

Running Head: Continuing Education Learning Guide

Part II: A Professional Learning Guide for the Continuing Education of
Environmental and Public Health Professionals

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Abstract

Maintaining a current and relevant workforce in a rapidly changing world presents a challenge to environmental and public health professionals. A continuing education requirement that addresses the core areas of skills and competency development; knowledge attainment and reinforcement; and values and ethics, will provide an excellent means of ensuring ongoing competency amongst the certified members of the Canadian Institute of Public Health Inspectors. Included in this paper is a teaching guide which summarizes the relationship between training, assessment and outcomes; these are linked back to training directed to these core areas. In conclusion, a recommendation is made that the institute adopt continuing education requirements for all certified members as it benefits the membership, the institute, the employers and the general public by increasing the likelihood of good decision-making that is based on current and appropriate evidence that is applied in a manner that is sensitive to the population being served.

Part II: A Professional Learning Guide for the Continuing Education of
Environmental and Public Health Professionals

Introduction

Maintaining currency and relevancy in a rapidly changing world is a challenge for most professionals. This is particularly so for environmental and public health professionals who are faced with rapidly changing paradigms in the scientific, political, cultural and technological environment in which they must evaluate information and make decisions that effect community health outcomes. Canadian Environmental Health Officers, also known as Public Health Inspectors, work in various levels of government, institutional settings, commercial industry and as entrepreneurs in a variety of capacities that impact on public and environmental health policy and outcomes. As certified members of the Canadian Institute of Public Health Inspectors (CIPHI) there is an expectation of a minimum level of competency, knowledge, ethical foundation and work experience. For this reason, it is critical for CIPHI as the certifying body responsible for ensuring the credentials of certified public health inspectors, to establish a continuing education program that focuses on gauging intellectual assets to ensure that members continue to contribute effectively in the knowledge economy.

This goal can be achieved through the establishment of continuing education requirements such as courses made available through a number of different recognized models that are credited by the institute for a certain number of continuing educational units (CEUs) per year that take into account organizational values, changes to environmental health information and technology and demographic shifts in the population recipients of interventions implemented by the professional body.

Continuing education for Health Professionals is defined by the Uniformed University of the Health Sciences (2002) as planned educational activities intended to further the education and training of health professionals and enhance practice, knowledge, administration and research; this does not include organized programs of study leading to a degree. Continuing Education Activities can include an episode or a series of events designed to “update health care practice, management or professional growth”, these should be planned around identified learning needs. These educational opportunities must have “explicit objectives”...based on current health professional information, utilize methods that are appropriate to the subject matter and audience, and involve the collection of evaluation feedback (Uniformed University of the Health Sciences, 2005).

Continuing education for environmental and public health professionals should focus on standards and programs that reinforce and expand the knowledge base of frontline staff and management who are certified and working as accredited members of CIPHI. This will contribute towards the maintenance of skills for sound professional practice and the assurance of competency.

As an organisation CIPHI retains an accountability to the public for the quality and calibre of the professionals it certifies. Status quo only ensures that staff entering the field have gained the relevant educational background to entering the exciting specializations open to Certified Inspectors; however, current practices do not ensure that those already practicing in the field have maintained currency with the myriad of changes that have occurred overtime.

In order to ensure ongoing competency in the field, certification requirements should include an continuing education component. Any continuing education program should be focused on three core areas: Skills and Competency Development; Knowledge Attainment and Reinforcement; and Values and Ethics.

The Continuing Education Triad

CIPHI is an organisation with members dedicated to enhancing environmental health outcomes in the broadest of domains. The ever changing priorities that require sound environmental health knowledge, skills and ethics challenge environmental health personnel. The challenge can exist in their readiness and confidence to respond to potential public health emergencies in a myriad of areas. Keeping abreast of changes in intervention technology; communicable disease outbreaks, emerging and reemergent concerns, radiological and terrorism threats; natural and man-made disasters; social dynamics that impact on responsiveness and methods of risk communication can in itself be a fulltime job. Environmental and public health practitioners are expected to be well versed in a variety of areas where the environment intersects with health outcomes and as these areas change, environmental health practitioners must adapt to work efficiently, effectively and appropriately in their roles. The stakes are high when environmental health practitioners work as the first line of defense in preventing disease (American Public Health Association, 2001). To be successful in this ever changing world, environmental health officers require new combinations of skills, including how to learn skills that allow them to find, manage, share and use information and knowledge gained effectively (Dunn,

2004). The links which exist between continuing education in environmental health and the groups positively impacted by ensuring that environmental and public health practitioners are up to date in the core competencies that affect their ability to practice are outlined in Appendix A and throughout the following section. Continuing education will increase the reliability, accuracy, currency and usability of the knowledge, skills and professional code of environmental health officers currently at work in the field.

The Cornerstones of an Environmental Health Continuing Education Program

Competence is the ability to handle a situation through knowledge, skills, relationships, values, will and commitment (TFPL The Information People, 2004). Knowledge audits are used to review the knowledge required by an organisation, department or group, once confirmed, this information is used to develop the professional supports to ensure that professionals can “carry out objectives effectively” (TFPL The Information People, 2004). A knowledge audit can be completed using tools such as a needs analysis, competencies and communication audits, evaluations of past interactions with stakeholders, and other reviews of how knowledge flows into and out of an organisation. Such evaluations can clarify the knowledge needs of the organization’s members. However, it is important to note that any evaluation must be broad enough to include both internal and external stakeholders including those who are the recipients of the services provided and the allied professionals who collaborate with organization members. “Intended users are more likely to use evaluations if they understand and feel ownership of the evaluation process...If you don't focus on specific intended users right from the start...you are likely to collect information that—while potentially interesting—will never be utilized” (Patton, 2002). The results of Knowledge Audits will be more readily accepted by

users when they are involved because of a deeper appreciation of the evaluation process, findings and recommendations that may stem from both intuitive and surprising results.

Expert knowledge, skills and experience are known assets that help environmental and public health professionals make good decisions that produce positive environmental health outcomes. Continuing education initiatives ensure that Skills and Competency Development; Knowledge Attainment and Reinforcement; and Values and Ethics are on par with the minimum expectation for qualified members through the course of their careers. A professional learning guide for continuing education in environmental health is included in Appendix C.

Skills and Competency Development

The skills that allow one to work effectively in environmental health are honed from many years of experience; however, it is often difficult to ensure that skills developed remain consistent with current professional standards. Furthermore, there is no guarantee that knowledge gained from completing an undergraduate degree will remain relevant or translate into skills that are valid throughout the course of a career. Problem based learning is a means to fill this gap between learning practice and changing information. Developed at McMaster University in the mid 1960's (Levine, 2001), problem-based learning is founded on a constructivist approach developed through case studies. This approach presents “ill-structured” problems similar to those seen in real life. The process is iterative and draws on knowledge and previous experience to explore possible solutions to a problem. The problem is then explored to review possible solutions and determine the most appropriate course of action. For maximum effectiveness, this model should culminate in a group discussion to review the various approaches developed by participants and broaden the scope of knowledge and resources available to solve the problem.

This approach to learning can be used in group training sessions, as part of an online learning forum or through assignments completed through group-work. Further benefits include the opportunity to work amongst interdisciplinary teams, network and forge links amongst various agencies to ensure environmental health outcomes are met. Other approaches to skills development include traditional skills training workshops to ensure consistency in applying various assessments and tests and interpreting these results accurately in the field. Training may focus on the use of field equipment, standard operating procedures for obtaining and handling samples, reviewing and interpreting test results, applying legal directions, presenting or documenting evidence intended for prosecution, or utilizing tactical communications in the field to prevent the escalation of a situation.

Knowledge Attainment and Reinforcement

The speed with which information changes is escalating. Last year's facts and even a truth held in decision making yesterday may not be of value today (Webb, 2000). Rapidly changing research results and technology mean that environmental and public health professionals must strive diligently to remain up to date. Continuous change is the new normal. It is important for organizations such as CIPHI to inspire its members to learn and adapt to change in the 21st century. The key to utilizing knowledge in practice is the ability to effectively obtain, disseminate and utilize information wisely and appropriately. Training on accessing and determining the validity and accuracy of information acquired, particularly on the internet, is crucial. Accessing reliable information with consistency is critical to responding to real life emergencies in real time. Courses focused on obtaining information and securing professional resources for obtaining information (i.e. an information broker or internet based membership tool or through publicly accessible resources such as the Cochrane Collaborative or Pubmed), has the

potential to greatly impact on the ability of environmental and public health professional ability to provide timely responses in a complex world.

Other learning tools which are inexpensive to implement but promote continuous improvement in workplace practices include Mentoring and Reflective Learning. Mentoring techniques are based on the foundation of a strong relationship between two professionals in which one individual with greater experience and connections provides feedback and advice regarding professional development to a emerging professional with promise (Phillips-Jones, n.d.). Reflective learning is similar but is based on self-examination that involves a review of events in an attempt to improve and encourage individual professional growth (Atherton, 2003). A situational debrief can also be used as a knowledge enhancing tool. A situational debrief involves an evaluation of past events to improve processes and achieve better outcomes in the future (Washington State Department of Health, 2004). This is most effective in a focus group including as many stakeholders as possible to determine where improvements can be made in the future. Traditional course workwork, online and in the classroom, can be used to enhance knowledge or develop a specialization. All three knowledge enhancing techniques involve reviews of personal knowlege, skills and attitudes in order to achieve better professional outcomes.

Values and Ethics

Values and ethics are critical considerations in public health because environmental and public health professionals are afforded many regulatory responsibilities which include but are not limited to: access to public and private property; authority to conduct search and seizure without a warrant; the ability to close or condemn private, public and commercial residences; as well as issue orders, lay charges and authorize the detention of individuals upon the

determination of a public health risk to the community. These powers can lead to fines, convictions and jail sentences. It is crucial that environmental health professionals are continually reminded of these powers and appreciate their potential impacts on the public. Regularly reviewing attitudes and biases towards the public or sub-groups thereof to ensure that professional conduct is in line with the values and ethical tenets of our authorizing body and code of practice.

Environmental practitioners are also privy to the personal and confidential information of clients including needs, health status and financial circumstance. Environmental Officers can find themselves in compromised situations construed by clients or the media and must maintain a professional code of conduct at all times on and off duty. It is important for members to view themselves as organizational ambassadors, presenting their fellow environmental and public health professionals in a positive light. Continuing education programs which stress: professional codes of conduct, respect for cross cultural traditions and beliefs, the dignity of clients and their privacy rights, transparency in decision making and assessments, communicating clearly and respectfully and the need to respect civil liberties when conducting risk assessments involving potential environmental health interventions.

Impacts and Outcomes of a Continuing Education Program for CIPHI Members

Continuing education is critical to the individual practitioner, the organizations they belong to and the public they serve. Each of these CIPHI stakeholders stand to benefit from the development of a stable and consistent continuing education policy. Environmental health and public health practitioners who are fully competent and working within a full scope of practice provide positive environmental health outcomes for their fellow practitioners, the association, the employer and the general public. Gray (1997) states that the cost-effectiveness of any program or

policy is related to efficiency and outcome; where continuing education policy is concerned it is important to determine whether the benefits of the program outweigh the risks and relate this finding to cost. With this in mind, of a rigorous continuing education program would ensure the highest level of competency within the profession and the time and money spent on maintaining competence would be considered cost-effective where the outcomes are positive in relation to the practitioner, the association and employer and the public.

Outcomes for Environmental Health Practitioners

For the individual environmental health practitioner, continuing education provides an opportunity to learn things missed in the formal university process; the opportunity to discover new or emerging information and develop a new area of specialization. Most importantly, continuing education maintains currency, maintains competitiveness in the market and can “refresh” a professional who is “stale” or lacks enthusiasm.

Outcomes for Employers and CIPHI

For organizations employing or representing the environmental health practitioner, investing in continuing education and development allows the authorizing body or employer to maintain and expand the field of practice. This is critical to CIPHI because it can with certitude; assert the professional competency of its members. The employer can claim that staff are competent and able to deal with critical and emerging issues in environmental and public health. Professional development and continuing education is an effective method to ensure that the public, allied professionals, elected officials and other decision-makers, respect the professional body and its members. There is confidence and credibility in professional services provided by members who are current through a continuing education program. Continuing education can also provide opportunities for networking and collaboration with allied professionals providing

an increased knowledge base of the interrelated programs and services that can improve client outcomes. Allied professionals will also value a membership with sound skills, knowledge and ethical grounding. These are the proposed cornerstones of professional development.

Positive Outcomes for the General Public

Finally, the general public also stands to benefit from the establishment of a continuing education program for environmental and public health professionals. Indeed the social benefits of practitioners who provide advice and institute environmental health interventions based on current knowledge and high quality professional practice is very significant. An environmental and public health professional who fails to remain current puts at risk the public health of the general population in critical emergencies. Incorrect or misinformed decision-making can result in increased morbidity or in the worst-case scenario death. Environmental and public health professionals who are experts based on current knowledge can act in good faith and meet the high professional practice standards expected by the public. Continuing education and professional development and lack thereof are an ethical and moral issue and responsibility to the public.

Asserting Professional Competency

Public access to information via the Internet and other resources virtually guarantees that the public will be well informed and capable of assessing claims of professional expertise exerted by any health professional. It is important to practitioners, the certifying body, the employing agency and the general public that assertion of professional competency are valid and reflective of a competent and adaptive professional.

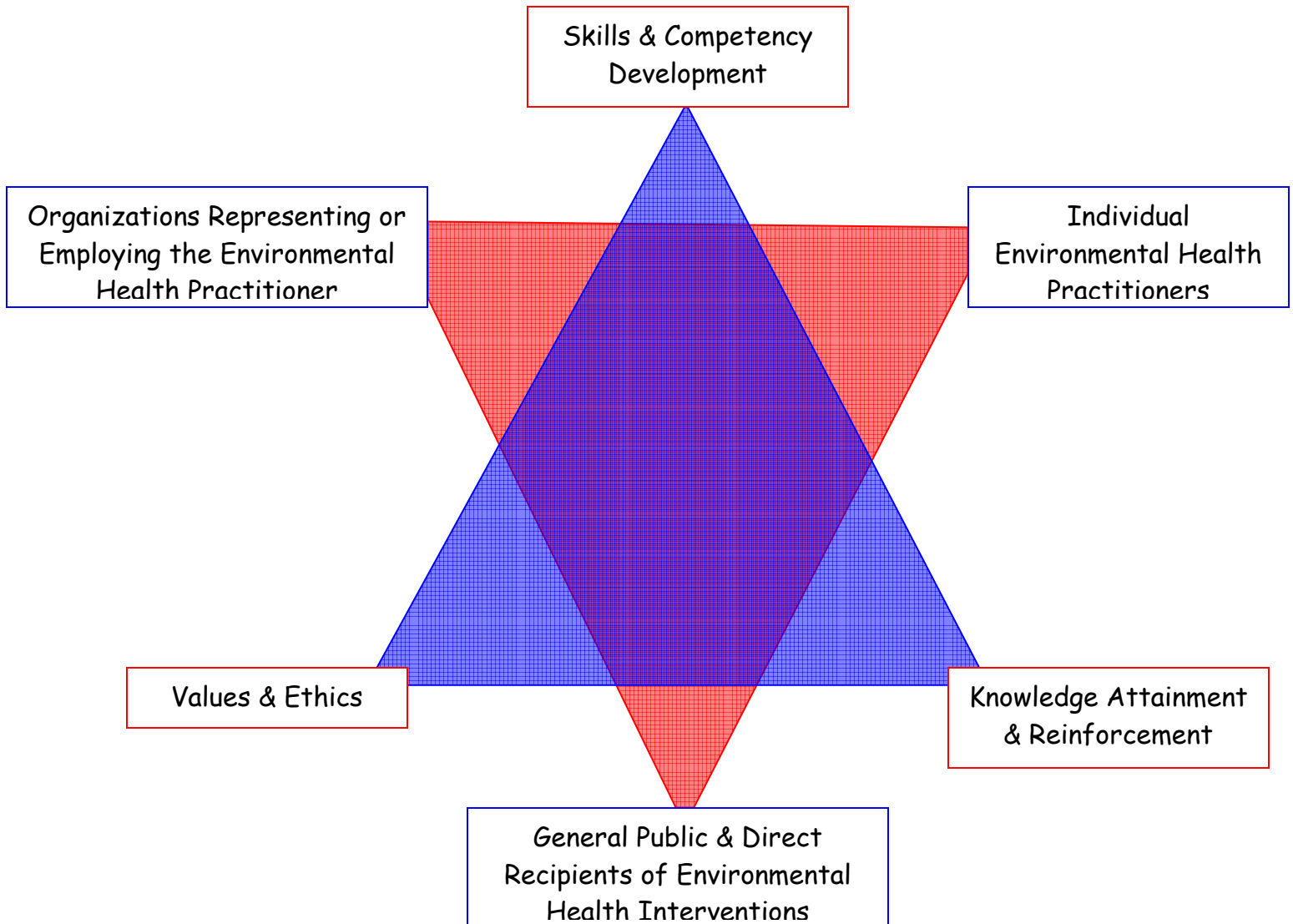
A learning organization is defined as “an organization that views its future and subsequent competitive advantage based on continuous learning and adaptive behaviour; it

develops a culture and processes to improve its ability to learn and share both at an individual and organizational level (TFPL The Information People, 2004). An environment that encourages team learning and community encourages high-performing, flexible individuals. In fact, it is critical that an organization such as CIPHI promotes itself as a learning organization and alerts its membership to the value of continuous learning and professional development. CIPHI must find a way to ensure that its members are truly august, capable and competent. It must also find means to recognize those who contribute to environmental health research and the development of best practices and social improvement. Reinforcing the key behaviours and competencies that promote the objectives of a learning organization requires dedication and commitment. Senge, Kleiner, Roberts et al. (1999) suggest that, "...encouraging people to develop their own resourcefulness (and) flexibility can enhance creativity and learning" (p.99). Resourcefulness, flexibility and creativity are key to critical thinking and the ability to respond to emergencies. These skills can be developed and honed through a robust continuing education program. CIPHI is encouraged to raise awareness of these core competencies as valued characteristics amongst the membership and reward those members who display these concepts through their professional activities, initiatives and networks.

Changing CIPHI into a learning organization is a joint responsibility of its members and the board. It is critical that certified members who are leaders find ways to encourage the personal growth and development of all members. Managers as well as front line staff must be committed to advancing knowledge by supporting and participating in research that leads to positive environmental health outcomes. Providing, encouraging and taking opportunities for personal and professional growth and development will be a benefit to all.

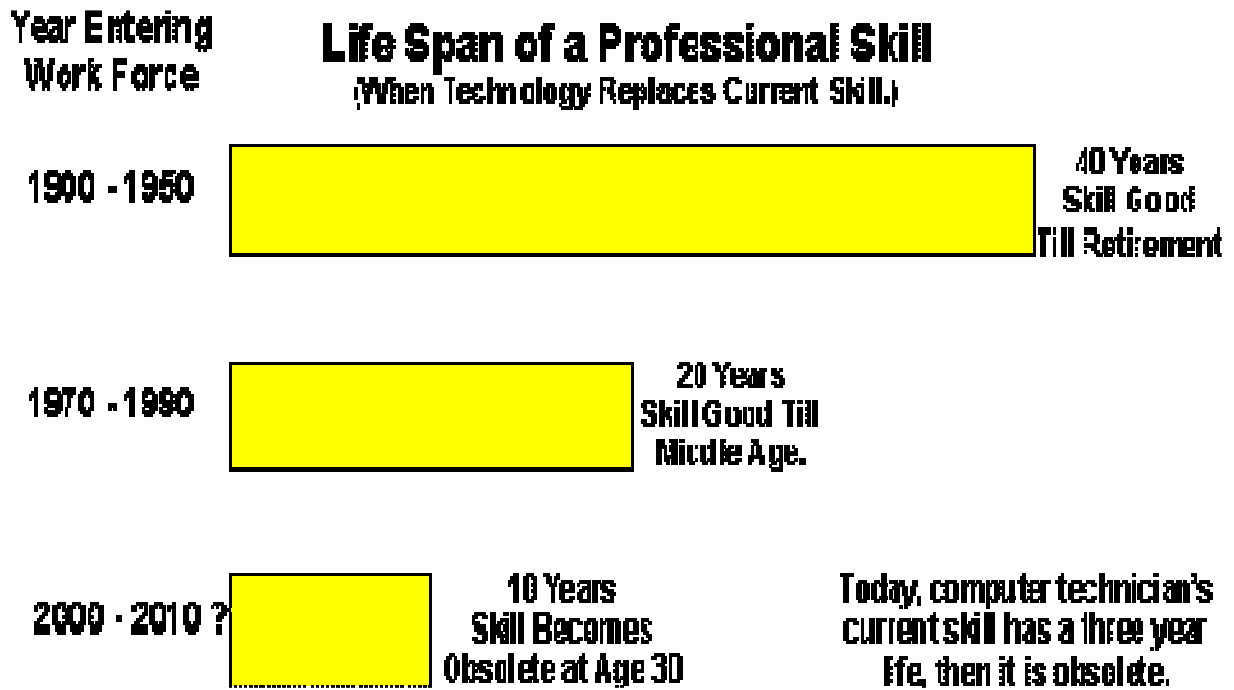
It is through measures such as these that CIPHI and its members will be able to assert with confidence that all of its members are indeed competent, no matter their length of time in the field. Well informed and highly capable professionals can be relied upon to deal with the challenging, complex and dynamic world of environmental health.

Appendix A



Appendix A: The Continuing Education Triad depicts the three overarching areas proposed as the foundation of an effective continuing education program for maintaining CIPHI certification for current environmental and public health professionals. The triad in blue depicts the focal areas of development including skills and competency development; knowledge attainment and reinforcement; and values and ethics. The impacts of a continuing education program focusing on these areas are depicted in the triad in red as improved environmental health outcomes for environmental and public health practitioners, organizations representing and employing these practitioners and the general public who are the recipients of policy and interventions developed by certified environmental officers.

Appendix B



Appendix B: The Bar Graph above demonstrates how as informations changes more rapidly overtime, the need to relearn skills to maintain commpetent is occurs with greater frequency (Webb, 2000).

Appendix C

<i>Focal Areas of an Effective Continuing Education Program</i>	<i>Suggested Continuing Education Learning Strategies</i>	<i>Behavioural Signs of Successful Learning</i>	<i>Assessment Tools</i>	<i>Overall Outcomes for all Three Focal Areas</i>
Skills & Competencies	<ul style="list-style-type: none"> • Problem Based learning • Traditional Case Studies • Case Method • Workshops • Role Play • Learning Labs for repetitive skill reinforcement • Emergency Scenario Drills • Use of games 	<ul style="list-style-type: none"> • Appropriate use and selection of field equipment • Ability to utilize and access standard operating procedures consistently • Review and interpret test results with consistency • Convey information successfully to various stakeholders • Model skills and competencies consistent with current evidence based best practices 	<ul style="list-style-type: none"> • Consistent demonstration of skills • Ability to apply skills in a complex scenario • Self-Assessment of Learning • Understanding consequences or impacts of one methodology over another • Test of ability to risk assess and utilize the most appropriate measure 	<ul style="list-style-type: none"> • Improved Environmental health outcomes • Gaps from formal undergraduate education are filled • Skills, knowledge and values remain current in spite of changes in research, techniques and demographics • Increased confidence and credibility of comprehensive critical thinking skills • Public confidence in interventions and advice • Ability to adapt to challenging, complex and dynamic environmental health scenarios • Sensitivity to different cultural perspectives in decision-making • Increased accountability for actions and decision-making • Improved collaboration with allied health professionals through opportunities for joint training
Knowledge Attainment & Reinforcement	<ul style="list-style-type: none"> • Conferences • Training on Accessing and Scrutinizing Information • Mentoring techniques • Reflective Learning • Situational debriefings • Computer based learning applications • Traditional in class learning by various methods 	<ul style="list-style-type: none"> • Ability to demonstrate learning through traditional testing methods (i.e. tests, writing papers) • Confidence in relaying information to others with accuracy • Self-Assessment of learning • Learning gap analysis and plan to close gaps with timeline • Ability to successfully use new knowledge in the field 	<ul style="list-style-type: none"> • Examination or test • Application of knowledge in a problem based scenario • Ability to use knowledge appropriately in a risk assessment • Dissertation demonstrating an understanding of material and ability to respond accurately to questions • Research and find accurate and reliable information • Self assessment identifying learning gaps 	

<i>Focal Areas of an Effective Continuing Education Program</i>	<i>Suggested Continuing Education Learning Strategies</i>	<i>Behavioural Signs of Successful Learning</i>	<i>Assessment Tools</i>	
Values & Ethics	<ul style="list-style-type: none"> • Basic training on ethics, values and impact on outcomes/professionalism • Review of code of professional conduct • Psychometric self-evaluations • Modules reinforcing directed thinking • Case studies examining and evaluating various viewpoints and approaches to a problem • Reviewing environmental health matrices and other problem solving tools ethical decision-making • Consistent role-modeling by association executives and local leaders • Cultural sensitivity training to avoid incorrect assumptions • Review individual biases • Communication workshops on meeting various stakeholder needs • Training on frameworks for complex case decision-making • Review powers and impacts of appropriate and inappropriate use 	<ul style="list-style-type: none"> • Model ethical decision-making consistent with organizational codes of practice • Ability to demonstrate learning through case studies and group discussions • Ability to effectively defend ethical decisions made; defense must be consistent with professional code of practice • Ability to self assess on ethical issues, conduct a gap analysis and develop plan to eliminate gaps in ethical foundations. • Confidence in relaying ethical principles to others with accuracy • Understanding of any preexisting biases and how they can impact decision-making • Develop a framework of contacts (preferably interdisciplinary) to assist in decision-making related to ethical concerns • Ability to document ethical rationalization when professional decisions are made 	<ul style="list-style-type: none"> • Consistent demonstration of ethical decision-making in practice • Ability to apply ethical guides in a complex scenario • Demonstrations of integrity in decision-making and documentation of ethics and values as part of the decisions made • Self-Assessment of ethical grounding • Understanding consequences or impacts of failure to be ethical in applying environmental health interventions • Use of ethical consideration in risk assessments to determine the most appropriate intervention given specific community needs and respect for various perspectives of truth. 	

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