comprehensive approach to this field is beyond the scope of most health professional curriculum, the Task Force recommends that important cross-cutting principles of occupational medicine be presented, including the value of obtaining occupational histories, the options available to decrease occupational exposures and risks, and occupational health and safety issues specific to clinical settings.

Global Health Issues: The ability to introduce students selectively to the wide range of important global health issues in the limited curriculum time available is a challenge for all clinical health professions. Nevertheless, the Task Force recommends that students gain a framework for thinking about the health issues of developing nations and diverse cultures, as well as the impacts of globalization. Specific examples such as AIDS and other emerging and re-emerging infectious diseases, tobacco use and polio eradication may be particularly relevant and provide a basis for comparison across societies.

Cultural Dimensions of Practice: The need to provide culturally competent health care and eliminate health disparities has become a central focus of the emphasis on patient-centered education. Key to its success is its integration with other curriculum components that relate to the delivery of clinical services.

Community Services: It is important that all students gain the basic information needed to function, learn and practice effectively in community settings. A distinct focus on community services has not been a uniform component of clinical health professional education. Disaster preparedness fits well into this domain though it can and should be considered for integration into other aspects of the curriculum as well. Some professions have traditionally included community services in their curriculum and may be able to offer curricula demonstrating methods to accomplish these goals. The Guide to Community Preventive Services may be formally incorporated into teaching this domain. The methods and approaches used for teaching may parallel those recommended for use of the USPSTF recommendations. Teaching methods might include case examples, service-learning, problem-based learning and community-oriented primary care learning experiences.

IV. Integration and Competency Assessment

Integration of the four components of the Curriculum Framework is highly desirable. This requires a big picture overview. In order to integrate the curriculum, one might illustrate the options for intervention from primary prevention through rehabilitation; the level of intervention from the individual, to the high risk group, to the general population; and the methods for behavioral intervention, including education, motivation, and counseling skill training. This type of integration may require the addition of a specific curricular component near the end of the degree program.

Each clinical profession should address the methods used to evaluate students and to ensure their levels of competency. The Task Force recommends that each profession systematically determine whether appropriate items in the Curriculum Framework are included as part of its standardized examinations for licensure and certification and for program accreditation.

V. Interprofessional Education

The Clinical Prevention and Population Health Curriculum Framework provides opportunities for interprofessional education. The Task Force encourages participating clinical health professions to explore creative methods for implementing the Curriculum Framework using interprofessional education. In addition, education in clinical prevention and population health needs to emphasize the involvement of a wide range of health professionals beyond those represented on the Task Force.

VI. Review and Revision

This document will serve as the official version of the Clinical Prevention and Population Health Curriculum Framework through 2009. In 2008 the Curriculum Framework will be extensively reviewed and subsequently revised. The revised version will be disseminated by the spring of 2009.

References

1. Institute of Medicine. Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century. Washington DC: National Academy Press 2003
2. Agency for Healthcare Research and Quality. U.S. Preventive Services Task Force Guide to Clinical Preventive Services Vol. 1 and 2, AHRQ Pub. No. 02-500 also www.ahrq.gov
3. Sheridan, Stacey et al. (2004) Shared decision-making about screening and chemoprevention: A suggested approach from the US Preventive Services Task Force. American Journal of Preventive Medicine, 26, 56-66.
4. Whitlock, E.P., Orleans, C.T., Pender, N., Allan, J. (2002). Evaluating primary care behavioral counseling interventions: an evidence-based approach. American Journal of Preventive Medicine, 22, 267-284.
5. Institute of Medicine. Health Professions Education: A Bridge to Quality. Washington DC: National Academy Press 2003
6. Institute of Medicine. The Future of Public Health. Washington DC: National Academy Press 1988
7. Harrell, J.A., and Baker, E.L. The essential services of public health. Leadership in Public Health 3(3):27-31, 1994.
8. The Guide to Community Preventive Services. www.phppo.cdc.gov/cdcrecommends viewed 2/7/2004

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