Chapter 4.2

SUMMARY OF THE GLOBAL CONGRESS AND THE CHALLENGES POSED

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The Global Congress on Dental Education in Dublin Castle brought 306 leading dental educators and scholars from 66 countries, representing all populated continents on the planet to discuss, debate and report on dental education in a global context and create a platform from which to launch a Global Network in Dental Education. The quality of the outcome of the Congress may be judged from the working group reports and the keynote addresses.

The main partners were the EU DentEd Thematic Network Project and the International Federation of Dental Educators and Associations (IFDEA) with the considerable support and engagement of the Association for Dental Education in Europe (ADEE), the American Association for Dental Education (ADEA) and the South East Asian Association for Dental Education (SEAADE) as well as sister continental dental education associations around the world; including Africa, China, India, Pakistan Japan and South America.

This summary and analysis is based on an interpretation by three individuals of the outcomes and recommendations. It attempts to identify consistencies as well as inconsistencies between the 14 working group reports, also taking into account the views of four world leaders who delivered keynote addresses. It does not attempt to repeat the details that will be found in the reports of individual working groups; rather, it highlights what were perceived as the critical points made and the challenges posed.

The Challenge

One conclusion from this Congress was inescapable; leaders in dental education cannot ignore the issues raised by the keynote speakers or the conclusions drawn by the working groups. At least we can claim that we have already improved literacy within our own discipline on the reality of the sufferings faced by those without access to clean water, fresh air or sufficient food to keep their children alive not to mention oral/dental care. Kofi Annan, the former UN Secretary General, maintained that the greatest enemy of health is poverty.

The Keynote Speakers

Mary Robinson, the former UN Commissioner of Human Rights, set the context for the Congress as a global leader in human rights. She painted a moving picture of the consequences of inequality and poverty, especially in the poorest regions of the world. She bemoaned the fact that a very small minority of the global population had access to the most rudimentary forms of emergency oral/dental care; symptomatic of deprivation and lack of access to health care, a fundamental human right. Mary Robinson asked why 210,000 children under five years of age die each week, or just under 11 million children each year, due to poverty; the equivalent of a daily 'silent Tsunami' that passes, virtually unnoticed, by the rest of the global community. A poignant reminder of Robinson's impact on global leaders had been carried in a news bulletin from Darfur the previous evening where, moved to tears, she was filmed visiting regions of the most severe suffering of both adults and children due to poverty and conflict. The impact of her address was a significant influence on the working group meetings that followed.

Jeffrey Sachs, Director of the University of Columbia's Earth Institute reinforced the message. He said that poverty will be ended by bringing the best of our thinking and the best of our science together with an ethical commitment to attend to the very great problems of the world. Sachs was adamant that we can do something about poverty that no other generation in history could even contemplate. The fact that we can do it, said Sachs, compels us to do it, not just out of goodness but also out of

self-need and bring an end to extreme poverty on the planet by the year 2025. This will require the thinking of scholars and scientists and committed practitioners from across the range of human knowledge. He explained how the impact of poverty, malaria and HIV/AIDS were exacerbated in regions susceptible to regularly occurring natural disasters; some perhaps associated with the profligacy of energy waste in the more economically developed regions of the world. Sachs presented haunting examples of the impact of poverty and inequality on low income regions; especially in sub-Saharan Africa. He was critical of those who used the excuse of corruption as a means of ignoring the plight of regions devastated by natural disasters, disease pandemics such as HIV/AIDS and malaria, malnutrition, lack of clean water and sanitation, poverty and lack of education. He questioned the international community's commitment to address poverty asking why the developed economies could not contribute the promised 0.7% of their gross domestic product. That would alleviate the sufferings of the most impoverished one billion in our global community living on less than a notional $1 per day. He questioned the benefits of the arms race arguing that peace and stability were more likely to follow if wealth and health were to be promoted in poor regions. He stated that 1% of the wealth of the world, or half of the US annual expenditure on arms, would alleviate global poverty. Both Jeffrey Sachs and Mary Robinson put in perspective the impact of poverty and inequality or health and disease on this planet which we share; a theme expanded in Chapter 1.1 by Working Group 6.

Sir Iain Chalmers in his keynote address emphasises one of the basic human rights that "sufficient food, clothing, housing, medical care, [and] necessary social services", and "the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond one's control." He asked what can health professionals reasonably be expected to do to promote the right to health? He accepted that health professionals are little or no better placed than others to influence some of the major determinants of ill health - wars, civil unrest, abuse of human and civil rights, economic injustice, and unfettered pursuit of profit, to mention just a few examples. He stated that implicit in the right to health is the right to an integrated and effective health system. Health professionals therefore have special responsibilities to promote this particular right, because effective health systems are an important determinant of health. He asked how can we fulfil our responsibilities in this respect? He said that educators, have a particularly important role - to help people to distinguish reliable evidence about the effects of health care from the other kind. It is not only teaching which is unsupported by reliable evidence that can be harmful. So also can acceptance of established practice which is unsupported by reliable evidence.

As an example Iain Chalmers quoted evidence from controlled trials that prophylactic antibiotics reduce the risk of bacterial super-infection in measles. Had this information been available to him he explained, many of his Palestinian patients would have avoided the complications of measles, and some who died would have survived. Chalmers described this realisation as "shattering" and influenced most of his professional life ever since; a professional life that has had a global impact due to the rigour of Chalmer's intellect.

Sir Iain said that the research community must share much of the blame for the way that health professionals have failed to do as much as they could have done to promote the human right to health. He cited an example very close to the soul of public dental health when he questioned the effects of mass medication using water

fluoridation. He drew attention to one of the conclusions on water fluoridation from the Centre for Reviews and Dissemination in York University (NHS Centre for Reviews and Dissemination 2000) that *inter-alia* and despite its well known beneficial effects, fluoridation may or may not, cause other harms, such as cancer, bone problems, etc; the most important conclusion of the review. Chalmers was critical of the health professions in general because of their unwillingness to acknowledge that there were any remaining uncertainties about the effects of fluoridating water supplies, even, for example, uncertainty about what concentration of added fluoride is needed.

He concluded his keynote address with four wise statements for all health professionals:

i. professional good intentions are not enough to promote the human right to effective health systems;

ii. systematic reviews of research evidence should inform decisions about healthcare and research;

iii. new research should begin and end with systematic reviews of other relevant research; and

iv. important continuing uncertainties revealed in systematic reviews should be addressed in further research, as an integral element of responsible professional practice.

The human rights principles articulated in the presentations of these three eminent human rights activists had a significant impact on the working group reports. However, it is not clear how, traditional dental education and oral health care can impact on global poverty and human suffering in regions of severe deprivation. Access to oral health care continues to be restricted to the privileged minority in a global context. Dentistry is an expensive investment for low and middle income countries whose priorities must be the preservation of life and the quality of life through cost effective measures. Oral/dental health seems destined to continue to depend on interventions based on the traditional oral health care team; this is a challenge that remains unaddressed in dental education. We live in an unequal world where 20% of the population in the developed economies (in other words, 5% of the global population) consumes 86% of the world's goods. Generally, we are not predisposed to altering the lifestyle of the advantaged which can perpetuate the poverty that afflicts so many. UNICEF said of the 30,000 children who die each day that "they die quietly in some of the poorest villages on earth, far removed from the scrutiny and the conscience of the world. Being meek and weak in life makes these dying multitudes even more invisible in death".

The fourth keynote speaker brought a different perspective; the potential of science, pharmaceutical and technological development to help address the challenges of major diseases and pandemics. He presented exciting developments in the use of salivary diagnostics, an easily accessible fluid, which has demonstrable markers of systemic conditions such as cancer and diabetes. This theme was further developed by working group 4 in Chapter 2.1. David Wong epitomised the intellectual firepower now residing in dental science and the possible chasm that is widening between the pace of developments in the biomedical sciences and their application in practice and

education, even in the most advanced dental schools in the world. He raised the exciting potential of saliva diagnostics and its impact on education and practice.

The Working Group Reports

Theme 1: Challenges and Opportunities

Working Group 6 in Chapter 1.1 set a global health context for all working groups. They complemented the challenges posed by the keynote speakers in addressing inequalities in access to care and those with special needs (Chapter 1.1). There is a wealth of data on the inadequacy of health promotion and health gain and the group stated that equitable access to education and healthcare constitute the cornerstones of increased community capacity. They went on to explain that many people who experience ill health and poverty have little or no access to education and healthcare compared to those in higher socio-economic groups. This working group's deliberations raised issues of inequality across the globe and particularly in respect of those with special needs. Even in the most highly developed economies there are profound inequalities in access to education, health care and basic human rights. This report asks that students and faculty members be encouraged and drawn from all segments of society, irrespective of economics, race, disability, gender or ethnicity. Such representatives will counterbalance the present imbalances; unfortunately, this aspiration may be more optimistic than realistic for many reasons.

Inequality begins at birth and continues to grow as a result of socio-educational influences throughout life. This Working Group also said that education and curricula, and thus the skills of the oral health team, should be responsive to the disease prevalence in their regions, emphasising a community-based approach. Healthcare must be community based, culturally competent and reflective of evidence-based policy in practice. Oral healthcare must be integrated into the primary healthcare approach. Governments need to develop legislation with NGOs and the private corporate sector to facilitate access to education as well as finance for the necessary service infrastructure required for those with greatest need.

Chapter 1.2 carries the report of Working Group 4 who looked at the challenges and opportunities of new discoveries in the biomedical sciences. Dentistry and medicine must adapt to developments in genomics, transcriptomics, proteomics, metabolomics, nanotechnology and bio-informatics. Research findings in these areas will change the way doctors and dentists diagnose and treat disease. Dental students must, therefore, have greater understanding of knowledge of the molecular basis of genetics, techniques of genomics and proteomics and their potential application. They described the impact of new discoveries on dentistry, dental bio-materials and their tissue interactions, regenerative dentistry, salivary gland gene therapy, analytical potential and use of oral fluids as diagnostic aids; complimenting David Wong's keynote address.

They strongly advised that undergraduate dental education must produce more scientifically orientated practitioners who will be able to evaluate evidence critically and more readily to adapt to scientific innovations and discoveries. It was argued that this should be achieved by expanding and integrating bio-molecular sciences and bio-technology throughout the curriculum. At the first Global Congress in Prague in 2001 concern was expressed that the dental profession might already be too late in adapting to, and availing of, the potential of research discoveries in the biomolecular sciences. Working Group 4 was sensitive to the potential of curriculum overload due to the exponential growth of new scientific discoveries and advocated problem orientated, integrated learning; the importance of balancing learning, knowledge acquisition and management and avoiding overload in the curriculum. What this

group reflected was the need for a profound change in dental education if the profession was to be empowered to exploit to the full the potential of the biomolecular and biotechnical sciences and their appropriate implementation to the benefit of society and the provision of oral healthcare in the future.

There were many lessons from the Human Genome Research Institute, one being that most bio-technology research now requires large teams from a number of institutions, universities and individuals with divergent scientific backgrounds to work together. In order to remain competitive researchers must embrace international collaboration and include expertise from outside their own field. Such advice might also include the plea that those in well-resourced institutes have responsibility to facilitate interaction with those in less well-resourced centres. Those empowered will in turn assist others and have significant influence on regional research development.

A complementary report to Sir Iain Chalmers keynote paper was that of Working Group 5 who set out clearly and unambiguously the principles underlying evidenced-based oral health care (EBOHC) as well as their impact on curriculum reform and development (Chapter 1.3). This report provides an elegant introduction to the subject, central to the application of appropriate education and care in different settings. The Group was sensitive to the application of evidence-based medicine in the areas where there were resource restrictions. They described three domains in respect of an evidence-based approach: 1. patient's biology preferences, values and expectations; 2. the clinician's expertise and experience to recognise their patient's needs; and 3. treatment based on the best available evidence. They argued that a rigorous patient-orientated approach is key to modern education and training throughout the health sciences. This chapter might become required reading for all clinicians and educators, especially those with leadership roles. Critical thinking and analysis of research were seen as vitally important aspects of evidence-based care, but in isolation, they do not constitute an evidence-based approach. They advise that a modern dental curriculum should be patient and learner centred, active and interactive and modelled to develop expert clinicians through exploitation of the clinical setting that prevails. The curriculum must be well prepared, carefully structured and multi-staged. These principles were consistent with the report carried in Chapter 2.1 which sets out the essentials of curriculum reform.

A very different perspective on opportunities and challenges is presented in Chapter 1.4 by the working group which dealt with the corporate world and how industry and its expertise could collaborate with dental academia to better effect. Working Group 11 said that those in dental industry and dental academics share the common goal of improving oral health of the global community. Industry and academia may have inherently different cultures in their organisational processes. Nevertheless, there are significant opportunities for enhanced communication and collaboration. These aims would be strengthened when there is a overlap of objectives and mutual understanding and respect for the two cultures. This working group was primarily made up of leaders from the dental industry world-wide. They questioned the traditional concept that in respect of dental scholarship industry is simply there to help fund projects and meetings. They provided examples of shared activities and values including: quality assurance competitiveness, audit, ethical imperatives, sustainability, access to new technologies & products, public relations, taskforce production, international networks, strategic planning, sharing of expertise, knowledge and resources, continuing education and many others. These constitute fundamental issues that are shared by the two sectors.

There was an implied criticism of the efficiency levels in universities that many academics might question. However, on the other hand there is a perceived sense

that the academic community does not give due credit to the research and scholarly advances made by scientists and colleagues in dental industry, despite the fact that in respect of qualifications and publications all have to fulfil the same exacting standards. These examples underpin the need for closer collaboration and better understanding between the two complementary sectors in oral health and dental education and range from research to sharing of data bases.

The group from industry offered examples of how they might support colleagues in low and middle income countries through enrichment and development of the faculty, provision of micro-grants for students to travel, offering training and opportunities for research and product development as well as mentoring from more experienced colleagues

WG 11 was strongly committed to the mission of IFDEA. They proposed the creation of a 'global faculty in dental education' through IFDEA. This would be a virtual faculty that would include, not just dental, medical and health science academics and researchers, but also the significant pool of talent that is available from researchers, educators and managers in industry; an enormous potential waiting to be tapped.

Theme 2: Education the Curriculum and Quality Assurance

In Chapter 2.1, Working Group 12 provides essential guidelines and advice on curriculum reform, continuing revision and assessment methods. It is a chapter that needed to be written and one that will probably be used by educational reformers for years to come. Their advice could apply to any area in the health sciences but is a particularly rich source of information for the dental educator. They describe the curriculum as a complex, dynamic and evolving system. It should be based on the knowledge, skills and attitudes that graduates will need, measurement of achievement of learning outcomes, establishment of an end point and working backwards from that. They believe it is critical to decide on strategies and evaluate continuously the process in a structured manner. They advised changing when change is needed but not to change simply for the sake of change alone. Curriculum change and development was seen as an evolutionary process.

Quoting Fish and Cole, they said designers of curricula need first to study the practice for which their curriculum is a preparation, and then design a programme of study which enables undergraduates to prepare for this. Assessment is first and foremost an *educational* practice and part of a holistic educational process which includes teaching and learning. This report went on to advocate that teachers should teach what they assess and assess what they teach; a simple but fundamental principle.

An elegant diagram in Chapter 2.1 illustrates the sometimes conflicting demands from the component disciplines, school, state and regional influences when constructing a modern curriculum. That diagram alone is almost sufficient to introduce the new academic to curriculum development or reform and emphasises that the curriculum blends priorities with the realities of available intellectual, physical and financial resources in a positive symbiotic relationship between the partners concerned. It is not simply a scheduling of unrelated departmentalised activities and didactic courses based on fact accumulation and repetition.

The group developed the concept that clinical wisdom was a gradual process that grows throughout a practising lifetime and only partially achieved at graduation. In other words, wisdom could be described as a mental rather than a physical skill and one which develops with experience and reflection. This is just one vignette from a comprehensive and informative chapter on how curricular reform is planned,

developed, shared, accomplished and continuously monitored; a must read for all dental academics.

Working Group 3 reviewed existing evidence and best practices in a new information society in Chapter 2.2. They advised that within a school, information technology should be student-centred, based on existing research and best practice. The working group was sensitive to divergent needs and agreed that “no one size fits all”. There is a need to use different tools for different learning scenarios. They advocated increasing the level and type of interaction and feedback during the learning process for best results. Continuous and long-term support of the learner and secure support for the developer in the faculty was deemed essential. This requires realistic funding and support from the school according to its ability to fund such developments, whilst taking care to avoid spending that does not yield desired results. They painted an exciting global perspective in respect of IT. Some of the problems that were raised in respect of introducing effective IT services included costs, computer literacy of students and staff, resistance to change, exclusion from access to innovation and scientific information. The chapter offers more solutions than barriers but asks how we should help bridge the gap between schools that can afford the technology and schools which cannot. If we do not help, the gap will widen between those most in need of development and the more advanced.

Working Group 7 examined quality assurance, quality management, quality improvement, benchmarking, testing and assessment at school, national, regional and global levels. In Chapter 2.3 they defined and explained each term and the processes involved with clarity and authority. This is a detailed report with considerable reference sources; an essential information base for those implementing quality assurance and benchmarking in their curriculum. Although the report is written in the context of dental curricula in developed economic regions their principles have widespread application if local circumstances are taken into account.

The group discusses transcontinental, mutual recognition of qualifications. Recommendations relate to common quality assurance in education and setting a framework for international cohesion and mobility of students and academics. There is recognition of the significant barriers, not alone between continents but even between states in some developed continents. Dental educators are encouraged to break down barriers to free movement as has happened, to a greater or lesser extent, in the European Union. They advise that exchanges should be planned to yield the greatest impact on both host and donor school thereby encouraging convergence towards higher standards through learning and adopting benchmarking and quality monitoring methods, thereby fostering freedom of movement across international boundaries.

This group repeated a recommendation made by two others (see Chapters 2.4 and 2.5). They suggested that the document authored by Plasschaert *et al* on the profile and competences for the dentist as approved by DentEd III and ADEE should be the basis for convergence on the profile of the international dentist. The logic of this recommendation was based on the fact that the European Union is a collection of 29 states with different cultures, languages, religions, ethnic backgrounds and educational systems. If an outline profile for a European dentist can be developed for these countries there must be merit in extending its application to others. Of course that there are more well tried accreditation systems elsewhere, such as in North America, Australia/New Zealand. However, a global profile requires significant compromise. This exercise was partly accomplished in Europe where there were many examples of highly developed accreditation systems but concessions were

made allow convergence. A request was made for the process to expand from this base to global application.

In chapter 2.4 Working Group 1 discussed the profile of the dentist in developed economies. As stated above, they relied heavily on the work already completed by one of the Taskforces in the recently concluded DentEd III Project. They first described current trends in dentistry in countries with well-developed economies and changes in the epidemiology of oral pathologies and dental diseases. In these economies, an ageing population and increasing demand for more sophisticated levels oral health care, higher levels of well-being and cosmetic dentistry were having profound influences on patterns of dental care and practice. There are serious inequalities even in the most developed economies where the need for very basic levels of primary care and prevention were not necessarily available to those most in need. On the other hand, increased demand for more sophisticated forms of oral care and dental treatment was influencing a workforce shift towards private practice and specialisation. This was adding further to problems of those most in need of care because this leading to a diminishing number of dentists engaging in primary care and public services.

This working group states that the new graduate must have knowledge and clinical competence for independent general practice, the standards and diversity of competence must be appropriate to the needs of the local population. In a modern, developed economy these must include prevention and health promotion, lifelong learning, communication skills (including the ability to ascertain patients' beliefs / values), whilst working within the principles of equity and diversity.

The dentist, as leader of the oral health team, is responsible for diagnosis, treatment planning and quality control as well as being required to be competent to communicate, delegate, collaborate, both within the dental team and other health professionals. Graduating dentists may have aspirations other than the immediately obvious one of general dental practice, such as working in academia,(research and / or education), hospital practice, public health or specialist practice. This Group also alluded to scientific developments that are moving so rapidly that one cannot expect the generalist to cope with increasingly sophisticated demands in diverse areas. Five years may not be sufficient in which to acquire knowledge, competence and experience; this was seen as a justification for the development of specialities. This chapter commends a process of mutual understanding on how progress can be made between continents with diverse needs and aspirations but with common values as a beginning. It does not explicitly question the ethical imperatives of a profession that have sometimes been overlooked by narrower concepts as to what constitutes "excellence" in individual care over wider and more productive health perspectives or where the general practitioner or tomorrow's profession should contribute to global health challenges.

In Chapter 2.5, Working Group 2 discusses the profile of the oral health care team in middle and low income countries. This was a daunting task. There was the safety of the tried and trusted traditional team of dentist and other allied professionals. Some would question the validity of such an approach for the most seriously deprived 1 billion or even the 3 billion in the world who live without sanitation facilities. Working Group 2 described barriers to health care delivery, including poverty, ignorance and lack of adequate numbers of educated and trained healthcare workers due to inadequate financial resources. Even in the developed economies, this is seen to apply in the less privileged groups. In low income economies there is a dilemma for a modern dentist, whether educated at home or abroad. How can one make an impact on poverty-related diseases whilst fulfilling personal aspirations to provide the

highest standards of care for patients, and yet earn a reasonable salary in order to sustain a family? The attractions of emigration and escape from the poverty trap are easy to understand despite the negative impact on the local economy.

Working Group 2 suggests that each country should develop a national oral health plan and define what the term 'effective oral health worker' means for that environment (in the overall context of the competences required). It was suggested that IFDEA should assist emerging economies to define effective oral healthcare plans. Dental schools in developed economies should also help. They repeated the often quoted fact that oral health is an integral part of general health and well-being. They referred to the WHO definitions of oral health as being free of chronic mouth and facial pain, oral and throat cancer, oral sores, dental caries, defects and discomfort. In that context Working Group 2 advocated that the profile of the dentist in middle income countries should not be substantially different from that described for the developed economic regions. This is an understandable, empowering, but essentially a controversial aspiration if taken in the context of the poverty and inequalities described by Mary Robinson and Jeffrey Sachs; or the disturbing healthy life expectancy charts in low income regions set out in Chapter 1.1. The presence of comparatively minor conditions, such as periodontal disease, should not divert any worker from addressing potentially life-threatening conditions to best effect with the appropriate use of limited resources.

In this summary of all working groups it is suggested that global population might be considered in three arbitrary economic divisions:

1. The developed economies (such as parts of Europe, North America, Australia/New Zealand and Japan and some urban regions in Asia) that might account for approximately 1 billion people;
2. Countries of middle income with emerging economies such as regions in Indo- China and former communistic block countries in Europe, undergoing rapid economic development (perhaps in excess of 2 billion people);
3. Regions of gross deprivation without infrastructure and geo-agricultural circumstances that promote famine and severe poverty, such as areas in sub-Saharan Africa and some rural parts of Asia, China and other deprived regions, accounting for perhaps almost half the world (approximately 3.3 billion people).

A legitimate question can be raised in respect of the aspirations of Working Group 2 to deploy health care teams along the lines of the profile defined for developed economies. Whatever developments take place in the more deprived regions of the world may depend on teachers, missionaries and untrained practitioners or traditional medicine. Our profession has a responsibility to direct education in these deprived regions through programmes that will empower leaders within the villages, as Jeffrey Sachs has done, With simple but effective programmes that yield clean water and basic disease prevention. How far are we from appropriate health care if we seek to divert resources from such fundamentals as delivering clean water or anti mosquito insecticide soaked nets to prevent killer diseases such as malaria to funding oral health care teams? Yet as Working Group 2 pint out we must be positive in our aspirations and look forward to the elimination of poverty when such possibilities will be more likely.

Despite implied criticism of addressing the most challenged regions Working Group 2 provide an elegant approach and well-thought out proposal for comprehensive national health care systems in economies covered in category 2 (above). Indeed, their principles could equally apply to some of the most developed economies where

there continues to be sad neglect of those most in need in pockets of deprivation, inequality and poverty.

A students' perspective is presented in Chapter 2.6. Working Group 9 consisted mainly of students but also included some very innovative academics. Their report was set as the benchmark for others to follow; a significant tribute given the calibre of participants at this Congress. Chapter 2.6 needs to be read in full to appreciate the expectations of today's cohort of the brightest intellects in our universities and the future profession of dentistry. This report reflects great credit on the dental schools in which group participants have been educated and give some indication of the success of their faculty members in the educational process to which they have been exposed. They described dental education as a complex, demanding and stressful process during which students must attain a unique and diverse collection of competences, including preparedness for independent clinical practice. The students' views, as they said themselves, were relatively convergent. They felt that the educational process should be based on a variety of means and methods to suit individual learning styles, as preferences may vary considerably. Students should be at the centre of the educational process. They commended a formative and self-assessment approach and asked for more widespread application of these principles. They promoted the use of reflective portfolios to assist learning and acquisition of competences. They advised that Information and Communication Technology be implemented in more schools and to greater effect. They supported early clinical exposure and the use of qualitative criteria in clinical education and assessment be applied throughout an integrated curriculum. They wanted collaborative learning and community placements (endorsing many of the fundamental principles of education explained in Chapter 2.1, who reported on curriculum reform and development). Students asked for more emphasis on international exchanges, innovative extra-curricular experiences and familiarisation with minority and global health issues be part of all curricula. They endorsed strongly the establishment of a global network but emphasised the importance of active student participation in this as well as in all facets of educational review and innovation. Working Group 9 said that if students were to be effective agents of change, they must be encouraged to become the innovators of educational change and be engaged from the earliest stages of planning.

One quotation sent a strong message to those who may be considered traditionalists in respect of 'requirements' and 'points' for individualised items of treatment. "I am already viewing my patients not in terms of what they need and want, but in terms of what I need to graduate. I would prefer to concentrate on my patients as people and not as a container of operative points or fixed points".

The issue of cheating was alluded to by this and other groups, where a plea was made to avoid using inappropriate assessment processes in end-of-year examinations. They advised that unreasonable or unnecessarily stressful assessments promoted similarly unreasonable responses, encouraging attempts to beat the system or cheat.

Theme 3: Leadership, Faculty Members, Staffing and balance in running a dental education and science research school

In Chapter 3.1, Working Group 10 reported on leadership, governance and management in dental education and how these have been influenced by new societal challenges. Every dean, staff member and academic with leadership responsibilities would be well advised to keep a copy of this chapter close by. It is full of useful information and commonsense. It contains most helpful advice in many

areas that will have a profound impact on a school's viability and success as we lose the traditional pillar of financial support, bringing reality into sharp focus.

They advocate the need for clear vision and a defined mission, combined with strategic planning, in order to achieve results in a coherent and collaborative way. Leadership and management must be contextualised to the institution, the university and relevant regional and state authorities. The Working Group emphasise the importance of staff/faculty members helping to create and become owners of the underlying vision and plan ensuring they have a broader understanding rather than the narrower perspectives from specialised discipline, clinic or laboratory in order to generate a climate that is congruent with the school's vision. This view is shared by Working Groups 8 and 9 in Chapters 3.2 and 3.3. Working Group 10 considers that Bowyer's concept of scholarship should be central to the reward and promotion arrangements that apply in all dental schools. They commend the establishment of external advisory boards that include external stakeholders to broaden the focus and ensure that the school is relevant to the university and the society in which it operates. They ask for greater inter-disciplinary and inter-faculty collaboration. Also they advise that the value of group outcomes be promoted as opposed to narrower individual perspectives.

In modern dental schools, the dean must lead in defining priorities in education, research, service and levels of staffing. Unique to the dental school in a university context are clinical matters and accountability. The dean must be competent to promote or "sell" the school's attributes and accomplishments. The dean is the leader in monitoring the schools "Key Performance Indicators" (KPIs) that will be measured by outside agencies which will determine their relevance and merit. The dean is increasingly required to fulfil corporate executive duties as well as those related to research, education, service and delegation of management leadership. Significant changes are being heralded in universities across the globe and at an increasingly rapid pace. There is need for more accountability, more effectiveness / efficiency and engagement with the community. The group advised that, whether we like it or not, universities and dental schools need to be more self-sufficient. Smaller departments and units are being amalgamated for efficiency and cost cuts as part of a more a corporate style of university management.

In Chapter 3.2, Working Group 8 considers the faculty members, staff and students in the university dental school. They agreed that intellect and its full development has been and continues to be the core resource of universities over the centuries. High quality academic staff constitute the bedrock of a dental school's sustainability and development. The group considered students to be colleagues and the essential raw material in the university, the profession and potentially constituting the dental school's future.

They advised that such intellectual talent, from both faculty and students, needs to be nurtured and mentored within the school but also encouraged to engage in international postings and exchanges. International mobility was considered the bedrock of a modern dental school and university without which both staff and students would become introspective and of narrow focus.

This group also emphasised the importance of all staff sharing the vision and "missions" of their institution and being facilitated to appreciate that they have important contributions to make in the wider vision of their school and university.

Working Group 8 spoke about the difficulties of recruiting, developing and retaining high calibre academic staff and identified this as one of the important challenges in a

modern dental school. Those appointed must share an awareness and support for the university's missions and should be willing to contribute positively to strategic planning. In this respect there is a need for more inter-disciplinary collaboration and also more international collaboration. This group endorsed the kind of international exchanges promoted by the Global Congress.

Chapter 3.3 is complementary to the preceding two chapters in considering how best to balance the competing demands of research, education and service in a modern dental school. Working Group 13 included consideration of caring for those in under-served areas and special needs groups. They advocated close collaboration and interaction between the medical and dental school faculty in all aspects of their activities. The stomatological model was discussed and was seen to have inherent advantages, provided it delivered appropriate clinical competences; a view shared by other working groups.

This working group considered how students should be exposed to care for patients with special needs and socially deprived groups. These views are similar to those of Working Group 6 who reported on inequality (Chapter 1.1). Working Group 13 considered the need to ensure that the curriculum was not compromised by being lumbered unduly with tasks for which an effective health care system should be responsible. Nevertheless, the importance of real-life settings was seen as an important component of the student experience. Patients should therefore be selected based on the educational needs of the students, but not be so selective that students are not exposed to a broad range of experience. Students must focus on the needs of the patients and teaching should emphasise comprehensive care, rather than individual elements of treatment. Dental schools need to tailor their teaching to the communities where the graduates will be seeking employment.

In respect of research this group advocated that faculty members, together with the students, should be involved in research projects and encourage mutually beneficial international collaboration. The Group asked that credit for career progression be given for all aspects of scholarship and contribution, rather than publications alone.

This group together with the group reporting on international mutual recognition degrees (Chapter 2.3) also raised the issue of enticing trained health care workers from under-resourced regions to practice in developed economies and the comparative attractions of higher standards of income. Individuals have freedom to travel and there are inherent values in this. However, those in positions of influence need to recognise that many emerging economies are losing some of their highly educated personnel to the detriment of kick-starting weak economies to become stronger. Malawi, for example, has lost 85% of its doctors. A similar drain in respect of all health care workers can be found in many low income countries. A recent survey emanating from the Organisation of Economic Cooperation and Development (OECD) shows that that if we drain countries of their highly educated women, there is reliable evidence to show that there is a consequential increased mortality rate for newborns as well as children under 5 and a reduced secondary school enrolment rate. The Carter Foundation in the United States asks that we be more sensitive to these issues.

Theme 4: The Global Network on Dental Education

Working Group 15 planned the Global Network in Dental Education – a new vision for IFDEA and their report is Chapter 4.1. The IFDEA Working Group was charged to use the keynote addresses, working group reports and the recommendations of the Global Congress to build an intellectual platform from which to launch a Global Network on Dental Education. A collection of recommendations from all groups is in

Annexure 1 to Chapter 4.1. The IFDEA web site was launched at the culmination of this Congress by the President of Ireland, Mary McAleese. This constituted a watershed in global dental education and presents a major challenge to all that they become engaged, so that colleagues throughout the world may share the benefits of IFDEA and its Global Network. The Mission of the International Federation of Dental Educators and Associations (IFDEA) is to contribute to improving global health by improving oral health and to be facilitated by raising standards in dental education on a global basis.

In anticipation of the re-energising of IFDEA and fulfilling its new Mission, IFDEA has appointed a new Board with a new constitution and by-laws under US legislation in Washington DC. Chapter 4.1 offers more details of the preliminary steps towards establishing a Global network of dental educators. At the Congress, it was announced that GlaxoSmithKline had committed $600,000 to sustain IFDEA and the Global Network for the next 5 years, thereby rendering core proposals achievable.

In the course of the meeting, negotiations were held to establish constituent organisations in Africa, China, India and Brazil and perhaps in South America. These will add to the other founding dental education associations which include ADEA, ADEE, SEAADE, Japan and Australia/New Zealand; in other words all populated continents on the planet. The President of Ireland Mrs. Mary McAleese and the Chancellor of the University of Dublin, Trinity College Mary Robinson paid tribute to African colleagues and wished them success in their new African Dental Education Association (AfDEA) which met in Dublin Castle.

In order to fulfil the new mission, IFDEA plans that its interactive web site www.IFDEA.org will become a repository of information and relevant material including the full Global Congress report. It will facilitate the downloading of peer reviewed modularised courses. IFDEA will establish a database of dental schools and dental education associations and a global directory of dental educators and scholars. There is considerable scope for further development of these facilities, including web based discussions, staff vacancies and newsletters. Realisation of these ambitions will be dependent on the willingness of participants to become proactive; a challenge to the more heavily burdened of dental educators throughout the world. The IFDEA platform will support our collective efforts on the principle that the whole is greater than the sum of its parts.

A questionnaire was circulated at the Congress and completed by 200 of the 300 participants. Those who responded demonstrated strong willingness to participate in the future IFDEA developments. As the Congress was held in 14 breakout areas in addition to the main auditorium it was not surprising that some of the completed questionnaires were not returned. The answers to this questionnaire are available on the web site www.IFDEA.org as Appendix 4.2.1 under Global Congress Appendices.

This Global Congress comprised a series of keynote and working group papers of significant quality and utility. Many of them, on their own, would have justified the organisation of the Congress. However, they raise many challenges and question fundamental values and ethical conundrums. Just one is what constitutes excellence. Traditionally in developed economies it is confined to care of the individual person. In middle and low income countries such an interpretation could divert resources from basic needs such as clean air, clean water and prevention of killer diseases. Yes, oral health is an integral part of general health and well-being but it must not be seen in isolation from conflicting demands or health authorities doing what is best for the society it serves.

So whither IFDEA and global health realities? There is a fundamental responsibility to promote convergence towards higher standards in dental education, research and oral health in general, but how do we in dental education impact on those most in need? Perhaps this summary of the challenges raised by the Congress and its reports is best concluded by quoting some fundamental principles articulated by Realising Rights, the Ethical Globalization Initiative, founded by our first keynote speaker, Mary Robinson. Its mission is to put human rights at the heart of global governance and policy-making and to ensure that the needs of the poorest and most vulnerable are addressed on the global stage. This initiative states that Ethical Globalization should:

- Acknowledge shared responsibilities for addressing global challenges and affirms that our common humanity does not stop at national borders

- Recognise that all individuals are equal in dignity and have the right to certain entitlements, rather than viewing them as objects of benevolence or charity

- Embrace the importance of gender and the need for attention to the often different impacts of economic and social policies on women and men

- Affirm that a world connected by technology and trade must also be connected by shared values, norms of behaviour and systems of accountability

Ethical globalization requires greater recognition of the responsibility of the international community to help people who have been denied their fundamental rights. This requires taking human rights beyond their more traditional political and legal realms and applying them to other fields. It is hoped that this Global Congress signifies recognition of wider perspectives in education and scholarship in the health sciences.

As educators, we should prioritise activities that will support colleagues in all health disciplines to gain knowledge and appropriate competence in minimising the impact of oral diseases; even preventing some. In particular, we can support colleagues working in low income countries through innovative means and collaboration; so much needs to be done.

Appendix 4.2.1

Survey of Global Congress Attendees based on Questionnaire

From 6 – 8 September 2007, Dublin Castle served as the global knowledge centre in dental education. 330 delegates from 66 countries from all continents came together for the Global Congress on Dental Education III. Over a period of two years prior to the Congress 14 Working Groups had collaborated via the web http://dented.learnonline.ie/ to prepare reports for discussion and completion at the meeting. There were 304 registered attendees at the Global Congress. A questionnaire (Appendix 1) was distributed at one of the Plenary sessions to determine willingness of delegates to participate in the newly established International Federation of Dental Educators and Associations Global Network. There was significant ongoing activity within the 14 Working Groups towards the completion of their reports and other delegates were engaged in organisational activities therefore a significant number of participants did not return the completed questionnaire. 200 questionnaires were collected from delegates, representing over 60% of all attendees.

The following were the main responses:

	Question	Response	#
1	Level to which attendees would be prepared to contribute to Network	Active participation (1 hour per week)	156
		Not prepared to participate	5
		Only as observer	6
		Left blank	33
2	Would your institution be prepared to collaborate with schools in less privileged circumstances?	Yes	157
		No	16
		Left blank	27
3	Would you be prepared to submit modularised programmes for peer review to be entered on the IFDEA web site?	Yes	123
		No	49
		Left blank	28
4	Would you be prepared to act as a reviewer for programmes submitted for inclusion on the IFDEA web site?	Yes	136
		No	42
		Left blank	22
5	Would you be prepared to act as an expert in visiting another dental school?	Yes	148
		No	27
		Left blank	25
6	To what extent would you be able to cover your own costs for visiting?	All of them	5
		Partly or depending on circumstances	60
		Not at all	90
		Left blank	45

Discussion of the responses questionnaire

The 304 invitees represent global leaders within dental education. A team of dental students collected the completed questionnaires. Amongst the 200 questionnaires completed the response was very positive

At least 50% of the registrants and over 75% of those who completed the questionnaire indicated willingness to devote at least one hour per week in engaging in the global network's activities (Question 1). That is encouraging and those who responded positively could form the core group or groupings of an evolving network.

One of the most heartening responses was the willingness of 157 participants to involve their school in a collaborative effort with colleagues in schools working under less favourable circumstances (Question 2). An even more optimistic way of looking at this is that only 16 explicitly stated they would not be in a position to do so. That alone would seem sufficient to justify the holding of such a Congress and needs to be pursued before momentum is lost.

A core objective for the new Network is the dissemination of information and in particular current peer reviewed course modules. So another greatly encouraging response was that at least 123 individuals were prepared to submit modularised programmes for inclusion on the Network site (Question 3). As these would need to be peer reviewed it was also considered helpful that at least 136 individuals would be prepared to act as peer reviewers (Question 4).

The DentEd visit system www.dented.org is well known to many delegates. 148 said they would be prepared to offer their services in such an effort (Question 5). 60 delegates who responded said they would be prepared to part-fund their participation in such a collaborative initiative (Question 6).

It is difficult to interpret the level of compliance in completing the questionnaire. Many of those involved in organisational duties and completion of the reports of their working groups may not have returned their completed questionnaires. The fact that there were many for whom English was not their first or even second or third language might have impacted on the time available to them to complete the questionnaire. It is also possible that those who were students or more junior faculty members felt that some questions precluded them from making certain commitments as set out in the questionnaire. Others represented regions or countries with low income and were constrained in responding to such a questionnaire.

Conclusions

It would seem reasonable to conclude that the responses indicate an encouraging willingness of at least 50% of the attendees (despite their many other commitments) to engage actively in a global network in dental education. It is vital that the goodwill generated at Global Congress III in Dublin be harnessed to best effect in advancing the network and the future of dental education. The information collated from this survey yielded a data base of individuals who are prepared not only to submit modularised programmes and offer expertise as visitors or reviewers but to collaborate via the network in the advancement of dental education and the provision of oral health care.

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