



# Educating Health Professionals for a New Century

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*Report from a conference held at Nobel Forum, Karolinska Institutet*

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## **Introduction**

The health systems of today are facing increasing complexity, dramatic demographic changes, increased use of information technology, increased demands from patients to be co-producers of care, as well as an increased focus on care quality, value, and patient safety. There is a shift in focus from the autonomy of the individual clinician to standardization through protocols, guidelines and checklists. For the medical professionals, there are calls for greater focus on developing the leadership and teamwork skills necessary to function in multidisciplinary care processes. Therefore, the education of health professionals must adapt to these demands and become more systems-based and include not only traditional professional skills, but also the skills necessary to improve the way that care is delivered. A prerequisite for this is an interprofessional approach, where doctors, nurses, and public health professionals and more collaborate with each other as well as work more closely with policy and decision makers.

One hundred years after the Flexner report defined how medical education should be designed and delivered, a Lancet commission revisited the question of how we should best educate health professionals in order to meet the demands of today's and tomorrow's health systems. The report, written by a 20-member committee comprised of academic and professional leaders representing health systems around the globe, was entitled, "Health professionals for a new century: transforming education to strengthen health systems" (Frenk et al., 2010). This report became the impetus for an article published in the Swedish Medical Journal (Tomson, Tomson, & Savage, 2012) and a conference held at the Karolinska Institutet on September 28, 2012.

## **Conference aims**

The conference had two aims:

1. Encourage participants to become aware of the need for improving health care curricula so that they are more aligned with and relevant to the needs of health care
2. Encourage participants to, inspired by concrete examples, develop the courage and the capability to do something to improve the situation in their respective institutions.

## **The Conference**

### **Participants**

About 70 participants met for a whole day conference at the Nobel Forum at the Karolinska Institutet. The participants came from Nordic medical faculties and also included leading representatives from Mexico, Pakistan and Uganda. Several Swedish Universities were represented by both students and teachers.

### **Structure**

The conference was divided into three parts. The first was to identify the challenges which are facing educational institutions relevant to their ability to adapt to the needs of health care

systems. The second part involved presentations from and international panel of invited speakers. The presenters represented many of the different stakeholders in the discussions (with the exception of patients). Speakers included representatives from different faculties and educational institutions, health care systems and hospitals, students, and three members of the Lancet commission. This session was rounded off with a plenary discussion where participants reflected on the ideas raised by the speakers as well as on how they related to the challenges they were facing at their own institutions. The third part of the conference was designed as a workshop to encourage participants to explore the interface between health care and health professions education. Inspired by Appreciative Inquiry, participants were asked to discover already existing effective examples of how health care challenges can be met through educational improvements.

## **Part 1: The Challenges**

Participants began by describing the challenges which they faced in their respective home institutions. These were categorized and six themes emerged (See Appendix 1):

1. Culture
2. Leadership
3. Education
4. Strategies
5. Health care work
6. IT

However, the aim of the conference was to encourage participants to see beyond the barriers of today and to discover success stories. To that end, participants were encouraged to leave the challenges behind them and instead focus on identifying success stories from around the globe.

## **Part 2: Reflections on the Lancet commission report**

### **A view from the university**

Jan-Olov Höög, dean of education at the Karolinska Institutet, began the conference by concluding that the role of the health professionals is changing. We need to look at education of healthcare professionals from a systems perspective. Further, education must aim at implementation of evidence-based medicine everywhere.

### **A view from the hospital**

Jan-Inge Henter, Director Research and Education, Karolinska University Hospital, emphasized that education of health professionals must be a top priority. We must challenge the norm that research has been given higher priority than education. One of his observations related to the fact that in Sweden, most clinical teachers for doctors in training are clinically active whereas for nurses most teachers are not clinically active. This constitutes an opportunity for change.

### **Keynote: Three dramatic changes during the last century**

Dr Julio Frenk, Dean of the School of Public Health, Harvard University, in a prerecorded keynote presentation, introduced the findings of the report of the Lancet commission that he had led “Transforming education to strengthen health systems in an interdependent world” (Frenk, et al., 2010). Frenk began by stating that the changes in health, health systems and care since the Flexner-report of 1910 are dramatic. In 1900, global life expectancy was 30 years. In 1984 it had more than doubled to 65 years. The reforms in health care education in the early 1900s and the following developments of health care were among the drivers behind this improvement. However, the challenges that face modern health care today are even more complex and differ fundamentally from 1910 in terms of epidemiology, technological innovation, costs and demands from the population. It is therefore vital to re-evaluate, update and reform education and curricula so that they are relevant to today’s needs in health care. He emphasized the need for inter-professional education with a better integration of the training of public health practitioners, nurses and doctors. To do so requires also a systems-based approach. Another challenge in health systems both globally and locally is the mismatch between needs and availability of health professionals. This is particularly so in resource poor settings.

### **Be brave and change!**

Professor Stefan Lindgren at Lund University underlined the need for educators to think about how they can contribute to the final outcome, i.e. health care outcomes. If we want to improve interprofessional collaboration in health care, it should be taught early on as part of the undergraduate curriculum. But if we are to depart from the traditional approaches to teaching and the traditional curriculum structures, we will need to be brave! If society and the world is constantly changing, so must the educational systems. It is therefore vital that we not only educate health professionals, we also need to help them develop the capabilities to become agents of change.

### **Enormous mismatch between need and availability of health resources**

Professor Zulfiqar Bhutta, Agha Kahn University, Pakistan, stressed the need for multi-professional education and the need to integrate medical, nursing and public health education. He also concluded that there is an enormous shortage of health care workers in some countries and a clear mismatch on a global basis on where health care workers are needed and where they are located. In short, none of the achievements in health care are of any value if they do not reach the poorest of the poor.

### **Need for more resources**

More resources are needed for education. In total, about 100 billion dollars are spent on education of health professionals on a global basis every year. That may seem like a lot of money, but one must be aware that the total global expenditure on health care amounts to no less than 5500 billion dollars which means that only two percent go to education of health professionals. Compared to other industries, two percent is without a doubt a very low figure.

### **Let’s question our assumptions about public health**

Professor Hans Rosling, Karolinska Institutet, reflected that the more money which is available in a country, the more economists you will find. But the relationship is not the same when it comes to sickness and disease – the greater the burden of disease – the fewer the number of doctors!

While there is a necessity to update educational curricula it is similarly necessary to update our assumptions about the world, especially when it comes to those areas of the world we often refer to as low- and middle-income countries. Teachers and students alike must understand that the world with its health problems and health systems challenges is much more nuanced and diverse than we usually acknowledge. And this has consequences on how and what we teach.

### **Successful collaboration between Uganda and Sweden**

Professor David M Serwadda, Makerere University School of Public Health, Kampala, Uganda, warned of a brain-drain of qualified health care workers when staff emigrate to the US or Europe for the sake of better salaries. One approach to deal with this is to develop partnerships in which the focus is on learning from each other and the different contextual challenges. Professor Serwadda described an example of a successful collaboration between Makerere University and the Karolinska Institutet. Initiated in 2001, the program has so far had more than 100 exchange students going from Karolinska to Makerere and vice versa during undergraduate training. The students involved represent several categories of health care workers such as doctors, nurses, midwives, physiotherapists and occupational therapists.

### **Reinvent the educational system due to new technology**

Dr Laura Magana Valladares emphasized the need for the educational system to be reinvented due to the revolution in information technology. One must also evaluate to what extent curriculum should be knowledge-based. Perhaps it is time, Valladares argued, to focus on cognitive skills, analysis and education to a larger extent. It may take time however since higher educational institutions often resist change. There is a completely new situation where students have direct access to a multitude of sources of relevant information whereas the educational system continues to use old school format. Educating health professionals for a new century needs to keep abreast of innovation.

### **Evidence-based teaching**

Evidence-based medicine is a cornerstone in professional health care. Erik Hagman, Veronica Hansson and Mairi Jüriska, students of medicine, nursing, and public health, respectively, requested more evidence-based *teaching*. The group reflected on their own experiences of how modern approaches to teaching such as internet-based course repositories or innovative courses could be stifled by traditional views held by faculty members in universities where staff promotion is based more on formal merits and less on the ability to integrate innovative teaching practices. This conservatism becomes a serious challenge to achieving health professions education that can keep step with as well as strengthen health systems.

## **Part 3: Workshop – Towards Health Professionals for a New Century**

After the plenary discussion in which participants and the speakers reflected on the different ideas which had come up, the participants broke out into four groups to discuss the following topics in more depth:

1. Team and inter-sectorial work
2. How to reach transformative education
3. Systems thinking – the example of primary care and hospital care
4. “Glocal” education – translating global trends into local action.

Participants began by interviewing each other about their own experiences of “best practice”. These examples were then analyzed and further developed so that they could be applied at the other participants’ home institutions.

At the conclusion of the day, the different groups met to present their findings. The following themes emerged:

### **Break the silos!**

The vast majority of participants agreed that the “silos must be broken” and emphasized the need for interprofessional education. The term “silos” refer to the grain silos that separate one type of grain from another. It has become a metaphor for the separate parts of an organization, such as the clinics in a hospital, the schools or courses in a university, or the divisions in a company, that have little or no collaboration or communication with each other. “To break the silos” was felt to require not only increased co-operation within, but also between universities and hospitals. Thus, if health professionals are to work together more effectively as fellow colleagues, they can just as well learn to do that as fellow students during their undergraduate training.

### **Promote interprofessional training**

An interprofessional training program in Gothenburg and Linköping was presented as a good example of how different professions within the health care sector can train together. In the training program, which takes four hours, nursing and medical students who are at the conclusion of their undergraduate training, work together in simulated emergency situations. Leadership, peer-learning and teamwork is thus trained in a risk-free environment.

### **Empower students!**

Courses in leadership at medical universities and student empowerment were presented as two important ingredients if a university is serious about achieving *transformative education*. Students bring fresh eyes with them to an organization. Use them! Encourage students to participate in daily clinical work. Ask them how things can be improved not only in education, but also at the hospitals and clinics in daily clinical work. Evidence suggests that they can provide useful insight on how health care practices can be improved.

### **Integrate primary and hospital care by empowering patients!**

In order to better integrate primary care and hospitals, the different influences appropriate to these nodes in the health system need to be acknowledged: governance, financing, human resources, technology (including medications), information, and service delivery. One concrete suggestion was to include representatives for primary care in the development of curriculum for health professionals which is often not the case today. Building on the previous discussion of silos, the argument was put forth that universities should be careful of dividing curricula into “blocks” (for instance primary care and pediatrics) as it can prevent effective communication. Instead, a good starting point is the patients’ point of view. This could involve identifying the process which a patient follows when s/he is referred to a hospital from primary care (or the other way around).

### **Clinical experience from early on in training**

Students of various health-professions should be exposed to clinical experience, not least in primary care, early in their training. An example from Oslo was presented. There, a health clinic for the elderly is driven by students. The students get experience from working in a

clinical setting. Since they are early in their training, they do not answer specific questions about treatments but instead offer general advice about health to patients.

### **Learn about other professions' core competences**

In order to work together, health professionals must be aware of what the other professions are competent and capable of doing. This should be something that is introduced early on in health professions curricula. At the same time, care should be taken not to overload already overloaded curricula. What is included in the basic curricula needs to be continually reviewed. When it comes to teaching, the educational methods used are often based on what is appropriate for school-aged children, not adults. This can hamper the development of professional identity and responsibility.

### **Interact with policymakers and learn from the private sector**

Politicians and policymakers often determine the constraints under which universities operate, not least when it comes to funding. Therefore, it is paramount that universities interact with and open a proactive dialogue with policymakers instead of seeing themselves as victims of politics. Universities can also learn from the private sector, especially when it comes to education and to leading change.

### **Health care systems must influence education**

If education of health professionals is to be successfully reformed, health care systems must be involved in the process from the start. The two cannot be separated, but should work closely together. In Stockholm, there is collaboration between hospitals and the university at the level of top-management. However, collaboration must spread throughout the whole organization. At issue is not only how we define what good health care is, but how we approach realizing that definition. There is a need for better tools to evaluate health care quality, but also to determine the quality of what good *education of health professionals* is. To make sure that health care is evidence-based is a cornerstone in good health care. The same should be required of health professions curricula. But that is not enough. But merely knowledge about what should be done does not always translate into doing it according to the evidence. Therefore we need to increase our understanding of why evidence-based practice is implemented in some clinics/hospitals/universities but not in others.

### **Local solutions to global problems**

Global health issues are present in local contexts. And as was exemplified in the workshop discussions, solutions that are designed in local contexts can help us to develop global strategies as well as concrete interventions that can be applied in other contexts. Another example is related to some of the health issues faced by immigrants and minorities. By learning how to solve these problems in our respective countries we can increase our understanding of global-health related issues.

### **To be continued...**

The Lancet commission has issued a clarion call to critically review the way in which health care professionals are trained. The world in which we live is one of increasing complexity – the interdependencies of educational institutions and health systems within and between countries precludes the continuation of silo-thinking. Indeed, if universities are to maintain

their position as the place where future health professions are educated, they need to move beyond just producing next year's crop of graduates. Universities need to see the role they have in strengthening health systems through interprofessional, "glocal", and transformative education. More about how this can be achieved will be the topic for the follow-up conference which will be organized next year hosted by one of the participating Nordic institutions.



## **Conference Organizing Committee, Karolinska Institutet**

Jan-Olov Höög, Dean of Education, Karolinska Institutet (KI); Jan Lindsten, Royal Swedish Academy of Sciences (RSAS); Carl Savage, M.D, KI; Tanja Tomson, Programme Director, Public Health Sciences and Global Health, KI; Annika Östman-Wernersson, Director Clinical Centre for Education, KI.

## **Conference rapporteur**

Anders Hansen M.D., freelance journalist

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## **References**

- Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T., . . . Zurayk, H. (2010). Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet*, *376*(9756), 1923-1958. doi: S0140-6736(10)61854-5 [pii] 10.1016/S0140-6736(10)61854-5
- Tomson, T., Tomson, G., & Savage, C. (2012). [The educational system of today and health personnel of tomorrow]. *Lakartidningen*, *109*(32-33), 1388-1389.

## Appendix 1: Brainstorming

*Question: What are the biggest challenges we face in developing health professions education so that it can strengthen health care systems?*

Category	Explanation
<b>Culture</b>	<ul style="list-style-type: none"> <li>• Breaking professional silos.</li> <li>• Challenge in education between generations (teacher and student) in lifestyle, perspectives, for the unknown needs for the future.</li> <li>• Culture change.</li> <li>• Conservatism sticking with the old clinical practice.</li> <li>• Dealing with patients and students with other cultures, languages, than the host country.</li> <li>• Priority culture change.</li> <li>• Tradition.</li> </ul>
<b>Leadership</b>	<ul style="list-style-type: none"> <li>• To change the paradigm from curative to preventive medicine.</li> <li>• Stimulate and organize modules and courses in leadership and management.</li> <li>• To convince leaders in health care that education, pedagogics is a part of all health care towards students, Patients, leaders .</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>• Improve learning methods.</li> <li>• Recourses for Education.</li> <li>• Harmonizing theoretical and clinical education.</li> <li>• Engage all students.</li> <li>• 'We are teaching responsibility for one student only'</li> <li>• Transfer of experience.</li> <li>• Facilitate interprofessional education.</li> <li>• Interprofessional education.</li> <li>• One challenge is to educate for constantly developing world, with new evidence and methods.</li> <li>• To make disciplines at KI (scientist, teachers, clinicians) to realize the education is part of their work and is important.</li> <li>• How to motivate students to learn for their medical future and not for passing the course.</li> <li>• How to attract the best individuals to health care and health education.</li> <li>• To stimulate and organize IPE learning.</li> <li>• Interprofessional Idea is part of all programs.</li> <li>• To more efficiently use the existing recourses and knowledge in todays health care in the education of future health care professionals.</li> <li>• How to motivate colleagues to teach continuously even if the work burden in production is tough.</li> <li>• One challenge is to educate skilled team members.</li> <li>• The biggest challenge in education is to make people able to find new ideas which can be useful to find concrete solutions in health fields.</li> <li>• How to evaluate long term the education of health professionals in a robust and accepted way.</li> <li>• Balance between academic and professional education.</li> <li>• How can the professional competence development continually develop and be tested throughout the entire education.</li> <li>• Bridge between academia and health care. i.e. how can we get research into care,, that it becomes evidence based.</li> <li>• To formulate education and examining goals for inter professionalism to evaluate each other competences.</li> <li>• Prioritize the context of education.</li> <li>• Educate for a global view and a local view.</li> </ul>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Integration.</li> <li>• Flexibility.</li> </ul>

**Health care  
work**

- Fragmented Health care.
- Quality and competence in the working context.
- Today's health care seems to aim for highest economic effectivity and productivity rather than patient benefits.
- How to keep the educated nurses within the clinical health care.
- Balance science input with health output,
- The focus is productivity in health care.
- Which competences does a doctor need to meet the demands of the future health care system.

**IT**

- Integration of information technology into medical training and all possible advantages, that come from all new technologies.
  - Learning needs and tools are changing with IT evolution.
  - How to integrate alternative teaching methods in medical education.
  - Paradigm shift to meet the digital world.
-