·Special Paper·

The Current Status of Physical Therapy in China

Alice Jones 1,2,5 Margot A Skinner^{3,4,5}

Abstract

The current health system in China has evolved by embracing both traditional Chinese medicine and Western medicine. China is the only country in the world where the number of doctors is larger than the number of nurses but education programmes for other health professions like physical therapy have been slow to develop. In the case of physical therapy it was not until China won the bid for the Olympic Games that permission to establish the first physical therapy programme was granted. Since then China has undergone a period of rapid economic growth enabling many people to have a higher standard of living and improved health, but at the same time the country is faced with massive urbanization, industrialization, increasing environmental health threats, increased health disparities and an aging population. With the support of the Chinese Association of Rehabilitation Medicine, an increased investment by the Government in public health and rehabilitation and engagement of international education experts, entry-level education programmes for physical therapy have started to develop and there are now nine which are modeled, at least to some extent, on the World Confederation for Physical Therapy's international guidelines. The paper explores the development of physical therapy education in China and discusses possible options for the way forward so that as the demand for physical therapy to service 1.4 billion people grows, the profession is prepared and the standards expected of the entry-level physical therapist will not be compromised.

中图分类号:R493 文献标识码:A 文章编号:1001-1242(2013)-06-0493-11

Background

World Confederation for Physical Therapy (WCPT) was constituted in 1951 with a founding membership of organisations from 11 countries around the globe. Today the WCPT comprises 106 member organizations but the world's largest nation, the People's Republic of China (China) is not amongst them, as physical therapy is not yet recognized as an autonomous health profession by the Chinese government. This may seem ironic given that references to the ancient Chinese physician Hua Tuo (circa 140-208AD) suggest that he was the first to prescribe exercise for health (http://en.wikipedia.org/wiki/ Hua Tuo /Mair 1994:688-696). Furthermore exercise in

the form of the ancient art of Tai Chi has been practised over the centuries by Chinese and the proven benefits of reducing falls risk, decreasing stress and general mind/ body wellness are recognized universally.

The Chinese health system has evolved from a very different model to most other countries. Firstly, Traditional Chinese Medicine (TCM) has dominated Chinese medicine for centuries. Its use was challenged when Western medicine was introduced through the 19th and early 20th centuries but TCM held its place and currently in China both TCM and Western medicine are given equal respect in the healthcare system (WHO 2008).

Secondly, China is the only country in the world

DOI:10.3969/j.issn.1001-1242.2013.06.003

¹ Honorary Professor, Faculty of Health Sciences, University of Sydney; 2 Adjunct Professor, School of Rehabilitation Sciences, Griffiths University, Australia; 3 WCPT Executive Member, World Confederation for Physical Therapy; 4 Deputy Dean, School of Physiotherapy, University of Otago, Dunedin, New Zealand; 5 Consultant, China's Expert Committee of Internationalized Education for Physical Therapy, Chinese Association of Rehabilitation Medicine

Address for Correspondence: Dr Margot Skinner, World Confederation for Physical Therapy, Victoria Charity Centre, 11 Belgrave Road, London SW1V 1RB, United Kingdom; margot.skinner@otago.ac.nz

where the number of doctors is larger than the number of nurses (WHO 2008), By way of contrast the number of physical therapists in the workforce in China is tiny in comparison, yet globally physical therapy is the third largest health profession. Whereas the physical therapy profession was developing rapidly in the Western world last century, references to the profession in the 1900's in China are sparse although the concept of physical therapy was often introduced alongside Western medicine when mission groups and others ventured in to China. For example, New Zealand educated physical therapist Bernice (Bunny) Thompson started a school of physical therapy in Wuhan in 1946, when she and her surgeon husband, Heath Thompson, volunteered for work in China and served for three years with the Friends' Ambulance Unit (a Quaker organization) during the civil war. When the Thompsons revisited China in 1978, they met many former patients and are reported to have found the physical therapy school still functioning, (http://journal.nzma.org.nz/ journal/116-1184/657/content.pdf), However it is more likely that the actual teaching provided was at the level of a physical therapy assistant.

Development of the Health System in China

From 1949 for the next 30 years health service delivery costs in China were largely covered by government and co-operative schemes which ensured access to preventive and other essential health services. China initiated economic reforms in 1978 and "dismantled the work-unit based social welfare provisions and launched its market orientated reforms" in 1979 [World Health Organization (WHO) 2008 p7]. Since then it has undergone a period of rapid economic growth enabling many to have a higher standard of living and improved health, but at the same time the country is faced with massive urbanizaindustrialization, increasing environmental health threats, increased health disparities and an aging population (WHO, 2008). In Western countries physical therapists play a major role in the physical rehabilitation of patients with musculoskeletal and neurological disorders such as low back pain and cardiovascular accidents respectively whereas in China rehabilitation has largely been the domain of physical medicine doctors and their technically trained rehabilitation assistants known as rehabilitation therapists (Zhou 1991). In the early 1980's the demand for rehabilitation services was growing and to meet the demand rehabilitation medicine developed rapidly as a medical specialty but the other rehabilitation therapies did not automatically follow. By 1986 when China pioneered community-based rehabilitation it was led by rehabilitation medicine doctors. As 80% of the population was still living in rural communities and accessing institution-based rehabilitation centres was impossible for many people, the concept of "train the trainers" was introduced as a means of attempting to provide some level of rehabilitation services to the public in more remote areas(Zhou 1991).

In 2008 China and the WHO developed a framework of co-operation to improve national health, the China-WHO Country Co-operation Strategy (CCS) 2008-2013. The Government's main health goal is to ensure there is universal access to basic healthcare by 2020. The CCS was developed after in-depth consultation with groups including the Ministry of Health, the United Nations (UN) and non-government organizations (NGOs) and is organized under four over-riding areas of strategic priority: 1 Health systems development-the focus is on health system reform including human resources for health. 2 Achieving health-related UN millennium development goals (MDGs)-in particular to increase access to affordable essential health care services. 3 Reducing the high burden of non-communicable diseases (NCDs) and related deaths-including the implementation of national strategies such as WHO's Framework on Tobacco Control. 4 Addressing emerging public health threats e.g. surveillance of communicable diseases and environmental health threats. (WHO, 2008).

In the context of its health development, China is now party to a number of regional and international agreements including:

- the People at the Centre of Care Initiative which focusses on "developing more balanced, people-centred health care that considers the broader psychosocial, cultural, ethical and social determinants of health" [WHO Regional Committee for the Western Pacific (WPRO) 2007 p17];
- the MDGs and tobacco control mentioned above and;
- the Convention on the Elimination of All Forms of Discrimination Against Women (UN 1979).

At a national level the Chinese government has determined to increase the investment in public health, make health care more affordable and improve research within medicine as well as TCM (WHO 2008). The current reforms to the Chinese health system have been led by a working group comprising 16 ministries which developed a framework for the reforms in health service delivery, medical services, health insurance and drug access, supply and availability. The government also made a commitment to cover all rural counties, prefectures and districts under a Rural Co-operative Medical Scheme (RCMS), provide 100% coverage of urban dwellers in employee health insurance schemes and expand the urban residence health scheme as part of the move to universal access to health services by 2020 (WHO 2008).

The global burden of disease estimates published by the WHO indicate that China's overall disease profile is the same as a developed country in that 70% of disability-adjusted life years are attributable to NCD's and injuries. In China, in 2008, the prevalence of smoking in males was estimated to be 49.4% and 10% of all deaths were caused through injury (WHO 2011). As part of the CCS, WHO is supporting the initiatives to reduce NCDs and improve occupational and transport safety but in reality there are practical difficulties which are placing limitations on reaching the development targets. Examples include the rapid move from rural to urban living; the fact that the RCMS insurance schemes are not adequate for universal cover; the inconsistent standard of health services; and a lack of trained health professionals particularly in the rural areas (WHO 2008).

A number of partnerships have been developed to assist with the health reforms. Groups include the Norwegian Agency for Development Cooperation (NORAD), the UK Department for International Development (DFID) and the Australian Agency for International Development (AusAID) along with WHO collaborating centres in China, including the Hong Kong Society for Rehabilitation (HKSR). The HKSR was first designated as a WHO collaborating centre for China in 1986 and partners with the Chinese Association of Rehabilitation Medicine (CARM) (www.rehabsociety.org.hk).

So, What is Currently Happening in China in the Ar-

ea of Rehabilitation?

Currently in China, physical therapy is not a profession recognized by the Central Government. Health workers engaged in rehabilitation services are rehabilitation therapists and the majority have been trained to work under doctors who themselves are qualified in rehabilitation medicine. Rehabilitation therapists carry out the doctors' instructions. Within the past 20 years the concept of health professionals becoming independent disciplines has emerged and a few universities are now providing specific training for the disciplines of Physical Therapy (PT), Occupational Therapy (OT) and Speech Therapy (ST). The concept of autonomous practice has not yet been authorized as all the therapists in China all still work under the direction of doctors of rehabilitation medicine.

Contemporary Western concepts of rehabilitation were introduced to China in the 1980s (WHO 2008). However it has only been in this century that the development of rehabilitation services has taken off at an impressive speed. As part of a report announced by the Chinese Premier in 2001, "rehabilitation" is considered by the Chinese Government as an area for "focused development" (WHO 2008). In August 2002, the Office of the Chinese State Council forwarded the following targets for healthcare reform to the Ministry of Health, Ministry of Civil Affairs, Ministry of Finance, Ministry of Public Security, Ministry of Education, and China Disabled Persons' Federation: that by 2015, all disabled persons should have access to rehabilitation services, and that the development of rehabilitation should pursue a direction which allows rehabilitation services to be accessed by all. The rehabilitation services' model has been encouraged to be more enriching through a greater variety of delivery settings such as rehabilitation centres, specialized rehabilitation hospitals and community rehabilitation and the Government has made funding available for NCD treatment, prevention and health promotion (WHO 2011). This policy is in line with the desired outcomes of the United Nations Convention on the Rights of Persons with Disabilities (2008). In March 2012, the Jiangsu Rehabilitation Medicine Quarterly published a notice from the Ministry of Health on "Basic Standards for Rehabilitation Hospitals (2012)" (JARM Quarterly 2012); The standards state that all Level 2 rehabilitation hospitals will have at least 100 inpatient beds

and rehabilitation treatment area of no less than 800m²; whilst Level 3 hospitals will have at least 300 beds and rehabilitation treatment area of no less than 3000m². Level 2 and Level 3 hospitals are also required to have treatment rooms for physical therapy, occupational therapy, speech therapy and traditional rehabilitation therapy. Level 3 rehabilitation hospitals should also have rehabilitation engineering, psycho-rehabilitation and hydrotherapy treatment areas.

In contrast to the rapid development of rehabilitation services in China, the development of the education of specialist health professionals who provide rehabilitation therapy has proceeded much more slowly. Following the directive to develop rehabilitation services, "Rehabilitation Medicine" became a compulsory curriculum for most medical schools resulting in a broad understanding of rehabilitation amongst medical practitioners. However, the education for specialized physical, occupational and speech therapists has not received comparable attention and the training of appropriate therapists who provide direct rehabilitative services to patients is severely lacking. For example at the time of the major earthquake in the Sichuan province on 12 May 2008, there was an international call put out from the HKSR project director to physical therapists from around the world for urgent assistance in the Sichuan province.

Based on the Second National Survey of people with disabilities (Zheng 2011), it is estimated that there are nearly 83 million (82,960,000) people with disability in China. Of these, 50 million require rehabilitation services. Furthermore, the size of the aging population is growing rapidly. There are currently 144,000,000 people aged 60 or over in China, and 70 million of them require rehabilitation services. Currently there are just a few hundred physical therapists only 14,000 rehabilitation therapists for the whole of China (JARM 2012) i.e. 1 rehabilitation therapist for every 100,000 Chinese people. This is far below the physical therapist/population ratio in Australia (1: 1011), USA (1: 1693), UK (1: 1344), Canada (1: 1886), Norway (1:485) and Sweden (1:768) (WCPT 2012). In view of this mismatch and factors such as the hosting of the 2008 Olympics and the lack of rehabilitation professionals to cope with the victims of the Sichuan earthquake, the Chinese Government has recommended that by 2015, the number of qualified therapists engaged in rehabilitation should be increased to 40,000 (JARM 2012).

It was not until the 21st century, that the development of rehabilitation therapy education began to flourish. Training programmes for rehabilitation therapists over the past 10 or so years have been developed in medical schools, sports institutes and TCM schools. Programmes offered range from high school diploma to baccalaureate level. To date, over 200 institutes including over 70 medical schools, 20 sports institutes and TCM schools and 100 high schools have developed rehabilitation therapy programmes (National Guidelines for Rehabilitation Therapy Education, in press) and the graduates from these 200 programmes are assigned to physical therapy, occupational therapy or speech therapy departments to deliver their respective services to hospitals. It is however not uncommon for a rehabilitation therapist who has worked in the physical therapy department for a number of years to be assigned to provide services in occupational therapy or speech therapy or to assist in the development of such services. Unlike Western countries where the role of the physical therapist is based on assessment, evidence-informed intervention, re-evaluation and patient education, and where "active" exercises and functional activities are very much the focus of the services, physical therapy in China is still dominated by the use of physical agents (wax therapy, electrotherapy, light therapy), traction, Chinese massage, manipulation and passive exercises. This is most likely due to the old Chinese tradition that the sick and the elderly need to be pampered and "looked after" and are not supposed to be 'active'.

Chinese leaders in the rehabilitation arena recognize the need to "internationalize rehabilitation education" in China. Over the years, the CARM has been actively promoting the need for separate education of physical therapists, occupational therapists and speech therapists. The first school was established at the Beijing Capital University with China Rehabilitation Research Centre (CRRC) and it adopted a specific "2+2" training model (2 years of generic subjects followed by 2 years of either "Physical Therapy" or "Occupational Therapy") as distinct from providing combined rehabilitation skills. In Beijing the physical therapy training has been very much influenced by the Japanese curriculum. A close collaborative relation-

ship between Japan and CRRC allows Chinese rehabilitation staff to go to Japan and receive free physical therapy training; although in the early 1990s a few staff from CRRC did go to Hong Kong to receive their physical therapy education.

Hong Kong, being a British colony until 1997, adopted the model of the Physical Therapy curriculum in the United Kingdom until the curriculum was updated 10 years ago to be in line with other leading programmes internationally and more recently it has been aligned with the international guidelines set down by WCPT (WCPT Guidelines for physical therapists professional entry-level education, 2011). In recognizing the need to assist China to develop an internationally recognized curriculum in physical therapy, the then Head of the Department of Rehabilitation Sciences at the Hong Kong Polytechnic University, Professor Christina Hui-Chan, in collaboration with the Hua Xia Foundation and Tongji University of Science Technology, founded the first Master in Physical Therapy (MPT) programme in Wuhan that commenced in 2004. The decision to locate the school in Wuhan was only made after extensive consultation over the best venue/ partner relationships and the sponsorship that had been procured. The formal signing ceremony took place in Beijing, on 13th March 2003 (Figure 1). The model for programme used the concept of "Train the Trainers". Professor Marilyn Moffat, the current President of WCPT, was one of the panel members involved in the validation process for the programme. Three successive cohorts produced a total of 108 MPT graduates who are now working as professors and teachers, directors of rehabilitation units or heads of physical therapy departments in different parts of China. The programme was unfortunately terminated in 2008 due to the lack of donations of money to keep it afloat. Thankfully, many of the MPT graduates recognized the importance of clinical reasoning and evidence-informed practice, and appreciated the non-traditional Western approach to teaching and learning, and have continued to actively promote international physical therapy values in the various parts of China where they are working.

To date, under the leadership and support of CARM, a number of universities including Beijing Capital University, Sun Yat San University, Kunming Medical Universi-

Figure 1 Professor Christina Hui-Chan, Head of Department of Rehabilitation Sciences at the Hong Kong Polytechnic University, and officials in Beijing at the formal signing ceremony held on 13th March 2003 to mark the founding of the first Master in Physical Therapy programme to be established at the Tongji University of Science Technology Wuhan in 2004.



ty, Sichuan University, Nanjing Medical University, Nantong University, Shanghai University of Traditional Chinese Medicine (TCM) and Fujian TCM University have established or are in the process of establishing physical therapy specific entry-level programmes using a 2+2 model (Table 1), as opposed to the rehabilitation therapist generic skills-based programmes which combine aspects of PT/ OT/ST. Several of the physical therapy entry-level programmes, namely programmes at Kunming Medical University, Sichuan University, Nanjing Medical University, Nantong University (Figure 2), and the Shanghai University of TCM have each used the WCPT's Guidelines for physical therapists professional entry-level education (WCPT 2011) as the basis for the curriculums for their four year entry-level degree programmes. Importantly, international education experts have been involved in formal review processes for some of the programmes that have produced physical therapy graduates to date and also interim reviews of three pilot programmes in order to advise on directions for curriculum development as the university staff work towards meeting the international guidelines. The physical therapy entry-level programmes at Kunming Medical University and at Sichuan University have been successful in gaining entry-level physical therapy programme accreditation with the WCPT.

At this time there are many positive signs to suggest that the physical therapy profession will develop as a

Figure 2 Professor Li Jianan, Vice President, Chinese Association of Rehabilitation Medicine, with Professor Alice Jones and Dr Margot Skinner, Consultants, China's Expert Committee of Internationalized Education for Physical Therapy, during a visit to Nantong University, December 2012, to advise on the establishment of their physical therapy entry-level programme.



recognised health profession in China. Firstly there has been an important signal from the Chinese Government that they are recognizing the significance of rehabilitation as a key component of their healthcare system (WHO

2008); and secondly the leaders in rehabilitation and CARM are strongly supportive of individual specialty education. Physical therapy entry level programmes with curricula based on WCPT's guidelines (2011) are being developed which will result in a large number of qualified physical therapists joining the profession in the very near future. This is sure to impact on the health care and life style of over 1.4 billion people!

So What are the Problems?

The first problem is a general lack of understanding amongst the Chinese people of the role of physical therapy and a traditional approach to health which is at odds with the evidence in support of the concept of the patient being actively engaged in their physical rehabilitation. While it is obvious that many hospitals would like to upgrade their rehabilitation services to an international standard, many also consider that their current physical therapy services which have an emphasis on electrotherapy are not outmoded. However with the recent introduction of the occupational therapy profession, the new concept of enriching a patient's occupation and home environ-

Table 1 The Current Status of Physical Therapy Degree Programmes Offered by Universities in China

University, City and Province	Programme	Length of Degree	First Cohort of Graduates	International Status
Beijing Capital University, Beijing,	Undergraduate	4 years	Expected 2014	Consulting with expert education advisors
Fujian University of Traditional Chinese Medicine, Fuzhou, Fuji- an	Undergraduate	4 years	Expected 2015	Consulting with staff from the Hong Kong Polytechnic University
Kunming Medical University, Kunming, Yunnan	Undergraduate	4 years	2011	Review undertaken by WCPT education experts 2011/2012
Nanjing Medical University, Nanjing, Jiangsu	Undergraduate	4 years	Expected 2015	Review of pilot programmes and interim report prepared by expert education advisors
Nantong University, Nantong, Jiangsu	About to establish an undergraduate programme	4 years	Expected 2016	Review of pilot programmes and in- terim report prepared by expert educa- tion advisors
Shanghai University of Traditional Chinese Medicine, Shanghai	Undergraduate	4 years	Expected 2014	Review of pilot programmes and interim report prepared by expert education advisors
Sichuan University, Chengdu, Sichuan	Undergraduate	4 years	July 2012	Review undertaken by WCPT education experts 2011/2012
Sun Yat-Sen Medical University, Guangzhou, Guangdong	Undergraduate	4 years	Expected 2014	Consulting with the Hong Kong Polytechnic University; and New York University for post-graduate programmes
Tongji Medical University of Technology, Wuhan, Hubei	Masters	2 years	Oct 2004-Sept 2008 (3 cohorts only)	Taught by the Hong Kong Polytechnic University staff

ment and returning them to the community, has become increasingly trendy and such endeavors are now considered essential services for the "new" and "advanced" rehabilitation hospitals. With the help of occupational therapy colleagues from Hong Kong and the World Federation of Occupational Therapy (WFOT), the development of that profession in China has been impressive, and the set-up for occupational therapy services in major hospitals and rehabilitation centres is usually of an outstanding quality. In contrast, in the physical therapy treatment room, of many hospitals although it is usually large, is filled with electrical, light and sound therapy equipment, traction machines and plinths where patients lie down and receive passive treatment. There is also some confusion between the roles of the physical therapist and occupational therapist with sensory integration therapy for children, hand therapy and burns management in the majority of settings being largely in the domain of occupational therapy. Whilst physical therapists and occupational therapists do work in harmony together, the exclusivity of "labeling" such services as "OT" impedes the development of both professions.

A common difficulty for all Chinese universities intending to launch a physical therapy curriculum of international standard based on the WCPT's Guidelines (WCPT 2011) is the lack of qualified physical therapist educators. WCPT requires the core physical therapy curriculum be taught by qualified physical therapists, not medical practitioners or rehabilitation therapists. Kunming Medical University and Sichuan University have satisfied this requirement because the programme run at Kunming is staffed by MPT graduates and Sichuan University's BSc in physical therapy programme was from the outset staffed by physical therapists from the Hong Kong Polytechnic University, with the help of Wuhan's MPT graduates. These physical therapy programmes however only produce about 20 graduates each year. So how might it be possible to properly educate 30,000 physiotherapists over the next few years? Furthermore, what might be a politically acceptable way to expose current rehabilitation therapists to further education and the contemporary role of a physical therapist with an internationally acceptable qualification? Notwithstanding the fact that these rehabilitation therapists are experienced in their "current 'physical therapy' services" and collectively manage hundreds of patients each and every day a formal programme to upgrade their knowledge, skills and practice may be an expedient way of adding to the physical therapy workforce.

Furthermore, as many Chinese universities are now in partnership with various overseas organizations or institutes, what is the best way to coordinate messages across the WCPT's member organizations and physical therapy academic staff in universities in those countries, to assist China in developing physical therapy education and advancing the physical therapy profession in the most efficient manner?

The Following are Some Possible Solutions

As international expert advisors appointed to the National Rehabilitation Education Committee of CARM in China, the authors consider the following may effectively assist the development of the physical therapy profession in China:

Top up Programmes/Online Courses

The most efficient and effective way for an experienced rehabilitation therapist to receive proper physical therapy training and become a qualified physical therapist who can educate others is via a programme which 'tops-up' their essential basic skills and knowledge to an internationally recognized standard. The curriculum should emphasize assessment, clinical reasoning dence-based practice in the musculo-skeletal, cardiovascular-pulmonary, neurological, paediatric and geriatric subspecialties. The so called, 1+1 model could be employed, for example: one year of theory followed by one year hospital attachments to clinical units in Australia (or other Western countries where evidence-informed physical therapy is practised). The theory year could be taught online or by sending university physical therapy staff to China to deliver the essential curriculum. However, for the programme to be successful, the online courses must be conducted in Chinese, and be supported by face-to-face tutorial sessions via interactive mediums such as Skype in order to clarify the concepts. Preparation of online courses in Chinese is not difficult, as translation of materials can now be easily organized, particularly for universities where there are collaborative projects with universities in China.

The Specific Advantages of Such 'Top-up' Programmes are that

- Many experienced rehabilitation therapists can be properly trained and 'formally' recognized as qualified physical therapists who themselves then become involved as educators
- Experienced leaders in rehabilitation services will not be threatened by others bearing the newly qualified physical therapy title; because, as leaders, they will be given priority to participate in the training programme prior to returning to run their department with updated knowledge and concepts of the role of physical therapy in health care
- Promotion of the profession is much more effective if those in authority within the service are properly equipped with the evidence for the benefits and cost effectiveness of contemporary physical therapy.
- The 1+1 model requires staff to be out of the workforce/away from China for only one year (or less), which is a more feasible approach for many universities and hospitals to be able to sustain.

On Line Courses

If top-up programmes are not feasible in all situations, short online courses focusing on physical therapy management of core areas of practice in musculo-skeletal, cardiovascular-pulmonary or neurological rehabilitation would also be helpful. These courses should however focus on assessment and interventions that are based on clinical reasoning and the outcomes of re-evaluation. The concept of evidence-informed practice also needs to be emphasized.

Attachment Programmes for Chinese Staff and Students

It is essential that Chinese physical therapy staff and students have attachment opportunities to visit overseas hospitals or university clinics and observe how physical therapy services provided at the international standard are delivered. Attachment programmes of four weeks to three months duration are certainly affordable for many universities in China providing that educational fees charged by host universities are not excessive.

PhD Students Engaged in Physical Therapy Related Research

While many post-graduate research studies are in the area of rehabilitation medicine, research projects specific

to physical therapy are only just beginning to be supported. Many senior staff engaged in rehabilitation services in China now have Master's degrees, and are enrolled in an overseas university for PhD studies. Such opportunities are very much encouraged by universities in China and it is expected that the graduates returning will then undertake research posts in the universities. However, most universities cannot afford to release staff to an overseas university for three to four years to complete a PhD programme, so where it is possible for the student to be engaged in their thesis on a "remote" basis with data collection in China and visits made once or twice a year to the host university, then completing a PhD thesis becomes a more tangible option.

Workshops on Contemporary Physical Therapy Skills

Workshops focused on physical therapy skills such as specific taping techniques, manual hyperinflation, manipulative therapy, that are available to the profession internationally are always welcome in China. While most hospitals and universities cannot afford a large honorarium, the cost of airfares, accommodation and often meals, would usually be covered. In order to have the subject matter properly understood by all the audience, materials must be delivered in Chinese, or a translated version made available. However, experts, even though they do not speak Chinese, are always respected and welcomed.

The Way Forward

To help China to efficiently and effectively set up and run programmes for entry-level physical therapists and to assist educators, to have an opportunity to see how physical therapists work in Western countries, more universities and hospitals need to be involved as hosts for the five proposed solutions. Many universities around the world already have links with Chinese universities as part of their international engagement and some provide scholarship opportunities for exchanges or post graduate programmes. A positive outcome will be more efficiently and effectively achieved if the physical therapy educators responsible for international relations use the WCPT and its education experts on China as an initial resource from the outset. Although China is huge and the aim of producing over 30,000 qualified physical therapists over the next 5 years seems only a dream, the Chinese Central

Government and leaders in rehabilitation are determined to introduce physical therapy-specific education to China and many universities are keen to have their physical therapy programmes accredited and recognized by WCPT. With such strong support from the Chinese Central Government, the job is well underway! Helping China to develop the physical therapy profession on the basis of international standards is a meaningful task and will significantly contribute to the health and welfare of nearly 1.4 billion people. An involvement in such projects will allow physical therapists from countries where the physical therapy profession is well advanced, such as Australia and Canada, to expand their own horizons and experience their profession through a different culture.

The main purpose of this paper has been to inform physical therapists around the world and fund holders in China of developments in physical therapy profession in China. We encourage those engaged in the academic arena, to participate and assist in the promotion of the physical therapy profession in China. Furthermore, in order to keep a consistent standard and build up a repository of knowledge on projects being undertaken and successes that can be shared, it is important to use the resources already built up by WCPT as a guide and to provide feedback to the WCPT on progress being made, so that WCPT maintains its role as the central source of information

Acknowledgements

Professor Li Jianan, Dean of Department of Rehabilitation Medicine, Nanjing Medical University; Vice President, Chinese Association of Rehabilitation Medicine and Vice President International Society for Rehabilitation Medicine for expert advice in reviewing the article.

The WCPT, for its support for the development of the physical therapy profession in China.

References

- [1] Hua Tuo http://en.wikipedia.org/wiki/Hua Tuo/ Mair 1994: 688-696 Retrieved 19 February 2013.
- [2] Hong Kong Society for Rehabilitation, WHO Collaborating Centre (http://www.rehabsociety.org.hk/e/getContent.asp?contentId=32443&menu=9 Retrieved 24 February 2013.
- [3] Ministry of Health 2012 .Jiangsu Rehabilitation Medicine Quarterly. March 2012, Vol. 11. (in Chinese). Notice on Basic standards for Rehabilitation hospitals. No. 17.
- [4] NZMA 2003. Health Thompson Obituary. New Zealand Medical Journal Vol 116 No 1184: http://www.nzma.org.nz/journal/116-1184/657/ Retrieved 19 February 2013.
- [5] United Nations 2007. Convention on the Elimination of All Forms of Discrimination Against Women, adopted by the UN 31 December 2007 http://www.un.org/womenwatch/daw/ cedaw/ Retrieved 24 February 2013.
- [6] United Nations 2008. Convention on the Rights of Persons with Disabilities (enforced 3 May 2008) http://www.un.org/ disabilities/default.asp?id=150 Retrieved 24 February 2013.
- [7] Wei JW, Heeley EL, Jan S, et al. 2010. Variations and Determinants of Hospital Costs for Acute Stroke in China. PLoS ONE 5(9): e13041. doi:10.1371/journal.pone.0013041.
- [8] World Confederation for Physical Therapy 2011. Guideline for physical therapist professional entry level education. Revised, WCPT General Meeting, Amsterdam, June 2011.
- [9] World Confederation for Physical Therapy 2012. Data collection project of member organizations WCPT, London.
- [10] World Health Organization 2008. WHO-China Country Cooperation Strategy 2008-2013. WHO Geneva.
- [11] World Health Organization 2011. China country health statistics http://www.who.int/nmh/countries/chn_en.pdf Retrieved 24 February 2013.
- [12] World Health Organisation 2007. People-centred healthcare: a policy framework. WHO Western Pacific Region.http://www. wpro.who.int/health_services/people_at_the_centre_of_care/documents/ENG-PCIPolicyFramework.pdf Retrieved 2 March 2013.
- [13] Zheng Xiaoying, et al 2011. Twenty-year trends in the prevalence of disability in China. Bulletin of the World Health Organization; 89:788-797. doi: 10 2471/ BLT.11.089730.
- [14] Zhou D 1991. Rehabilitation in China. The Western Journal of Medicine. 154: 5, 633.