European accreditation and the future public health workforce

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Background: In 2011 the Agency for Public Health Education Accreditation (APHEA) was initially launched focusing on Master level (second cycle) education. Methods: Between 2012 and 2013 the Association of Schools of Public Health in the European Region, APHEA and partner schools conducted a study on the compliance of Master level programmes of public health to the accreditation criteria. A web-based survey of second cycle programmes of public health across 29 countries was conducted using the APHEA criteria. The 29 countries were categorized into four regions: Northern, Southern, Central and Eastern and Western. We applied a Chi square test to identify regional differences with regard to the compliance of the programmes to the criteria. Results: Data from 51 out of 71 schools contacted were analyzed. The compliance to the two themes of student and faculty exchange and quality management were lowest for programmes of public health throughout the EHEA. There were significant differences in the compliance between the regions with higher compliance in the Northern European region. Conclusions: Student and faculty exchange and quality management are essential for schools and programmes of public health to improve the quality of their education through expanding international knowledge and the pertinence of skills taught within European and national contexts. The results show that there are intrinsic issues with exchange and quality management as well as the role of national accreditation agencies in defining public health education for the future workforce.
criterion. Other criteria and standards were reviewed during this process but we did not use them for the following reasons. Criteria from Western Association of Schools and Colleges (WASC)\(^19\) and EQUIS\(^20\) were institutionally based. The UK Quality Assurance Agency for Higher Education or QAA\(^21\) were reviewed but not used as they were either institutionally based or used systems not seen as compatible with European accreditation.

We tabulated the resultant criteria against the APHEA criteria. There were 23 sub-criteria found mentioned three or more times within different combinations of the reviewed agencies’ criteria. Any APHEA sub-criteria which were mentioned three or more times by other agencies would be included in the survey. The questionnaire asked for the compliance of each sub-criteria with three possible answer categories: (i) We comply, (ii) We don’t yet comply but we are in the process of trying to reach this level and, (iii) We don’t comply. The survey began by asking identifying questions such as age and location of the programme as well as the existence of other agencies would be included in the survey. The questionnaire was distributed by email (N = 71) and sent a link to a web based survey. This number was 12 schools less than the membership list of ASPHER at that point in time, as in some cases the schools were known not to have master level public health education and in several other cases the contact points in the schools were in transition and no new details were available. The web-based survey was developed by the ASPHER web administrators using php scripting which stored all the responses within a Comma Separated Values file which was then exported into SPSS. Once completed by the respondent an email was also sent to the survey coordinator where the data was presented in an html tabulated form in which missing or erroneous data could be easily identified.

The whole process of distribution and collection took two months to complete with a total of four rounds of contact to the schools. The first response came on 15 February 2013 and the last response was received on the 12 April 2013. Once the data had been received, the country identifiers were used to assign the country to four principal sub-regions of the EHEA: Northern Europe (NE), Western Europe (WE), Southern Europe (SE) and Central Eastern Europe (CEE). The United Nations regional definitions\(^22\) of North/East/South/West were used as a basis but refined to recognize the similarities in countries most typically associated with the Central and Eastern European region, namely those countries typically seen as post socialist or transitional countries.

We aggregated the responses of the 23 individual sub-criteria by converting the three responses, (i) we comply, (ii) we don’t yet comply but we are in the process of trying to reach this level and, (iii) we don’t comply, into a binary yes/no response. The response (i) we comply formed a 1 integer (yes) whereas the last two responses formed a 0 integer (no). For the second step, if any of the seven overarching criteria contained at least one sub-criteria value of 0 (no) the overarching criteria was equally assigned a 0 (no). This process produced the data found in table 1. For the three individual sub-criteria found in table 1 only the first step of this process was taken. We applied Fischer’s chi square exact test to test for differences in compliance to the sub-criteria (yes/no) between the four regions. We used SPSS version 17.0 for statistical analysis and excel to create the tables.

### Results

A total of 61 out of 71 (86%) programme representatives responded. From this number we excluded 6 programmes for not having a Master of Public Health type award, 2 programmes did not want to participate and 2 programmes returned substantially incomplete questionnaires, they had only completed the first eight ‘identifying’ questions. As a result we analyzed data deriving from 51 programmes. The regional breakdown of the 51 programmes was as follows: Northern Europe (NE) = 12 schools, Western Europe (WE) = 10 schools, Southern Europe (SE) = 8 schools and Central and Eastern Europe (CEE) = 21 schools.

Within the questions regarding national accreditation bodies 84% (N = 43) of programmes indicated that they were licensed and/or accredited by their national authorities. Only one out of the 51 programmes left one sub-criterion blank in the first criterion and

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Average compliance with the overarching criteria in the four European regions</th>
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<tbody>
<tr>
<td>Overarching-Criteria</td>
<td>Aggregated EHEA Regional compliance</td>
</tr>
<tr>
<td></td>
<td>NE</td>
</tr>
<tr>
<td>Criterion 1: Governance and Organization of the Programme</td>
<td>100%</td>
</tr>
<tr>
<td>Criterion 2: Aims and Objectives of the Public Health Programme</td>
<td>100%</td>
</tr>
<tr>
<td>Criterion 3: The Curriculum</td>
<td>75%</td>
</tr>
<tr>
<td>Criterion 4: Students and Graduates</td>
<td>100%</td>
</tr>
<tr>
<td>Criterion 5: Human Resources and Staffing</td>
<td>100%</td>
</tr>
<tr>
<td>Criterion 6: Supportive Services, Budgeting and Facilities</td>
<td>100%</td>
</tr>
<tr>
<td>Criterion 7: Internal Quality Management</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>NE</td>
<td>WE</td>
</tr>
<tr>
<td>0.026</td>
<td>0.046</td>
</tr>
</tbody>
</table>

*Chi Square exact test P values. NE, Northern Europe; WE, Western Europe; SE, Southern Europe; CEE, Central and Eastern Europe.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>The three least complied sub-criteria in the four European regions</th>
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<tbody>
<tr>
<td>Sub-Criteria</td>
<td>Aggregated EHEA</td>
</tr>
<tr>
<td></td>
<td>Regional compliance</td>
</tr>
<tr>
<td></td>
<td>NE</td>
</tr>
<tr>
<td>Criterion 3.6: International exchange of staff and students is facilitated</td>
<td>75%</td>
</tr>
<tr>
<td>Criterion 7.1: QMS in place including faculty / students / stakeholders</td>
<td>100%</td>
</tr>
<tr>
<td>Criterion 7.2: Continuous data collection</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>NE</td>
<td>WE</td>
</tr>
<tr>
<td>0.886</td>
<td>0.008</td>
</tr>
</tbody>
</table>

*Chi Square exact test P values. NE, Northern Europe; WE, Western Europe; SE, Southern Europe; CEE, Central and Eastern Europe.
we deemed this sufficiently small (6 of the 7 sub-criteria had been answered) to ignore when aggregating the data for the over-arching criterion. Table 1 shows the levels of compliance for the seven overarching accreditation criteria according to European region. The regional location of the programmes was significantly associated with compliance rates in five of the seven overarching accreditation criteria.

Out of the 23 sub-criteria, three areas demonstrated the least amount of compliance (identified in table 2). The first question was ‘international exchange of staff and students is facilitated?’ where non-compliance pervaded all regions but where the Southern and Central Eastern regions displayed the least compliance. The average responses from all 51 programmes were ‘we comply’ = 67%, ‘we don’t yet comply but we are in the process of trying to reach this level’ = 23% and ‘we don’t comply’ = 10%.

The second area covered the two sub-criteria under the seventh accreditation criterion ‘quality management systems (QMS).’ The first sub-criteria enquired if the programme had, ‘an operational internal quality management system is in place, broadly inclusive of staff, students and stakeholders’. The average results were, ‘we comply’ = 67%, ‘we don’t yet comply but we are in the process of trying to reach this level’ = 27 and ‘we don’t comply’ = 6%. The second part of the question asked if, ‘there is continuous data collection and analysis that assures necessary modifications in the learning objectives, the content of modules, staffing and pedagogical approaches. Results of analysis are relayed accordingly to senior management, staff and students’. Once again the average responses were ‘we comply’ = 67%, ‘we don’t yet comply but we are in the process of trying to reach this level’ = 27 and ‘we don’t comply’ = 6%

Table 2 shows the sub-criteria with the lowest compliance stratified by European region in which the programmes were located. Unlike exchange issues, the compliance to QMS significantly differed between the regions with Southern and Western European regions exhibiting the lowest compliance.

### Discussion

The research clearly demonstrates that issues concerning student and faculty exchange and quality management in programmes of Public Health throughout the EHEA are a cause for concern with around a third of schools falling within the ‘non-compliance’ category. In many ways both exchange and quality management demonstrate two desired and complementary forces upon public health education: global knowledge and experiences adapted to local contexts determined by national stakeholders, which has been a constant in the development of schools and programmes for many years. The questions then arise, if these are so important, why are they constant in the development of schools and programmes for many years.11 The questions then arise, if these are so important, why are we in this position and what solutions can be sought?

The research identifies that student and faculty exchange throughout the EHEA has a non-compliance range between 25 and 38% (see table 2). Exchange is included in accreditation to monitor the programmes alignment/adherence with the Bologna processes and as student and faculty exchange is a central tenet of the Bologna declaration which all countries of the EHEA have by default signed, why does it remain one of the weakest areas of compliance? With 84% of programmes licensed or accredited by national agencies how are these agencies ensuring the integration of their governments’ international treaty obligations?

Exchange of students and faculty is a core aspect of mobility and a hallmark of internationalization. Exchange can be seen within a context benefiting individuals from increasing competences, knowledge and skills through to organizational change models in setting academic standards and institution building. The use of the aforementioned PEER review as a framework for developing schools and programmes across the Central and Eastern Region provides a

Good example. Faculty exchange was seen as a key element and focused upon both increasing and improving academic capacity but also on giving schools first-hand experience and insight into the operational intricacies of differing European models of education from module design, through to pedagogical approaches and assessment. The returning faculty were expected to adapt their knowledge to their local situations.

However, exchange generally requires funding. There are funds available through European instruments but these require that schools have an Erasmus University Charter which not all schools possess. Language barriers will continue to stifle both student and faculty mobility. In some countries mobility of students is deterred by compulsory testing on the return home. For both students and faculty, mobility requires an element of ‘up-rooting’ which does not always fit in personal life which is especially difficult if programmes focus on part time teaching of professional staff. A limitation of this line of enquiry is that the question does not specify the constituent parts of ‘exchange’. European Union funding documents state that mobility covers faculty for teaching, providing training, participation in structured courses or training events (excluding conferences) or job shadowing/observation and for students, a study period which may include a traineeship. All of these activities have to occur in a foreign country and therefore is open to differences in interpretation where schools may have included wider notions of exchange, such as, conferencing or joint research projects.

Adapting to local situations mentioned earlier is a central feature also for QMS. This activity is aimed at improvement through listening to and integrating the needs of the (most notably national) stakeholders. In theory this is commendable but the low compliance may be a result of its impracticability. The EHEA consists of 53 countries with large diversities, inequalities and understandings of public health. On the ‘Western’ side there are the older European Union states who, over the last 30–40 years, have been embracing new public health which, ‘includes all possible activities known to be useful and effective in promoting health and in the prevention, treatment and rehabilitation of diseases for the individual, the community, and the population as a whole’. Ironically the term ‘new public health’ was first coined over a century ago in 1913 in which public health was viewed as a composition of hygiene and sanitation for the control of infectious disease at an individual level which is historically not too dissimilar to the understanding of public health developed and lingering in the ‘Eastern’ side of the EHEA. On this latter side, many countries and their stakeholders continue to perceive public health through an historical san-epidemic paradigm which placed a narrower focus on medical surveillance of infectious diseases and sanitary issues through a network of public health centres in nearly every district of the country for the surveillance and control of all potentially preventable diseases. Such understandings have created a situation of high premature mortality, up to four times higher in some former Soviet states than in Western Europe. In such circumstances it will be very difficult for programmes to approach potential stakeholders as they will not consider themselves to be ‘public Health’ stakeholders. To integrate ‘out-moded’ stakeholder opinions in such a climate may also be counter-productive by reflecting and reinforcing historical understandings.

Even in more westernized systems stakeholder input has limitations as many (sometimes the majority of) stakeholders do not have an education in public health. This may raise issues in understanding where or whether stakeholders fit in a ‘public health’ system and what the expectations of public health education are if systems and workforce survive and thrive on untrained individuals.

The low compliance rates in the Western and Southern regions may well be also indicative of a continued ‘ivory tower’ approach to education where programmes are disconnected and non-responsive to the environments they are meant to serve. Finally, the low compliance in the first sub-category may also be due to a
longstanding confusion between what constitutes and differentiates quality management from quality assurance.\textsuperscript{52} Quality Management is used here to refer to the philosophy of continuous improvement, customer focus and integrated management systems\textsuperscript{53} whereas Quality Assurance is seen as a process for establishing that provision (input, processes and outcomes) fulfils expectations or measures up to minimum requirements\textsuperscript{44} generally through the use of standards or criteria.

Conclusion

The results of this research focus on the least compliant themes of public health educational programmes to the new European Accreditation: exchange and quality management. Both of these sub-criteria stress the importance of programmes and schools of public health to learn from within and outside of their national systems with the aim of improving the quality, vision and employability of their respective public health workforces but also their accountability to societies they serve.\textsuperscript{46}

However, problems persist. Exchange of students and faculty (mobility), although enshrined in legislation is, in many countries poorly implemented and enforced. QMS which inherently rely upon feedback from stakeholders are limited by a lack of understanding and dialogue from both schools and stakeholders.

National and European governments will need to support (and enforce) faculty and student exchange. Schools should also understand this activity as a long-term investment for internal quality improvement. For QMS there is a need for schools to be trained in some basic concepts and instruments to remain in tune with the needs of the field and outside of their ivory towers. This activity should be seen as improving internal quality rather than ticking bureaucratic boxes.

As to identifying the stakeholders within the public health workforce it will be interesting to see how the WHO’s new essential public health operations (EPHOs) and most particularly EPHO 7 on workforce, will assist in this manner by identifying and categorising responsibilities within the public health workforce. The EPHOs, e.g. could be used by schools for both identifying stakeholders and also informing these stakeholders of how they are seen within an international perspective. This would give good ground toward understanding the competencies needed in each arm of the workforce and this work has already begun.\textsuperscript{46} This will be an interesting avenue as previously the WHO’s Health For All targets helped initiate the latest version of ‘new public health’ and the new EPHOs, hold the possibility to define public health in terms of function-related competences which can help schools determine both the content and delivery of their programmes.\textsuperscript{47} This is an area that perhaps networks or research consortia should concentrate upon. In all cases public health programmes should be keeping in contact and listening to their alumni, which does not seem to be a common exercise at present.

Many of these issues may be become calcified because national accreditation systems act as gatekeepers to the existence of schools and programmes and these are intrinsically tied up with the financing and politics of their education systems.\textsuperscript{48} Disregarding the potential for conflicts of interest these systems tend to be non-sector specific to public health but rather limited to generalized academic measurements. As a result, programmes and schools of public health are legally, financially and politically guided in their development through generic education standards set at a national level which are not necessarily focused upon the delivery of a competent public health workforce at either a national, European or global level. The role of European accreditation should therefore be to add value to these national systems through sector specific and internationally accepted standards and benchmarks. These should be focused on the relevance of education for real-world public health and not only on the formal academic measurements of the national agencies which are, at present, applied equally to a programme or school of public health, engineering, law or aesthetics.

Funding

Research Project supported by: Lifelong Learning Programme. Erasmus Accompanying Measures Reference: 527903-LLP-1-2012-1-BE-ERASMUS-EAM Project Title: Public health Education Reform For Equity in Quality of Training.

Conflicts of interest: None declared.

Key points

- European public health education accreditation system implemented since 2011.
- Compliance to accreditation criteria by second cycle public health education programmes across the European Higher Education Area (EHEA) exposed differences.
- There is a regional significance to compliance with Northern Europe having the highest compliance and Southern Europe the lowest.
- The two lowest complied themes across the whole of the EHEA were exchange of students and faculty and quality management systems.
- These two themes can help schools and programmes learn from international benchmarks within local contexts.

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