DISCUSSION PAPER

Issue: Board of Certification Oral Examination Consistency

Prepared for: CIPHI - Board of Certification

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BACKGROUND

The Certificate in Public Health Inspection (Canada), CIPHI (C), is granted by the Canadian Institute of Public Health Inspectors to those candidates who fulfill the requirements set forth in the Regulations Respecting the Certificate in Public Health Inspection (Canada) and Governing the Board of Certification of Public Health Inspectors.

This is a certificate of qualification and is intended to meet the needs of the provinces, municipalities, federal government, and other employers of qualified Public Health Inspectors. The exam should verify that the candidate is able to function in the field of Environmental Health in an entry-level position.

Candidates for certification must satisfy three components: education, practical experience, and examination. The examination for certification is comprised of written reports and oral board examination by a panel of three persons. Eligibility for membership on the panel is determined by BOC policy.

The BOC has received feedback from board members, candidates, panel members and provincial exam coordinators that there are inconsistencies across Canada in the examination process. This includes the marking of reports, content of questions presented to the candidates, scoring standards used by different panel members and assignment of overall score.

It is perceived that these inconsistencies result in a candidate’s success being dependent on the province where the exam is administered and/or who was on the panel, rather than their knowledge and aptitude for the profession.
Also, criticism of the process has led to difficulties recruiting volunteer examiners.

The Board of Certification has identified this as an issue that needs to be addressed in order to ensure that the certification of public health inspectors is a fair and meaningful process and achieves the goals of the organization.

**DISCUSSION**

In preparation of this report an on-line search was made to identify similar certification processes and review what methods were shown to ensure exam consistency. The most comprehensive information regarding the examination process found to date were on the US National Athletic Trainer’s Association BOC (NATABOC) and the Alberta College of Paramedics websites. CIPHI’s BOC process differs in that it an oral board examination Vs a written exam and it is a national certification process that occurs simultaneously across Canada twice a year. However, the same principles of standardization and accuracy of scoring recognized by these agencies as being the cornerstone in producing competent, qualified professionals could be applied to CIPHI’s BOC.

These principles and where the current BOC examination process stands in this regard are as follows:

**CONSTRUCTION OF A CONTENT-VALID EXAM**

The quality of a certification exam can be measured by the following characteristics:

- The content is job related and should cover areas where lack of knowledge could result in a threat to the public’s health and safety.
- The exam is reliable or consistent, meaning that a candidate’s scores should not be affected by different scoring standards used by different examiners or by a particular set of exam questions they are presented with.

The development of an exam can be undertaken in different ways and the complexity of this process is dependent on the nature of the exam. Regardless, the process should include:
• Identification of the job characteristics of an entry level candidate by subject matter experts
• Development of a guide or template for determining the content of the exam (i.e.: the percentage of the exam that should be devoted to each subject area.)
• Development of questions (and answers) based on the guide and validation of the questions by other subject matter experts.
• Development of the exam through random selection of questions from each subject area.
• Review of exams must be done on a regular basis to ensure validity and consistency of results.
• Incorporation of reliability testing using proven statistical methods or through “inter-rater reliability” which involves the comparison of ratings of two or more examiners.
• Determination of what constitutes a defensible passing score on the exam and how the score is arrived at (i.e. marking criteria for examiners)

Current BOC Examination Development Process

• Criteria for examination is set in administrative policy #4
• Generally, a bank of questions is available in each province through the provincial exam coordinator. Panel members either use these questions or devise their own based on their understanding what the knowledge of an entry-level candidate should be in the subject area that is being tested. Whether or not they are reviewed by the exam coordinator prior to the examination appears to vary from province to province.
• There is no formal reliability testing or revision of examination questions undertaken by the examiners or the BOC.
• A passing score is set in BOC policy, however there is no measure as to how the score is derived. Each panel member individually scores the questions they have developed and presented to the candidate. A candidate must receive a passing score from each examiner to achieve an overall-passing grade. This method cannot be considered a good test of reliability for the exam when there is no consensus required by examiners as to the overall suitability of the candidate.
EXAMINER TRAINING

- The importance of examiner training cannot be understated. NATABOC sees this as “the single most important element of quality in administering and scoring the practical exam as it helps to ensure standardization and accuracy in scoring”.

- Training provides examiners with standardized information to assist them to develop exam questions and score candidates in a manner consistent with other examiners and ensure a fair and impartial judgement of the candidate’s abilities. This is especially crucial to a national certification process that faces communication challenges due to the wide geographic dispersal of examination boards.

Current BOC Examiner Training

- No formal national training process supported by BOC
- Training of examiners takes place on an ad hoc basis depending on the policy or resources of provincial exam coordinators. This may take the form of a discussion over the phone between the examiners and coordinator.
- Training generally consists of familiarization of examiners with BOC policy for exam criteria through phone discussion or meeting with examiners prior to the exam.

FORMAT OF EXAMINATION

In order for a certified practitioner be recognized as such and for the certifying body to retain credibility the format must be the same regardless of where or when it is administered within the jurisdiction of the board.

Current BOC Exam Format

- Format consists of oral board examination and two written reports
- Criteria for how, when and where examinations take place are set in administrative policy #4 Part 2.
• BOC policy that requires evidence of compliance be submitted to BOC before certification is awarded to candidate

EXAMINATION ELIGIBILITY

• Individual Boards of Certification should require that candidates meet certain prerequisites that make them eligible to sit the exam leading to certification.
• BOC’s must have an administrative process in place to monitor that this requirement is complied with in order that potential candidates are treated fairly and that the credibility of the certification process is maintained.

Current CIPHI BOC Exam Eligibility

• Eligibility is set in policy and all candidates apply to a BOC administrator requesting exam registration.
• Once eligibility has been confirmed, provincial exam coordinators are advised as to whom upcoming candidates are.

CONCLUSION

In the areas of exam content and examiner training the CIPHI BOC oral examination process falls short of the principles of standardization and accuracy of scoring generally recognized as being the cornerstone in producing competent, qualified professionals.
OPTIONS

#1  Continue with the current oral board examination process based on administrative policy.

Pros

- Does not require intervention by the BOC and place any additional burden on board resources

Cons

- Leaves the BOC vulnerable to on-going criticism as to whether examinations are equitably administered and are an accurate assessment of the competency of entry-level Environmental Health professionals

#2  Adopt Guidelines For Oral Board Examinations (Draft Nov/03)

Pros

- Will assist in clarification of roles and responsibilities of exam coordinators and panel members
- Provides templates for use by exam coordinators aimed at reducing workload and providing a consistent approach.
- Builds on and supports BOC administrative policy

Cons

- Continues to place the onus on individual panel members to develop questions which could vary widely from province to province
• Continues to place the onus on individual exam coordinators across the provinces to decide on appropriateness of panel member questions

• No formal process in place to ensure that panel members are adequately trained in the exam process and fully aware of their roles and responsibilities and the expectations of the BOC.

#3 The BOC develop and manage a set of national examination questions and answers that incorporate recognized principles of standardization and scoring.

Pros

• Exam quality can be measured using characteristics of content-valid examinations.

• Candidate’s scores should not be affected by different scoring standards used by different examiners or by a particular set of exam questions.

• Accusations that level of “difficulty” of exam varies from province to province will be invalidated.

• Responsibility for ensuring that exam content meets principles of standardization rests with the BOC rather than individual panel members and exam coordinators

• Will enhance current BOC policies and guidelines aimed at producing competent, qualified professionals in the field of Environmental Health

Cons

• Security of examination questions will be an on-going issue

• Greater workload on BOC in reviewing and revision of examination material on an on-going basis.
Examiners reach a consensus as to what mark the candidate receives for each question based on the pre-determined marking criteria and the response of the candidate recorded by each examiner.

Pros

- This method can be considered a good test of reliability for the exam when there is consensus required by examiners as to the overall suitability of the candidate.

- Reduces the risk that a candidate response is not accurately recorded if multiple examiners are making notes.

- One examiner’s score is not responsible for candidate failing examination.

- Will reduce the likelihood that candidate will have grounds to appeal the marks that were decided upon by a panel Vs individual examiners.

Cons

- Requires a high level of cooperation between panel members with diverse subject matter expertise

- May require a change of policy

- Lengthens the process

- Examiners must possess good listening and recording skills in order to record candidates response to subject matter they may not be familiar with.
#5 Training of Examination Coordinators and Panel Members

Pros

- “the single most important element of quality in administering and scoring the practical exam as it helps to ensure standardization and accuracy in scoring”.

- Training provides examiners with standardized information to assist them to administer exam questions and score candidates in a manner consistent with other examiners and ensure a fair and impartial judgement of the candidate’s abilities. This is especially crucial to a national certification process that faces communication challenges due to the wide geographic dispersal of examination boards.

- Scope of training can be tailored to meet manpower resources available (i.e.: web site training course, provincial train-the trainer course administered by BOC on an as need basis, national training workshops in conjunction with CIPHI Educational Conferences)

Cons

- Will require the development of a training regime by the BOC and may take some time to implement based on available manpower.

#6 Develop and institute an on-going audit of the examination process by the BOC

Pros

- Places accountability on the examiners and exam coordinators in regards to following policy and guidelines.

- Scope of audit could be tailored to meet manpower resources available (i.e.: paper audit, phone interviews, questionnaires, and exam audit)
• Board of Certification would be seen as taking the next step in policy setting which is to monitor if the policies and guidelines are relevant and achievable and take appropriate corrective action when required.

Cons

• Will require the development of an audit function by the BOC and may take some time to implement based on available manpower and expertise.

• Could be viewed negatively by volunteer examination panel members who feel their expertise or professionalism is being questioned.

#7 Limit number of examinations in locations where majority of applicants reside or educational institutions are located and have exams administered more closely by the BOC (to replace exam boards in each province)

Pros

• Will ensure greater consistency in examination delivery and assignment of marks due to limited numbers of examiners involved in the process

• Reduces burden on each provincial exam coordinators who would otherwise administer two exams per year.

• Would require a minor policy change as provisions are already in place to allow regions to combine examinations (Sec 4.3.1 (2))

• Would accommodate majority of candidates

• Institutions could possibly host exams.

Cons
• Greater numbers of candidates concentrated in one location will necessitate greater numbers of panel members and interview rooms or holding exams over two or more days. May place too much of a burden on single exam coordinator and require greater participation by BOC.

• May be an added cost to BOC if panel members must be drawn from outside examination area.

• May place a burden on the minority of candidates to travel to exam locations outside their province of residence.

RECOMMENDATION

BOC develop a three year strategic plan based on the following schedule:

1st year - Options 3, 4, and 5 be completed and incorporated into draft guidelines for Oral Board Examinations, leading to adoption of these guidelines. These options are most crucial to ensuring that exam consistency is implemented without significant changes to the current examination process.

2nd year – Option 6 An audit process is a logical next step to ensure that options implemented in year one are effective.

3rd year - BOC should determine whether the options implemented in year’s 1 and 2 have sufficiently addressed the consistency issue and whether adoption of Option 7 is necessary.

The Board of Certification voted in favour of accepting these recommendations in June 2003.