

## ► E-health and the Universitas 21 organization: 4. Professional portability

Michael A Goldberg\*, Zena Sharman<sup>†</sup>, Brandi Bell<sup>‡</sup>, Kendall Ho<sup>†</sup> and Niv Patil<sup>§</sup>

\*Universitas 21 Global Pte Ltd, Singapore; <sup>†</sup>Division of Continuing Professional Development and Knowledge Translation, Faculty of Medicine, University of British Columbia, Vancouver; <sup>‡</sup>Department of Communication Studies, Concordia University, Montreal, Canada; <sup>§</sup>Department of Surgery, Faculty of Medicine, University of Hong Kong, Hong Kong, China

### Summary

Professional portability is the ease with which health-care professionals can move in person or virtually across barriers, and among and between jurisdictions, to transfer their knowledge, skills and care. As part of the Universitas 21 (U21) project on e-health, professional portability was examined using a SWOT analysis (strengths, weaknesses, opportunities and threats). The analysis showed that many factors hamper the development of global professional portability; on the other hand, the potential exists to substantially improve access to health care and its quality around the world. The study suggests that professional portability can be advanced in a number of ways. These include exploring policy, technology and medical training. The field of professional portability, while of considerable relevance to health and other professions, is undeveloped and is clearly an area that would benefit from discussion, research and global collaboration.

### Introduction

Global e-health has the potential to enable health professionals to study and work across national borders.<sup>1</sup> Global institutions such as universities are in a position to address the opportunities and challenges associated with global training and education in order to facilitate the future portability of professional credentials, including degrees.

In 1997, a group of leading research universities from 12 countries and four continents formed the Universitas 21 (U21) consortium to address issues associated with global training and education.<sup>2</sup> Two of the consortium's initial foci were e-learning and professional portability among schools and jurisdictions. Professional portability in the health professions can be defined as the ease with which any health-care professional, recognized as an appropriately skilled practitioner, expert or trainee, is able to move in person or virtually across barriers (including political, cultural, social and temporal

barriers), and among and between jurisdictions, to transfer knowledge, skills and care.

The scope of professional portability in the health professions is broad, spanning a range of policy issues and opportunities in clinical work, and in training and education. Technological change, particularly in information and communication technology (ICT), allows health professionals to practise and share their expertise and information across legal jurisdictions on a global basis. This calls into question the future value of traditional geographically based jurisdictions and accreditation and licensing schemes. This situation is being faced by all professions and licensing bodies around the world and has led the United Nations to become active in the area to prepare for greater professional portability to meet the changing technological environment and the growing global need to share professional expertise more broadly. Similar forces resulted in the Washington Accord in Engineering<sup>3</sup> (see Box 1).

To enable professional portability, global e-health opportunities may include faculty development and exchange, as well as teleworking or mobile working (e.g. the ability of a clinician to attend to his/her own patients at a distance). Global e-health also enables the sharing of expertise in patient management across

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Correspondence: Dr Michael A Goldberg, Universitas 21 Global, #01-01, UIC Building, 5 Shenton Way, Singapore  
(Fax: +65 6410 1358; Email: michael.goldberg@u21global.com)

**Box 1** The Washington Accord<sup>a</sup>

The Washington Accord was signed in 1989. It is an agreement between the bodies responsible for accrediting professional engineering degree programmes in each of the signatory countries. It recognizes the substantial equivalence of programmes accredited by those bodies, and recommends that graduates of accredited programmes in any of the signatory countries be recognized by the other countries as having met the academic requirements for entry to the practice of engineering. The Washington Accord covers professional engineering undergraduate degrees. Note that engineering technology and postgraduate-level programmes are not covered by the Accord. The signatory countries of the Washington Accord are Australia, Canada, Ireland, Hong Kong, New Zealand, South Africa, the United Kingdom and the United States.

<sup>a</sup>See [http://www.washingtonaccord.org/wash\\_accord\\_faq.html](http://www.washingtonaccord.org/wash_accord_faq.html)

institutions (e.g. telementoring, where a surgeon in Hong Kong with expertise in nasopharyngeal carcinoma, for example, can guide a surgeon in another country about a similar case).

The aim of the present study – which was part of the U21 consortium's work in global e-health<sup>4</sup> – was to examine the issue of professional portability in the context of global e-health.

## Methods

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We conducted a SWOT analysis (strengths, weaknesses, opportunities, threats), based primarily on our experience in the domain of professional portability. We also conducted a literature review on professional portability by searching the ACP Journal Club, CINAHL, Cochrane Database of Systematic Reviews, MEDLINE and the Web of Science using the search term 'professional portability' in combination with 'e-learning', 'telelearning' and 'knowledge translation'. This search yielded few results, so the SWOT analysis is largely based on our own experience.

## Results

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### Threats to professional portability

There are many threats to e-health for professional portability; these vary in scale and encompass institutional cultures, leadership, policy, geography, and users' expectations and awareness of e-health. Institutions may be resistant to changing the ways things are done, leading to inertia concerning professional portability. Schools may find it difficult to manage change as they adopt new technologies for teaching and exchange. On a broader scale, there is a lack of global coordination because e-health

applications are often developed locally or regionally and conflicting policies affect possibilities for global uses of e-health.<sup>5</sup> In addition, e-health tools are not perceived to be easy to use. High expectations can be a threat to successful e-health deployment. For example, users may expect e-health to deliver realtime interaction or consultation on demand, services that are not always feasible to deliver because they require significant investment in time and technical resources. Moreover, users may lack awareness of the possibilities of global e-health. There is no clear evidence to demonstrate that e-health activities work.<sup>6</sup> Finally, the logistics involved in global communications (e.g. time zones) complicate attempts at inter-jurisdictional activity. All of these factors can hamper the development of global professional portability.

### Opportunities for professional portability

Opportunities are plentiful for professional portability in the context of e-health. E-health facilitates student and teacher exchanges, broadening horizons of learning through international training. Trainees and educators can forge international relationships and gain experience by working in other countries, thereby augmenting ties between institutions and nations. Trainees and educators build global relationships, leading to international cooperative education opportunities and traineeship placements. E-health supports the development of professional competence and standards in developing countries and may facilitate the equalization of health practices across countries. The sharing of best practices between educational and health institutions, in an effort to build global clinical practice guidelines, can be tested and used to develop global standards of care. Trainees and educators can engage in structured and unstructured e-health learning and research activities (e.g. a videoconference and online case presentation between medical students at great distances). E-health allows for the combination of education and global surveillance of health trends (e.g. the first case of suspected respiratory infection in Asia alerted other universities about emerging infections). Harnessing these factors will accelerate not only the maturation of professional portability but also substantially improve global health access and quality of health.

### Weaknesses of professional portability

E-health, although holding considerable potential for professional portability, also has weaknesses that must be addressed for successful deployment. It is difficult to make some e-health applications work in practice

(e.g. compatibility is considered integral to interoperability).<sup>7,8</sup> It can also be difficult to arrange realtime interaction on a global scale. Some institutions lack technical support and services, a situation made more difficult by varying degrees of technological competence among potential e-health users. Certain e-health applications are expensive to implement and maintain. There are varying degrees of interest and investment in e-learning technologies among universities, perhaps because e-learning is still in its infancy and its efficacy has not yet been proven. On a global scale, there is a lack of e-health policies to guide implementation and usage (e.g. liability, patient confidentiality and privacy).<sup>9,10</sup>

### Strengths of professional portability

The strengths of e-health for professional portability are many, particularly when the advantages of leading academic and health-care institutions are recognized. The technological infrastructure for e-health is more likely to be in place at these institutions, and numerous universities have established e-learning curricula and learning objects that may be available to share between institutions. Research-intensive educational institutions also have the capacity to provide mentorship in biomedical health, population health and health policy research. E-health technology enables students to interact at a global level (e.g. conferences and seminars via videoconference) and share experiences and best practices globally (e.g. dealing with suspected SARS cases). Diverse medical cases around the world can provide educational materials for global discussions, and students are currently showing interest in using new technologies for education and the mutual sharing of information. In summary, the strengths of global educational institutions and existing linkages between them provide a foundation for the development and implementation of professional portability.

### Discussion

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The present study identified a number of strategies and recommendations for advancing professional portability through e-health. First, efforts to advance professional portability must account for local needs and capacities and must not occur at the expense of local health-care professional development. They must strengthen the sustainability of local health-care support. Second, a number of obstacles (legal, geographic, economic) must be overcome in order to achieve a global web of support. For example, the

ability to transfer liability coverage, especially when neither doctors nor underwriters have developed the confidence in the pursuit of care, will need consideration. Third, there is a need for a coordinated, multidisciplinary effort to critically examine professional portability, identify key issues and determine how to address them. Portability and credentialing risk being profession-specific, when they should draw on commonalities and growing teamwork among professions. Fourth, to start a professional portability-training path, interested institutions should establish a global e-health trial curriculum, create a range of pedagogical tools and identify key challenges as the curriculum develops. Fifth, champions of professional portability must promote international policy discussion to facilitate professional exchanges to overcome licensure issues and medicolegal barriers, enabling global disease surveillance, monitoring and management to be addressed. Sixth, health trainees participating in international exchange programmes must be encouraged to engage with the e-health curriculum as part of their international experience. This group can be used to help fine-tune an e-health curriculum. Finally, in order to evaluate the aforementioned e-health curriculum, there is a need to conduct a study of faculty members and health trainees to explore their perspective on what is entailed by professional portability and whether the e-health curriculum as a demonstration initiative meets their expectations.

The possible applications for global e-health in professional portability suggest there are a variety of areas and contexts to consider. These include policy (as it relates to domains such as professional licensure and portability, health education and e-health), assessment and understanding of the technologies that enable global e-health, as well as assessment and understanding of current and evolving practices in medical training. Future global e-health efforts should explore such varied facets of professional portability. The field of professional portability, while of considerable relevance to health and other professions, is undeveloped. This is clearly an area that would benefit from discussion, research and global collaboration, for the field has yet to be defined and therefore represents an area of tremendous opportunity and importance.

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