

IPIJ

THE OFFICIAL JOURNAL OF FIP



FIP PRESIDENTS

Honouring the past, welcoming the future

CONGRESS SECTION

From Lisbon, to Hyderabad and beyond, the FIP Congress takes all on an exciting journey

SPECIAL FEATURE

A follow-up to the Basel Statements and the 2008 FIP Global Hospital Pharmacy Conference on the Future of Hospital Pharmacy

JOURNEY OF EXPLORATION

The 2010 FIP Congress in Lisbon set out to examine pharmacy's exploratory journey, including the vehicles moving the profession down the right paths.

DEAR READER

International Pharmacy Journal

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Art Direction/Layout

United135, The Netherlands

Advertisements

Prices are available upon request from the Editorial Office in The Netherlands.

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Can it not be said that the path to enlightenment is marked more significantly by unexpected turns, than well-mapped itineraries? Can the same not be said, in essence, for the progress and evolution of the pharmacy profession? Taking into account a history that has steered us in unexpected directions, yet still cannot discount the role and contribution of pharmacists, few can argue.

Regardless of how one looks at it, **can** be said that both the profession of pharmacy, and those who serve it, are on a journey. A journey within, as exemplified in FIP's 2010 Congress in Lisbon, Portugal, which adopted the theme of "From Molecule to Medicine to Maximising Patient Outcomes – Pharmacy's Exploratory Journey", and a journey expanding outward, taking the profession to places yet undiscovered.

The articles in this issue of the IPJ do both. Reporting directly from the Congress in Lisbon, the authors do an excellent job of bringing us with them down the paths that pharmacy practice, the pharmaceutical sciences and pharmacy education are taking, guided by such events as the FIP congress. Furthermore, we hope to get all teeming with anticipation for the 2011 FIP Congress in Hyderabad, India, which in a similar yet cautionary way hopes to steer all away from the risky paths of compromising safety and quality.

We are also pleased to offer readers a special feature in this late 2010 edition. In 2008, coinciding with the FIP Congress in Basel, Switzerland, the FIP Hospital Pharmacy Section (HPS) hosted the Global Conference on the Future of Hospital Pharmacy. Within this meeting a very ambitious – and, successful – project was born: The Basel Statements. The Basel Statements are a series of consensus statements developed by the attendees of the Global Hospital Pharmacy Conference reflecting the profession's preferred vision of practice in a hospital setting. Since 2008 they have been translated into 18 languages, including all 6 United Nations official languages (Arabic, Chinese, English, French, Russian and Spanish) and implementation has begun at ever increasing international levels.

It is our pleasure to devote half of this issue of the IPJ to articles that follow-up on the Basel Statements and how they are being adopted and implemented around the world. A very deserved thanks to Mr Lee Vermeulen, Mr Bill Zelmer and Mr Andy Gray for their vision in coordinating and editing this exceptional and welcome addition to the IPJ.

And so, we now invite you to turn the pages and take the journey with us.

Myriah Lesko Editor

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Editors, The Basel Statements

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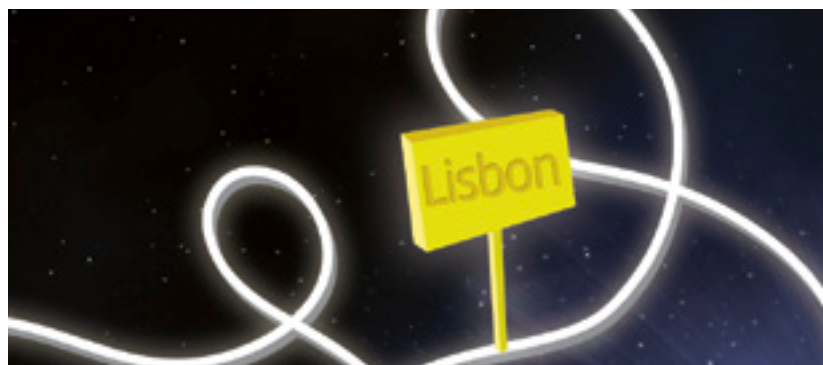
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LEADING FIP INTO THE FUTURE

NEW FIP PRESIDENT DR MICHEL BUCHMANN

On Saturday, 29 August 2010 the Council of the International Pharmaceutical Federation (FIP) met under the occasion of the 70th World Congress of Pharmacy and Pharmaceutical Sciences in Lisbon, Portugal to elect Dr Michel Buchmann (Switzerland) as the new FIP President. Dr Buchmann will serve a four-year term (to 2014) following the Presidency of Dr Kamal K. Midha, who will carry on as FIP Immediate Past President.

Dr Buchmann is assuming the role of FIP president after extensive experience within FIP Boards, community pharmacy practice and Swiss politics. In his remarks following the release of the Election Results Dr Buchmann exclaimed "This morning, when I came into this room, my principal objective was to take part in a dignified open election which enhanced the cohesion of all parts of the profession, here at the FIP Council meeting. I think together we have aspired to this goal.

An election is often seen as an end. It is in effect quite the contrary; I feel this is the beginning of a new period but one in totally harmony with the strategy decided upon under the leadership of our President Kamal Midha. An election is not a finale, but a chance, a challenge and an invitation sent out to every pharmacist to help build the future."

FIP officers, volunteers and staff would like to extend sincere congratulations to Dr Buchmann and welcome his visionary leadership as we move into this next era of FIP.

*FIP President 2010-2014
Dr Michel Buchmann (Switzerland)*



OPENING CEREMONY PRESIDENTIAL ADDRESS

DR KAMAL K. MIDHA, FIP PRESIDENT 2006-2010

Dr Kamal K. Midha

At the 70th FIP World Congress of Pharmacy and Pharmaceutical Sciences, outgoing FIP President Dr Kamal K. Midha addressed an audience of thousands at the Opening Ceremony in Lisbon, Portugal. His reflective and inspirational words were a timely and motivational start to what would prove to be a widely successful congress for participants and locals alike.



Now exploring beyond the horizon...

Have you stared at the ocean horizon outside this congress centre and imagined what a navigator in the 14th Century would have thought when heading out to cross that line beyond the unknown?

At that time people believed that the world was flat. So what reassurance would a navigator have had that he would not sail out and fall off the horizon?

What qualities of mind and heart propelled the maritime discoveries?

- a vision of an enhanced way of life and wealth;
- a call to adventure and passion, out of curiosity and restlessness, to brave the world beyond;
- a will, with courage and confidence, to develop a better understanding of the world beyond.

What skills, tools and ways of doing things enabled admirals and ship captains to be successful?

- Technology;
- Innovation;
- Planning.

By the 15th Century, Lisbon became a hub of commerce and innovation because:

- know-how was sought and gathered on celestial navigation from various parts of the world;
- knowledge was translated into practices for navigating great distances and overcoming the dangers;
- strong partnerships were built;
- ships and fleets of ships were well governed through coordination;

- fleet admirals, ship captains and crews were educated, trained and empowered to become successful.

As in all major undertakings, lessons have been learned through risks in exploring beyond the horizon. We learned many beneficial outcomes but we also suffered some unintended harm.

Throughout this period of exploration, fleets of ships with their captains and crews learned to circumnavigate the world. Thereafter they regularly sailed routes from Lisbon to as far away as Japan – linking east to west by the end of the 16th century.

What parallels can we draw between a 500-year old story of maritime explorations and global pharmacy, health care and FIP in 2010?

Today, we continue a journey of exploration – not in navigating the seas, but in exploring the challenges and critical needs in our schools, our laboratories and in our communities, in pursuit of global health. In my first address as President at the Beijing FIP congress, I said: “The future of Pharmacy and Global Health Care is literally in our hands, whether as a pharmacy in an isolated village in Africa, or as an ultra modern pharmaceutical unit in a plush private hospital in Europe. . . . In becoming Pharmacists and Pharmaceutical Scientists, we dedicated our lives to ‘global health and quality of life,’ to make our world a healthier world.”

Over the past four years at FIP, we have set our coordinates to explore beyond the horizon of a world rapidly changing. The vision set in our 2008 strategic plan promises and ensures that where medicines and health care are discussed,

FIP is at the table. This vision provides sustainable, steady, long-term focus for FIP. Our mission targets the ultimate goal of our work – to make a positive impact on patients' health outcomes.

Strategically, FIP has placed pharmacy practice and science, supported by education, on the international healthcare map. Our collective energy and passion in what we do have set us on a great journey with confidence and determination.

To achieve our objectives and outcomes, I believe we also need to:

- Use and leverage technology intelligently, such as information technology informatics systems for drug supply, electronic prescriptions and e-health records.
- Innovate beyond established boundaries of fixed horizons, focussing on public health programmes such as health promotion services and disease management.
- Plan thoughtfully and responsibly to meet unexpected and deep changes in the ways we do business, research and care for patients.

As the global hub for pharmacy practice and pharmaceutical sciences, FIP provides the collaborative platform for pharmacists and pharmaceutical scientists worldwide to exchange and learn from one another. We interweave our strengths to support better health outcomes. Through FIP we do together, with and for each other, what we cannot do alone. As I said in Beijing: *"... challenges can only be successfully addressed by working together – locally, regionally, globally. The health of all of us – as students, as professionals, as associations, as nations – depends on each of us."*

Over the past four years of my Presidency, we have gained further insight into the challenges and opportunities that you as regional, national and individual Member Organisations face in your daily work. Through listening and meeting with you, we have mapped out global strategies for pharmacy and pharmaceutical sciences in the context of global healthcare. FIP has set up an extensive resource centre:

- to support national members in networking with peers;
- to highlight needs and common challenges; and
- to gain synergies through unified advocacy.

Along with closer relationships and interactions among FIP members, our FIP partnerships with global health organisations have grown from strength to strength. This year's annual report highlights some of the collaborative initiatives with the WHO. These include rational use of medicines, strengthening the pharmaceutical workforce, patient safety, and others noted in the report. I urge you to review this year's annual report. You will enjoy it.

As a founding member of the World Health Professions Alliance (WHPA), FIP is a leader in bridging together health professionals in Medicine, in Nursing, in Dentistry, in Physical Therapy and in Pharmacy at the international level. Collectively WHPA represents more than 22 million healthcare professionals. Our joint initiatives build further

recognition and visibility of pharmacists and pharmaceutical scientists as valuable and integral, effective and efficient members of healthcare teams. Specific initiatives on which we are working together include the Positive practice environments campaign, the World Health Professions WHPA Conference on Regulation, and the counterfeits campaign. A joint vision of collaborative practice is also being developed with the members of the WHPA after we presented our FIP work on Collaborative Pharmacy Practice.

Good governance is key in organisations around the world. You Members should expect and must be confident that decisions taken by your leaders are sound and honourable. In the last four years, FIP has formalised procedures on duty of care and duty of loyalty for its Officers. Good governance is ensured through transparency in all venues and decisions – including this congress. It is worthy of note that those of us who are in positions of governance are here to serve you, FIP members.

This FIP congress marks four years since we started our education initiative. We are learning from a diversity of speakers and from exchanges with other participants. The roles of pharmacists and pharmaceutical scientists are constantly evolving. FIP brings these roles together in the Board of Pharmacy Practice and in the Board of Pharmaceutical Sciences in the context of Education – under one roof, living together as a family. This collaboration has been deliberately chosen to create the synergy of exchange among these three units, distinct in focus but fundamentally interconnected and interdependent fields of activity.

At the FIP congress we all benefit, keeping up to date and creatively addressing emerging issues.

Each year, FIP invests in the education of thousands of pharmacists and pharmaceutical scientists. Our efforts and achievements have increased through the work of the Global Pharmacy Education Taskforce. The second consultation with the Deans and Leaders representing pharmacy schools from around the world and the 5th open consultation will take place here in Lisbon. FIP is instituting AIM – academic institutional membership. AIM will strengthen FIP networks among academia to advance pharmacy and pharmaceutical sciences education, globally.

It is fundamental for pharmacists to be well educated and effectively trained to take on new roles. What I said in Beijing three years ago still holds:

"For a truly collaborative patient-centred health care focus, Pharmacists must be respected and have equal status as full health care team members, based on competence established through contemporary and rigorous educational standards."

Pharmaceutical scientists must be encouraged and empowered to develop new and innovative therapies. The impact of the pharmaceutical sciences on health, through

developing need-based therapies, has been impressive so far. However, I believe more resources – both human and financial – are needed for the developing world.

The Vision of the Future of Pharmaceutical Sciences, a project of the FIP Board of Pharmaceutical Sciences, has been published widely. It shares the view that we must challenge the status quo. Exploring wider surroundings will stimulate creativity and innovation.

During the 4th Pharmaceutical Sciences World Congress this November in New Orleans, Scientists from around the world will come together to share and learn about the latest developments in science and technology.

“Our communication skills and global knowledge must be used effectively, not just in the name of science, but for the sake of our humanity itself.”

Each year at the annual congress, FIP brings us together – with our different historical, cultural and social backgrounds. We search for common horizons in our shared concerns for global health. Still our viewpoints can often separate us, set us apart. Continual dialogue is crucial to bring about improvement in our organisations and workplaces.

So allow me to share two concepts from Japan with you, Kaizen and Genba.

I would like to challenge all of us to embrace Kaizen. Composed of two Japanese characters – Kai for “change” and Zen for “good” – Kaizen urges “change for the better.” As students, practitioners, scientists, elected officers, members, we all have a stake in improving health. We must make suggestions for beneficial change. Then work toward implementing such change, and change will occur. Then monitor progress towards continually ‘changing for the better’ – practice, science, education – worldwide through FIP.

FIP exists to serve all of us. Each of us – individually and collectively – creates value in healthcare. Genba is the Japanese word for the ‘real place’ – ‘where things happen.’ For us, Genba is our workplaces – where escalating discovery and delivery for improving healthcare take place.

Two years from now in 2012, FIP will celebrate its centennial, marking many major historical milestones and successes. Our future is bright as we explore new horizons in medicines, pharmacy, pharmaceutical sciences, and patient care. Together, we go forward with confidence in the direction we have chosen and in the strategies we have mapped out. The future we share together in FIP is bright.

The energy generated throughout this week needs to be redirected to everyday practice, the real place where it makes a difference that matters. In their daily practice, many pharmacists provide advice to patients without selling medicines. Pharmacists are the most accessible healthcare professionals. This is praiseworthy. But more importantly,

our accessibility as health professionals provides clear benefits to patients everywhere.

As the global advocate for pharmacy practice, science, and education, FIP is at the Table – for each of us and for all of us. Through 2020 Vision, Mission and Strategic Objectives, the FIP fleet has set its course. Our journey to the new 21st century horizon may become turbulent, even dangerous at times due to storms beyond our control. Our FIP Strategic Plan will enable us to stay steadfast, determined that our federation reaches the desired destination

Each leg of the journey teaches us valuable lessons. As we learn, our patients benefit through improved healthcare and vitality of living.

Since 2006, colleagues, I have been entrusted with the responsibilities as the FIP admiral – coordinating a fleet composed of 124 MOs ships with their individual captains and crews. We represent more than 2,000,000 pharmacists and pharmaceutical scientists worldwide. In my role I can say that I am proud of our collective achievements. You should be too. Our shared achievements have only been possible through the dedication and hard work of all of you, FIP Officers, volunteers, staff and partners.

To you, leaders in pharmacy and pharmaceutical sciences around the world, I express my admiration and deep gratitude for your resourcefulness, passion and resolute commitment as we have together sailed toward new horizons of world health care.

Thank you.

PHARMACY'S EXPLORATORY JOURNEY

THE THEME OF THE 2010 FIP CONGRESS

Peter Rollason

As a title for a discussion theme I find this a little odd! "Exploration", as an event, visualises a journey into the unknown, a discovering of new facts, a chronicle of adventure. This worries me somewhat. In Pharmacy, we know quite well what we are searching for, we know equally well the basic facts of our search, and our chronicle so far has been rather dismal. We are better oriented to an investigation, an enquiry and above all, an assessment of the future of our profession.

Make no error there are just as many hazards to be faced and just as many dogmatic problems to be conquered as with any adventure, but in our profession we have to consider the different facets that are pertinent to the varied applications of our original qualification. There are the differences and similarities in the practice of, for example, community, hospital, and industrial pharmacy. There are the educational aspects of varied localities. There are the diverse legalities applicable to practice in diverse places. And especially there are the distinct personal relationships that apply in different places. It was most encouraging therefore to find so many of these avenues explored in some detail in papers delivered at one of the plenary sessions of the 2010 FIP Congress in Lisbon.

Every person or institution involved in health care should be able to undertake and fulfil certain basic requirements. With the emphasis on Pharmacy these are a concern for patient welfare especially in the use of medicines, a knowledge, however specialised of medicines as an essential commodity, a consciousness of the economics of practice including professional cognitive services, the costs of such services and medicine prices, a humanistic concern for people in various stages of distress, and an eagerness to co-operate with other health professionals in all spheres of activity.

The Pharmacist is a key member of any envisaged professional team or group concerned with the administration of basic health care. But – world wide, he is his own worst enemy, in as much as he is inclined to be far too self-effacing and generally apprehensive of taking a leading and stimulating role in the promotion of his own profession. This probably originates in the image of the bespectacled 'chemist' rolling pills and compounding mixtures in secrecy behind a screen, and at same time contributing to the mystique and awe that signified the practice of medicine a hundred years ago. A communications ability and an accompanying expertise is essential in any form of health practice, and particularly in Pharmacy.

One of the main problems that is escalating in Pharmacy is that of counterfeit medicines. The only logical and effective way to combat this is a concentrated and effective global legal action. This needs universal and similar legislation in all affected countries which would succeed in actively prosecuting and penalising offenders with punitive punishments, impervious to nationality claims. Any country that should adequately pursue this action and is thus seen to do so would very quickly become recognised by the "peddlers" as unsuitable for their type of business.



With a marked increase in travel especially from European and American countries to less sophisticated areas, and particularly tropical and sub-tropical places, a much greater world wide knowledge of diseases and health hazards in such destinations is urgently needed. As a typical example, very few pharmacists and doctors in North American and European cities know much if anything about the diagnosis and treatment of bilharziasis, malaria, filariasis and even tuberculosis. A great deal more emphasis should be placed on enhancing world wide knowledge of these and other diseases, their origins and prognoses. Diseases of warmer climates are already showing signs of increasing incidence likely to be due to global warming.

A focus on medical supplies to cash strapped developing countries should be considered, with cognisance of the WHO guidelines on drug donations. In this adventure into the future, every endeavour must be made to improve the image of the pharmacist.

In a paper presented at the last FIP Conference in Lisbon, Prof. "Charlie" Benrimoj from Australia laid emphasis on, amongst other matters, the need for proper cognitive services to be implemented, and hopefully remunerated. There were many other avenues to be examined ranging from the

competence of the pharmacist to creating the right atmosphere in the pharmacy, from the increased use of IT (including access to patient records) to the training of pharmacy staff. Communication skills must be enhanced especially at undergraduate level. The integration of professionalism and business acumen, the old story of dichotomy, has to be overcome.

Dr. Pedro Ferreira from the host country, Portugal, spoke of the evolutionary tree of Pharmacy, as to how the different aspects and approaches of the profession have been dealt with in the past. This he used to exemplify the need for a serious look at the future situation especially in view of the speed of that very same evolution and particularly considering the many branches of that same tree that now involve pharmacists in specialised undertakings.

The circumstances prevailing in his own country were detailed by Dr. Ajad I. Aryan from Jordan. He emphasised the rapid changes that had been taking place in the last twenty years, all leading to an enhanced position of the pharmacist in the eyes of the community, and showed how this extension of service has led to a much greater involvement of the pharmacist in the overall medical care of patients. It was interesting to note that about 40% of the population

was 15 years or younger, and that elderly patients (+65) only accounted for about 4% of the total.

A paper presented by Dr. Nobuo Yamamoto representing the Pharmaceutical Association of Japan drew attention to the rather unbalanced services offered by the pharmacist up to recent days, with the emphasis on the dispensing of prescription drugs, while matters of pharmaceutical affairs and hygiene services received scant attention. It seems that this has been resolved since the introduction of new ideas around 1974. He compared remuneration for services accorded to doctors with those received by pharmacists and showed that increases in the pharmacists revenue had enhanced general practice and led to the separation of prescribing and dispensing. Further changes in the system envisaged by the Japan Pharmaceutical Association are for the patient to relate to the pharmacist in various ways. These include functioning as a distributor, as an educator, as a gate-keeper and as an information service.

South America shows some interesting pictures. In Uruguay, medicines are distributed through both hospital and community pharmacies, the latter being highly competitive. There are some 1250 community pharmacies serving a population of 3¼ million. Dr Laura Rugnitz told the audience that pharmacists should consider the characteristics of the patient as well as that of the medicine in the context of developing the right product. There is an inherent desire to improve health services and the profession has received an initial promotion from the Ministry of Health. It is significant that the whole project involves the neighbouring country of Paraguay. This is a great example, but not enough pharmacists are as yet committed and the environmental conditions are not always appropriate.

It became obvious with ensuing discussion that circumstances that prevailed and were being considered varied considerably according to geographical considerations and cultures. There is however, an overwhelming concern that is universal. Things cannot and will not remain as they are now for much longer. The factors of enhanced communications, of a constant flow of new drugs, of more information about their health being made available to the public will need the pharmacist to adapt and modify his global thinking about how he is going to approach and continue to practise his profession in his own environment. It is equally obvious that the education of the pharmacist to become an efficient practitioner will play a paramount part in this process, and it raises the thrust as to the necessary changes that must be introduced in both undergraduate and post graduate education very soon. An example of the dilemma facing the educationalists is that of deciding if and when a prospective pharmacist should specialise in a chosen branch of the profession, for no longer are we to be qualified as a "generalist" and then make an effort in finding the right niche in community, hospital or academic pharmacy, as examples.

The whole theme of the 2010 Conference was concentrated on this very 'Adventure' into the future, our Exploratory Journey, and there were many papers presented and discussions that ensued debating the facets as applicable to so many differing situations. A large number of these papers dealt with the young pharmacist, his or her education leading to qualification and registration and most especially his or her progress immediately thereafter. This focus was one of the most enlightening aspects which by its very nature should do well for the future of our profession

What is likely to happen in the next fifty years to pharmacy as we know it today? Will the small chemist shop of past years survive? Will the chain stores and supermarket pharmacies play a greater role in the provision of medicines to the public? Will the larger and more comprehensive manufacturers continue to expand and absorb small concerns all in the interests of better and more comprehensive research? Will generic drugs overtake original proprietaries to the detriment of progressive research? Will the hospital pharmacist world wide become more directly concerned with the health problems of the individual patient? Will the individual pharmacist ever be able to keep up with developments such as IT and fulfil the need for continuing professional education? Will there be an increase in partnership practices with the various medical and allied professions working directly together? Above all, will the status of the pharmacist in the eyes of the public be adequately and sufficiently enhanced?

No one can answer these questions right now; one can only speculate. But this speculation will depend on one paramount fact, and that is the individual attitude of the pharmacist himself or herself to the needs of the profession and his or her ability and willingness to meet those needs, capitalise on them and particularly benefit from them. We certainly need to stand up and be counted. And if all this comes about the profession of pharmacy will be the proudest, most intelligent, most sought after profession anywhere. Pharmacy can do it. Yes, it can.

AUTHOR'S INFORMATION

Peter Rollason

Is a Pharmacist from Zimbabwe who has lived there for over 70 years, with his own community Pharmacy practice for 50 of those years, and is now semi-retired. He is also well known as a radio and TV broadcaster and great supporter of FIP, attending some 28 annual conferences.

COUNTERFEITING OF MEDICAL PRODUCTS HIGH ON AGENDAS

Janice Blondeau

During the recently held FIP Congress in Lisbon and in several other international forums, the issue of counterfeiting of medical products as a threat to patient safety and public health has been in the spotlight. These initiatives have been a direct result of the new campaign launched by FIP and its partners in the World Health Professions Alliance – Be Aware – which aims to raise awareness within and outside the health-care arena on the threat of counterfeit medical products and what can be done to stop them.



Combating Counterfeit Medicines symposium at FIP 2010 Congress

In a day-long symposium entitled Combating Counterfeit Medicines, experts from around the world attested to how they are battling this serious public health issue.

Dr Sabine Kopp, of the World Health Organization, Switzerland, presented an update on recent work of the International Medical Products Anti-Counterfeiting Taskforce (IMPACT) as well as discussions at the 2010 World Health Assembly. She also spoke about the ongoing work of the WHO Expert Committee on Specifications for Pharmaceutical Preparations.

From India, Professor Bhushan Patwardhan, Director of the Institute of Ayurveda and Integrative Medicine, Bangalore, and Professor, Interdisciplinary School of Health Sciences, University of Pune, addressed the issue of counterfeiting in herbal products. There have been a growing number of reports associated with herbal treatments. These have been related to adverse effects – which could be short term, long term or even fatal; herb-medicine interactions; heavy metals and poor quality.

Mr. Zhong-Yuan Yang, a senior chemist, member of the Executive Committee of the Chinese Pharmacopoeia Commission, former member of the Expert Panel on the International

Pharmacopoeia and Drug Preparations of the World Health Organization (1988-2008), and editor of “Acta Pharmaceutica Sinica” spoke of medicine testing in China. On the basis of the Basic Tests for Pharmaceutical Substances and Preparations proposed by the World Health Organization, he explained that medicine testing institutions in China have developed screening methods for detecting counterfeit medicines according to the practical situation in the region, for example using chemical methods, simple chromatography and drug testing vehicles provided by the State Council. Technical measures are being developed for combating counterfeit medicine, which can occur in both pharmaceutical products and in Traditional Chinese Medicine.

The *Internet and patient safety* was the theme of presentations by Heidi Wright, Practice and Policy Lead for England at the Royal Pharmaceutical Society of Great Britain (RPSGB) and Nino Ahmed, Head of Intelligence, Medicines & Health-care products Regulatory Agency (MHRA). The Internet Days of Action (IDAs), first held in 2006 in the UK, were highlighted as well as some of the initiatives developed by the professional leadership body for pharmacists (RPS) to raise awareness of the problem of falsified and counterfeit medical products amongst professionals and patients.

The IDAs aim is: 1. To warn patients and consumers of the risks posed from obtaining medicines on the internet and 2. To use enforcement activity to safeguard public health and 3. Be a vehicle to maximise media coverage and provide advice to the public. According to Nino Ahmed, the dangers of buying drugs online is just as dangerous as buying them on the street corner. (For details of the most recent Internet Days of Action, Operation Pangea III, conducted in 2010, please see end of article).

Hiiti B. Sillo, Acting Director General of the Tanzania Food and Drugs Authority (TFDA), addressed role of law enforcement agencies in combating counterfeit medicines, with the experience of Operation Mamba in Tanzania. This has been successfully conducted in 2008, 2009 and 2010, with support from Interpol, the IMPACT taskforce, TFDA, Fair Competition Commission of Tanzania, Medical Stores Department and the President's Office.

Counterfeit problems and solutions in Portugal were addressed by António Bica, Technical Director (QP) of LEF, a pharmaceutical laboratory contract research organization. In relation to Internet buying behavior, Mr Bica informed symposium participants of research in Portugal including interviews with a sample of 800 consumers. Six percent of those between 18 and 64 years old indicated that they had purchased medicines through the Internet, while only 20% of respondents indicated that they had correctly determined the website's authenticity.

Stephan Schwarze, of Bayer Schering Pharma AG Berlin, spoke on the challenges of tackling counterfeit medical products. He concluded that applying a holistic approach can be more effective, especially as technology is only a part of, but not the total solution to combating counterfeits. He suggested rather that a combination of technological measures within an appropriate controlled legal environment could be a more suitable approach.

From the Council of Europe, Sabine Walser, EDQM, spoke to the MEDICRIME Convention, the first international treaty on counterfeiting of medical products and similar crimes, which focuses on public health protection not IPR. She highlighted that the proposed convention is offence (behaviour) oriented rather than product oriented. It encompasses conduct related to medical products including active substances and excipients; and medical devices, parts, materials, and accessories.

In other presentations during the symposium, François-Xavier Lery, EDQM (Council of Europe), provided an update of the EDQM project for a pan-European track and trace service for medicines, while Robert Watt of the School of Pharmacy, London, looked at screening methods to block wholesaling of counterfeits.

Also on the subject of counterfeiting during the FIP Congress, participants at the Annual Meeting of the African Pharmaceutical Forum on 1 September were urged to continue their

combat as they have a clear role to safeguard their patients against falsified and counterfeit medical products. Health professionals in Africa were encouraged take a stand to let governments know that counterfeit medical products should not be coming into their continent.

San José workshop unites health professionals against counterfeiting

Under the banner of the "Be Aware, Take Action" campaign against counterfeit medical products, the first of a series of World Health Professionals Alliance (WHPA) workshops, aiming to tackle the serious challenge of counterfeit medical products worldwide, was held in San José, Costa Rica on 19 October.

Co-hosted with WHPA by the Pharmaceutical Society of Costa Rica and the Pharmaceutical Forum of the Americas, the workshop brought together participants from Colombia, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama.

As an outcome of the WHPA workshop, twenty-three national health professional organisations who are members of the World Health Professions Alliance (WHPA) partners – International Council of Nurses (ICN), the International Pharmaceutical Federation (FIP), the World Confederation for Physical Therapy (WCPT), the World Dental Federation (FDI) and the World Medical Association (WMA) – agreed upon and signed the WHPA San José Call to Action on Counterfeit Medical Products. The Call to Action is addressed to patients, healthcare professionals and their organisations and health authorities and urging these stakeholders to Be Aware and Take Action against medical product counterfeiting.

The workshop targeted joint strategies amongst the five health professions to identify report and purge counterfeit medical products from the supply chain and to empower patients to make the best decisions when it comes to acquiring, carefully checking and using medical products.

Presenters included the Pan-American Health Organization, the US Food and Drug Administration Office for Latin America and the FIP Pharmaceutical Forum of the Americas. They provided a clear picture of the severity and complexity of the problem, as well as the efforts being made by these organisations to fight it and the legal framework available in each country to define, combat and penalise the production and distribution of counterfeit medical products.

There was consensus on the need to raise awareness about this issue amongst healthcare professionals and the public in general, through massive campaigns and training initiatives. Likewise, participants unanimously agreed on the need for strong and clear laws and institutions that prevent, pursue and punish such crimes – laws that are written in collaboration with healthcare professionals' organisations and are based on their technical input.



WHPA Counterfeit Workshops, Ajuba, Nigeria (left) and San José, Costa Rica (right)

The workshop concluded that counterfeit medical products are, above all, a public health problem and a threat to patient safety with grave consequences in terms of increased disease burden, mortality and costs for healthcare systems. Furthermore, it was recognised that patients have the power to decide where to buy and how to use medical products, but they are also the most fragile link in the chain and the main victim of counterfeit medical products. It is therefore crucial to inform and raise the awareness of patients about the risks of counterfeit medical products and encourage them to take action to fight this problem.

WHPA Be Aware, Take Action toolkit launched in Spanish

A Spanish version of the WHPA anti-counterfeiting toolkit for health professionals, health advocates and patients is now available on the WHPA website.

www.whpa.org/counterfeit_campaign.htm

Public safety focus of Operation Pangea III

Between 5 and 12 October 2010, 45 countries took part in an international week of action targeting the online sale of counterfeit and illegal medicines, called Operation Pangea III, to raise awareness of the associated health risks, resulting in arrests across the globe and the seizure of thousands of potentially harmful medicines.

Focusing on websites supplying illegal and dangerous medicines, Operation Pangea III was the largest Internet-based action of its kind. It involved police, customs and national medicines regulators with support from Internet Service Providers (ISPs), payment systems providers and delivery services, the global operation targeted the three main components abused in the illegal website trade: the Internet Service Provider (ISP), the electronic payment system and the delivery service.

During the operation, the participating countries sent intelligence to a dedicated operations centre at INTERPOL's General Secretariat headquarters in Lyon, and Internet monitoring revealed 694 websites engaged in illegal activity, 290 of which have now been shut down.

In addition, some 268,000 packages were inspected by regulators and customs, almost 11,000 packages were seized and just over 1 million illicit and counterfeit pills were confiscated – including antibiotics, steroids, anti-cancer, anti-depression and anti-epileptic pills, as well as slimming or food supplement pills. More than 70 individuals are currently under investigation or under arrest for a range of offences, including illegally selling and supplying unlicensed or prescription-only medicines.

“While this international operation, the third of its kind, shows that criminals attempting to use the Internet as an anonymous safe haven are not safe anymore, we hope that that by raising public awareness about the dangers of illegal Internet pharmacies, consumers will exercise greater care when purchasing medicines online,” said Interpol Secretary General Ronald K. Noble.

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INCREASED RESPONSIBILITY, INCREASED PROMINENCE

THE CHANGING ROLE OF PHARMACISTS

Emma Andrews, Luc Besançon and Phil Riggins

A representative survey of 2,023 pharmacists in eight countries measured views on the profession, daily work life, the pharmacists' role and the practice of pharmacy. The structured survey was administered via telephone and online interviews composed primarily of closed ended questions. Key findings include pharmacists' beliefs that their profession will focus on improving patient outcomes (i.e. through services) but that the changing expectations that go with this role are not always compensated fairly.

Introduction

Healthcare systems around the world are changing in response to number of factors such as an aging population, shortage of healthcare professionals and the rising cost of healthcare.¹

According to the United Nations Department of Economic and Social Affairs (DESA), by 2020 it is projected that there will be 2 billion people in the world aged over 60.² An ageing population means an increase in chronic diseases, often requiring a complicated drug regimen. The result is polypharmacy (the concurrent use of multiple prescription or non-prescription medicines). Although polypharmacy can occur at all ages, it is more common in the elderly, with patients 65 years and older using an average of two to six prescription medications and one to 3.4 non-prescription medications.³ Thus, a greater need for effective medication management. In the United States a recent article in the media highlights the fact that pharmacists are underutilized in the health system and can fill in healthcare gaps.⁴ With their substantial education, knowledge and skills in the clinical application of medications in the care of patients, pharmacists are increasingly finding themselves at the forefront of the fight against disease together with patients, other healthcare professionals and the pharmaceutical industry.⁵

For pharmacists, this means that they are coming out from behind the counter to play a pivotal role in health care delivery – whether it is chronic disease management, improving patient communication abilities or team management. The role of the pharmacist is changing.

To better understand how pharmacists practice, what they see as the key issues in healthcare delivery and their evaluations of the profession and business of pharmacy a survey was conducted which asked more than 2000 pharmacists in 8 countries (Australia, France, Germany, Italy, Portugal, Turkey, the UK and the U.S) about the issues facing their profession and practice.

Methodology

The International Pharmaceutical Federation (FIP) in conjunction with Pfizer Inc. External Medical Affairs and APCO Insight designed a structured survey with mostly closed ended questions. The survey tool was developed based on input from FIP and several national pharmacist associations, as well as from previous research studies with other health care professionals.

APCO Insight conducted the representative survey of 2,023 community/ retail, hospital and “other” pharmacists in 8 countries, including Australia, France, Germany, Italy, Portugal, Turkey, the UK and the U.S. Interviews were conducted between April and June 2010. The survey was administered in the national language by telephone in most countries, online in Portugal, and both telephone and online in Australia and Italy.

The overall margin of error for the total sample is $\pm 2.2\%$ and $\pm 6.2\%$ for country level results. Data from the open-ended questions were content analysed and data grouped thematically. It is important to keep in mind that for some of the results shown, totals may not equal 100% due to rounding and exclusion of “don’t know” or “no answer” responses.

Sampling

The sampling framework for the survey was designed to ensure as much representativeness as possible in the 8 countries selected for the study. In each country, we attempted to achieve a fair representation of pharmacists based on geographical criteria and main practice settings. Pharmacists were only invited to participate if they satisfied the criteria for inclusion in the study (i.e., being a licensed and practising pharmacist).

Representative sample frames stratified among retail/community, hospital and “other” pharmacists were constructed from publicly available databases, pharmacy association databases (Turkey and Portugal) and through desk research. APCO Insight used a random sampling approach from databases in all countries. A variety of approaches were used to select individual pharmacists for inclusion based on what was most practical in each country. Some of the key demographics for the achieved sample include a marginal female gender distribution (53% female vs. 47% male); with about two in five interviews conducted with pharmacists under age 40 (42%) and the remainder aged 40 or older (57%); more than two thirds of the pharmacists were managers or owner/managers (69%), the majority of pharmacists surveyed worked in community/ retail settings (86%) and/or in urban areas (50%) (Figure I).

Results

Overall, more than 5-in-10 (54%) pharmacists believe that the job of being a pharmacist is worse today than five years ago (Figure II).

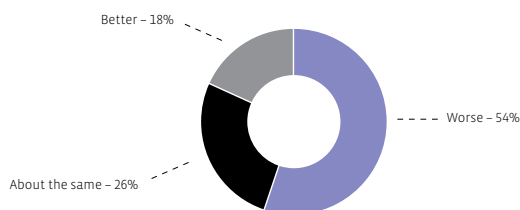


Figure II. Pharmacy seen as “worse” today than five years ago – % who say pharmacy today is, compared to five years ago

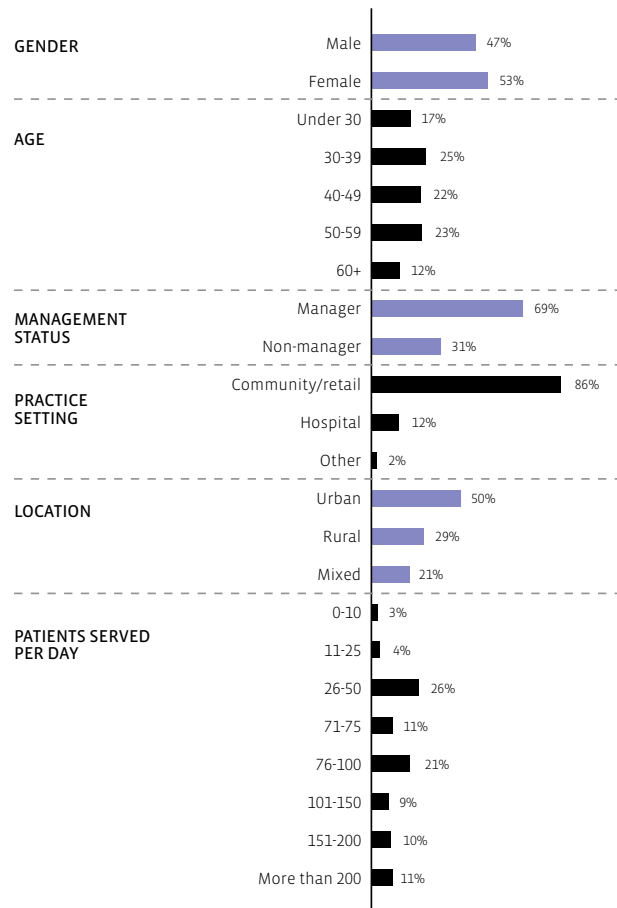


Figure I. Key demographics of pharmacists surveyed.

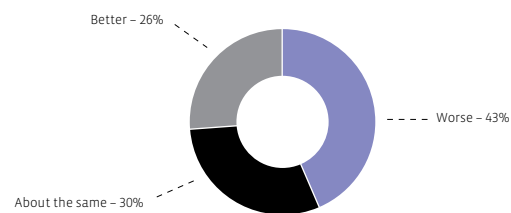


Figure III. Quality of healthcare system seen as “worse” today than five years ago – % who say quality of the healthcare system in their country, compared to five years ago

Career Satisfaction Closely Associated with Helping Patients
In general, pharmacists are very satisfied with their careers and most plan to remain in the profession for at least the next five years. For example, when asked to rate how satisfied they are with their career in pharmacy using a 1 to 10 scale, where 1 means not at all satisfied and 10 means very satisfied, on average pharmacists rate their satisfaction with their career a 6.9 out of 10. In fact, nearly half (47%) of pharmacists say they are very satisfied with their career in pharmacy. Likewise, when asked to rate the likelihood they will still be in pharmacy in five years, 2-in-3 (67%) say it is ‘very likely.’



Pharmacists surveyed tend to be patient-centered and enjoy this focus of their activities. When asked to volunteer in an open-ended question what they see as the most favorable part of their job, two in three pharmacists (68%) say that it is “helping patients and patient contact”. Conversely those things that tend to keep them from spending as much time as they might like with their patients, are considered the most unfavorable part of their job today. When asked to volunteer in an open-ended question what they consider to be the most unfavorable part of their job, pharmacists’ are most likely to say “bureaucracy and insurance contracts” (47%) and “workload or working conditions” (24%). Similarly, when asked to rate a variety of possible sources of career satisfaction using a 1 to 10 scale, where a 1 means very negative and 10 means very positive, pharmacists are most likely to give high ratings to the factors associated with patient-centered treatment: having a positive impact on patients’ outcomes (mean score 8.8 out of 10) and being recognized with trust & respect by patients (mean score of 8.7 out of 10) (Figure IV).

The Pharmacist’s Role is Changing – Presenting benefits, opportunities and challenges

Pharmacists see their profession as changing in ways that will improve patient outcomes, and which will provide opportunities and challenges for the profession. When asked to say how important they think the role of the pharmacist is seen currently by other health care practitioners such as doctors and nurses, the majority of pharmacists say they believe they are seen as at least “somewhat” important (70%) by other healthcare practitioners. Other findings of the survey discussed below suggest the role of pharmacists is likely to be seen as increasingly important in healthcare delivery.

Community pharmacists play a crucial role in providing access to healthcare for their patients. For example, for every seven patients visiting a pharmacy, one will receive advice without any sale of product (i.e. pharmacists are not paid for

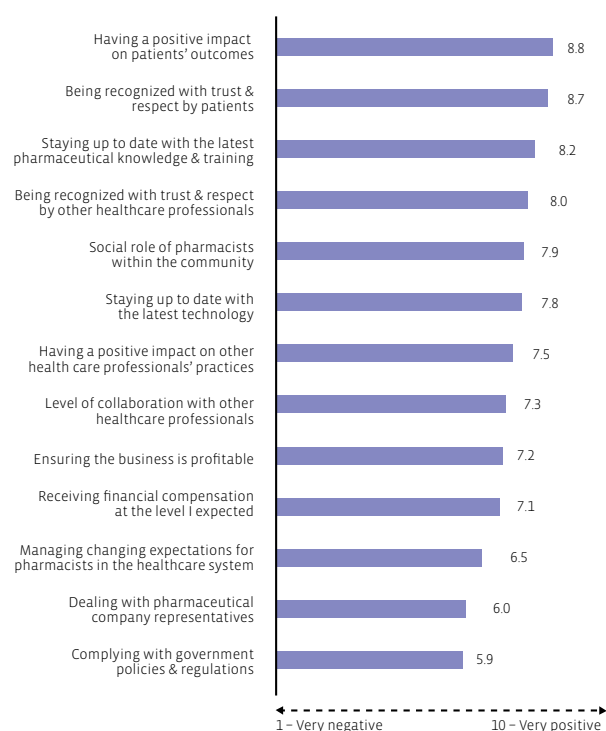


Figure IV. Rankings of importance on career satisfaction – Mean Score

this activity through the sale of products). One can imagine that this counseling activity prevents unnecessary visits to the General Practitioner, illustrating how pharmacists are one of the most accessible healthcare professionals in their communities.

One important way in which pharmacists see their role changing is in providing services such as health promotion and health management programs. They see this expansion of their role as benefiting patients, health care systems and the pharmacy profession. Most pharmacists (73%) say they currently offer health promotion, health management, medication reviews and compliance support. Nearly all

pharmacists surveyed (regardless of whether they currently provide these programs) believe that these programs are valuable for improving health outcomes for patients (90%), contribute to cost savings for health care systems over time (79%) and expanding them to include more patients and more health issues should be a government priority. Nearly nine in ten believe that offering these programs increases the visibility of pharmacists' expertise (87%).

Pharmacists, whether they currently provide these services or not, were asked to rate how much interest they have in providing a variety of health promotion and management programs using a 1 to 10 scale where 1 means no interest and 10 means a great deal of interest. Their responses indicate that chronic disease management and support are key areas of patient focus for pharmacists; the services pharmacists are most likely to say they are interested in providing are shown in *Table I*:

	Mean Score
Diabetes management	8.1
Compliance support	7.9
Blood pressure management	7.8
Asthma management	7.8
Medication reviews	7.7
Smoking cessation	7.6

Table I: Rating of interest in providing health promotion and management programs

In addition, highlighting time and compensation challenges presented by their changing role, nearly all pharmacists surveyed (93%) say that they are expected to provide more information and advice than ever before and most (75%) agree that they are asked to provide additional services to patients without fair and proper compensation (*Figure V*). Additionally, three in ten pharmacists (30%) believe there is a serious shortage of pharmacists in their country, which may put additional stress on their workload.

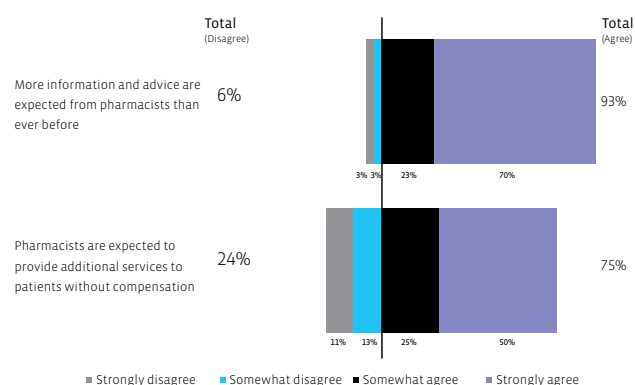


Figure V. Being a pharmacist and pharmacy practice today: % who say...

Taken together, these findings suggest that, while pharmacists welcome their changing role, the additional time and effort required to provide services such as these, as well as a possible shortage of pharmacists available to provide them, will need to be addressed.

In fact, pharmacists surveyed acknowledge that the profession will need to adapt in order to best prepare pharmacists to play their changing role. When asked what the critical success factors for the next generation of pharmacists are, pharmacists in general are most likely to volunteer "more and better services oriented to patients" (39%) and "competencies and education" (36%).

Subtle differences emerge in the views of hospital and community pharmacists on this question. When hospital pharmacists were asked to volunteer what skills and services will be most important for hospital pharmacists in the next five to ten years, they are most likely to volunteer "increased knowledge, competence and specialization" (61%) and "communication skills, patient interactions and counseling" (19%). When community/retail pharmacists were asked to volunteer which skills and services will be most important for community pharmacists in the next five to ten years, they are most likely to volunteer "patient-oriented skills" (32%), "disease management" (23%) and "new services" (16%).

Currently, pharmacists report spending approximately 7.7 hours each month on continuing education. Reinforcing their appreciation of the educational support needed to perform their changing role, pharmacists are most likely to say they would like continuing education programs to focus on disease management, chronic disease management, prevention and health promotion (82%). When asked what their preferred format is for continuing education, pharmacists are most likely to say online tools (53%) or scientific journals (46%).

ePrescribing

In the survey, pharmacists were also asked their view of ePrescribing. What we find is that six in ten (61%) pharmacists say they have a favorable view. One reason for this favorable view could be that most pharmacists (65%) also agree that ePrescribing saves time and reduces errors in the dispensing process.

Counterfeit medicines a serious concern

Another finding of the survey is that the majority of pharmacists surveyed (61%) say the prevalence of counterfeit medication is a serious issue in their country. Furthermore, the majority of pharmacists (63%) believe current policies and technology are insufficient to deal with counterfeit medicines. Most (77%) believe medicine packages should have machine readable bar codes to ensure they are not counterfeit.

Limitations

Larger sample sizes would have enabled greater subgroup analysis. Similarly, the inclusion of more countries in the study would have enabled a more “global” examination of the views of pharmacists. However, it is important to keep in mind that the purpose of this study was to gain insights on the issues facing pharmacists today across a limited but diverse set of countries in the interest of promoting discussion and possibly action, rather than to be an exhaustive study of how all pharmacists view these issues.

Seven of the eight countries included in the study were high-income countries and one was Upper-middle-income (Turkey).⁶ Thus, the survey is mainly of developed economies and may not reflect the interests and views of pharmacists from developing countries.

Moreover, most of the questions are related to a national context (healthcare systems which are very different from one country to another, current legislation, scope of practice, etc.). This means, for example, that for countries which rate practicing pharmacy as worse than 5 years ago, the reason for this worsening may be very different from country to country (e.g., cost constraints, new contracts with health insurance). Therefore, interpreting the reasons behind answers to these questions is more complicated when analysing the agglomerated results.

And, although there was a process for ensuring translations into the national language of each participating country were consistent, it is possible the translation process may have introduced some minor but important differences in the wording of the questions and, therefore, in the way pharmacists may have answered them.

Several factors that reduce bias should be considered along these limitations including: the study was conducted in the national language, eliminating possible bias from including only pharmacists with high English language skills; sampling was conducted so that the age and practice setting distributions matched available data on national proportions; and most respondents were interviewed by telephone, minimizing possible bias from differing levels of IT skills.

Discussion

The survey covered a number of issue areas relevant to pharmacists, their careers and daily life. The study was designed to foster discussion within the international and national pharmacist communities to not only further validate the findings, but also to help determine appropriate steps to best prepare the next generation of pharmacists for their evolving role.

The survey suggests there are several inter-related elements to job satisfaction and staying in pharmacy that can be optimized to increase overall satisfaction and likelihood of staying in the profession, as well as continue to make the profession attractive to future pharmacists. Optimizing

these elements is likely also to lead to better health care outcomes for patients and health care systems in general.

As the survey shows, key to pharmacists’ career satisfaction is their interaction with patients and focus on patient-centered pharmacy. For many years, FIP has advocated for a more patient-centered approach – an approach which is also supported by the World Health Organization (WHO).⁷

As described above, pharmacists value the time they spend with their patients and it is a prime source of career satisfaction. In fact, we also find that the aspects of their jobs which prevent them from spending as much time with patients as they would like to are listed as important sources of dissatisfaction (e.g., bureaucracy, paper work, working conditions).

We also observe that pharmacists are positively predisposed to providing additional health care services to their patients. Indeed, when we consider the views of pharmacists on the evolution of pharmacy practice, the countries where pharmacists are more involved in pharmaceutical care (such as Australia, UK or USA) are less likely to be negative towards their careers. This suggests there is positive relationship between the level of implementation and degree of recognition of pharmaceutical care in the level of satisfaction with a pharmacy career.

Another positive aspect of the changes in pharmacy highlighted in the survey is enhancement of the role of the pharmacist as a critical member of the health care team. As pharmacists move closer to the center of healthcare delivery, there are possible benefits to patients and systems – as well as to the stature of pharmacy. Healthcare delivery is changing around the world. Overstretched healthcare systems must cope with smaller budgets and increased demand for services, at a time when demand for treatment and prevention services for chronic disease is rising. In the U.S., for example, pharmacists are seen as well placed to fill the gap created by the growing shortage of doctors in the U.S. and expected increase in the number of patients in the system (+30 million).⁸ By increasing the types of care pharmacists provide, the pressure on system could be reduced. As the survey results show, pharmacists are ready to assume this expanded role.

There is strong evidence of the benefits of collaborative practice between pharmacists and other healthcare professionals, both in primary care settings and at the hospital.⁹ Research shows that an expanded role both benefits patients and saves money.¹⁰ One author of research looking at the benefits of greater collaboration between doctors and pharmacists in providing diabetes care said: “enhancing the patient’s access to care through collaborative physician-pharmacist relationships can yield lower blood glucose levels, improve the overall metabolic profile and reduce costs to the payer.” Cost savings in this study included average monthly treatment costs per patient going down by approximately \$212, or around \$2,500 per year – even though there were nominal increases in the cost of medications prescribed.¹⁰

Also, as we saw in the survey, some factors for career satisfaction are related to team working and collaborative practice: pharmacists value being recognized with trust and respect by other healthcare professionals and having a positive impact on other healthcare professionals' practice. Thus, expanding the scope of this relationship should be encouraged. One step in that direction has been taken by FIP. The increasing importance of team working has been highlighted in the last FIP Statement on collaborative practice adopted at the 2010 FIP congress in Lisbon.¹¹

However, these positive changes do not come without potential costs. The role of stress and other factors in job satisfaction is well documented.^{12, 13} These expanded services require additional time, which creates increased stress on the already busy pharmacist. They may also require skills that some pharmacists may not yet feel fully comfortable with. Moreover, when there is a specific shortage of pharmacists within a specific country (which we see is a significant issue in the survey), this will likely create underserved areas especially in rural areas.¹⁴ In cases such as this, a shortage of pharmacists will put additional stress on the workloads

of pharmacists working in these areas. Pharmacists will need various types of support (e.g., additional resources and training) to best perform in their new role and maximize benefit to the patient and to healthcare systems.

The findings of this study suggest that additional and ongoing research is needed to better understand exactly what types of support pharmacists will need and how they are coping as they continue to take on additional functions and they move closer to the center of healthcare delivery.

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THE FIP ACADEMIC INSTITUTIONAL MEMBERSHIP (AIM)

AIMING HIGH AT THE INAUGURAL DEANS FORUM AT THE FIP CONGRESS LISBON

A FIP Report

In March of 2010 FIP launched the new Academic Institutional Membership, or FIP AIM. The Membership allows Faculties and Schools of Pharmacy to become inter-connected on a international platform of discussion, leadership and shared challenges and successes. The FIP AIM is the only truly global initiative of its kind, uniting top-level decision-makers of academic institutes, all vested in forwarding pharmacy education via improved faculty strategy, resource building and peer interaction.

The FIP AIM focuses on the parallel evolution of Faculties and Schools of Pharmacy alongside the ongoing changes in pharmacy practice, science, research and their respective funding. All Faculties and Schools of Pharmacy from around the world are welcome to become a Member of the FIP AIM. These Academic Institutes are represented by their Deans, Vice Deans and other Decision Makers within Membership activities such as online discussion platforms and the annual International Dean's Forum at the FIP Congress.

A key element to this new initiative is the annual AIM Deans Forum, held during the FIP World Congress of Pharmacy and Pharmaceutical Sciences. The Deans Forum invites and welcomes all representative Deans from the Faculties and Schools within the Membership to meet each other and discuss current and relevant topics in an international arena.

The first AIM Deans Forum was held at the most recent FIP Congress in Lisbon, Portugal on 29 and 30 August 2010. The Forum welcomed a packed house of Deans and Decision Makers from Faculties of Pharmacy from around the world. Deans representing schools of pharmacy from Europe, North and South America, Asia, Africa and the Middle East met to network and interact on a discussion platform of current and relevant issues facing all Faculties of Pharmacy, with the goal to improve the efficiency of their Faculties and the effectiveness of their staff and students.

The Deans Forum began with a Session on Faculty Partnerships, an exceptionally interactive Session that welcomed expert speakers to discuss how partnering with public and private sectors, governments, the international community, industry and other Faculties may lead to more efficient and effective use of Faculty resources.

Highlights of the first day included welcoming Professor Daan Crommelin from the Dutch Top Institute Pharma (TI Pharma) in The Netherlands. He explained that the mission of TI Pharma is to “establish, support and manage public-private collaborations between academia and the (inter-)national pharmaceutical industry in order to create ‘health & wealth’, a growing initiative that has resulted in a public-private partnership that is freeing up 60 million Euros per year over the course of 4-6 years for research and development.

Complementarily, Dr Jake Thiessen, Founding Director of the School of Pharmacy at the University of Waterloo in Canada shared with his peers the novel concept behind the School of Pharmacy he developed, which included gaining the buy-in and financial support from the University, municipality, local businesses and taxpayers to build the monetary foundation necessary for a new Faculty of Pharmacy. The School opened in April of 2009 and has served not only to expand pharmacy education resources for Canada but has also contributed to significant local development and community solidarity.



Dr Jake Thiessen presents at the FIP AIM Dean's Forum 2010

The second day of the Deans Forum continued by delving into faculty strategy, curriculum development and ensuring quality of both staff and admitted students while at the same time expanding research opportunities and overall resources. Dr Wayne Hindmarsh, Dean Emeritus from the University of Toronto (U of T) Faculty of Pharmacy shared proven strategies for success in the growth of Schools of Pharmacy, using U of T as a prime example. He explained that by hiring right, having dedicated champions and by employing innovative fundraising and spending tactics, to name but a few examples, the overall aim of achieving a modern and efficiently functioning faculty can be achieved.

Quality assurance of both curriculum and students are without doubt at the top of the list for all academic institutions, and never more important for leaders of healthcare faculties in an era of evolution for healthcare delivery. Dr Ambrose McLoughlin, Registrar and CEO of the Pharmaceutical Society of Ireland stressed the essential role of regulators – such as national pharmacy organisations – in creating standards that would ensure quality pharmacy education and in turn competent practitioners.

Dr David Latif, Professor and Chairman of the Department Pharmaceutical and Administrative Sciences at the University of Charleston, USA, explained the marked value in instilling a semi-structured interview into the pharmacy admissions process. The goal of the interview was to evaluate other factors beyond traditional cognitive performances that can be related to being a patient-focused pharmacist, such as motivation, empathy and integrity. He explained how evaluation of these factors potential students may ensure a generation of pharmacists with increased moral reasoning, which in itself has been tied to clinical performance.

A highlight of Day 2 was an energetic and interactive Panel Discussion welcoming representatives from regional associations of schools of pharmacy to discuss such topics as pre-service qualifications; trends – regional issues affecting global issues and vice versa; best practices; recent key decisions and what led to them and communication with Deans of Schools of Pharmacy in that region. Participants challenged the speakers for solutions to regional problems that may be applied in other areas of the world, with more emphasis on strategy and problem solving than local resource availability and/or individual situations.

FIP, through the recent adoption of the Vision, Mission and Strategic Plan – Vision 2010 – has placed the global advancement of pharmacy education as a top priority. The first AIM Deans Forum was a prime example of the work FIP is doing to fulfil this goal and create, via AIM, a global concerted effort for growth. All present were engaged in extensive discussion, often extending well past the Session finish, making the one and a half day event a great success. Programme planning for next year's Deans Forum at the 2011 FIP Congress in Hyderabad, India are already well in place, for which FIP plans to welcome an even more extensive and dynamic global group of Deans of Faculties of Pharmacy.

For more information on AIM and the FIP Deans Forum please visit www.aim.fip.org, where all current and future AIM Members can view videos and presentations of the Deans Forum in the Member Only Area.

TELEPHARMACY

HOW ONE COMPANY IS BRIDGING THE PHARMACY SERVICES GAP IN RURAL AND UNDERSERVED AREAS

Gloriana Fernández

Access to quality pharmacy services is crucial to the proper use of medications and to the reduction of medication errors. As modern medicines become increasingly potent and capable of curing and mitigating disease, pharmacy and the involvement of a pharmacist becomes more and more important in ensuring rational, safe and cost-effective use of medications for the public. In certain communities, however, a pharmacist's presence is not always possible. As rural areas continue to struggle with declining and aging populations they are faced with shortages of health care professionals and declining access to health care.

Experienced hospital pharmacists are a critical part of the health care team. They bring extensive knowledge of the complex issues that arise when dealing with severely ill hospitalised patients who are on multiple medications and have complicating health factors. Attracting and keeping hospital pharmacists in rural communities can be very difficult. In cases where a hospital has only one pharmacist, there is severe pressure on that individual to meet all the facility's needs and burnout can become a significant issue. The rate of pharmacy staff turnover is higher in small hospitals than it is in large hospitals and this presents a serious health risk for rural communities.

So how can we expand access to quality pharmacy services in a cost-effective manner while at the same time retaining the active role of the pharmacist as the primary health care provider in the delivery of pharmacy services? One viable and efficient method is telepharmacy.

Telepharmacy is the provision of pharmaceutical care through the use of telecommunications and information technologies to a patient at a distance. It is a unique and innovative way to deliver a full service pharmacy operation which includes prospective drug utilization review and consultation services provided by a pharmacist to a remote site which incorporates all the safe practices offered by the traditional mode of delivery. Through telepharmacy, rural

communities can have their pharmacy services retained or restored without a licensed pharmacist needing to be physically present in the hospital. Potential benefits to these rural community hospitals from telepharmacy services include enhanced patient safety, reduction of medication errors, improved compliance with hospital policies and regulatory requirements, and increases in clinician access to expertise on medication issues. All of these benefits culminate to deliver improved clinical and financial outcomes. It should be stressed that although the pharmacist is not physically present, he or she remains very much involved. The pharmacist's interaction with the hospital staff is paramount for achieving the highest standard of quality for delivering pharmacy services to rural communities and ensures the protection, safety and welfare of the public.

This year at the 70th FIP World Congress of Pharmacy and Pharmaceutical Sciences in Lisbon, a pioneer of telepharmacy services was present. CEO and Founder of Envision Telepharmacy, Emily Alexander, Pharm.D., BCPS, travelled from her home in Texas to speak on this exciting new frontier in pharmaceutical care. Through her lecture, "Use of telepharmacy to increase access to pharmacy services" at a session organized by the FIP Pharmacy Information Section, and via her presence at the Envision Telepharmacy booth at the exhibition hall at the Lisbon Congress Centre, she was able to share some of the ways in which Envision brings telephar-



macy services to hospitals in medically underserved areas every day.

Envision Telepharmacy was established in 2004 to provide ways for hospitals and health care systems to improve and expand pharmacy services. Through the use of high-bandwidth, standards-based web technology, still imaging, and high resolution video, off-site pharmacists working remotely are brought into rural community hospitals and provide quality pharmacy services in a cost-effective manner. Two ways in which Envision pharmacists accomplish this is via services such as Electronic Supervision of Technicians (EST) and Remote Order Entry (ROE).

Electronic Supervision of Technicians (EST) is a service that permits a remotely located pharmacist to oversee a hospital pharmacy technician performing medication related activities that they would otherwise only be able to perform under the direct supervision of an on-site pharmacist. During low-volume hours or in facilities where there is not a continuously steady stream of pharmacy orders to process, it is often difficult to justify a round-the-clock pharmacist from a financial standpoint. The presence of the remote pharmacist essentially extends hours of pharmacist availability during slower times and ensures that one is available on an as needed basis to supervise the processing of orders as they come in. Through the use of high-resolution imaging and real-time communication tools a pharmacist is involved in the entire process of readying an order for dispensing. This results in the potential for significant reductions in medication errors and improved medication related processes.

The EST service is rendered in the following way. The remote pharmacist and the facility pharmacy are linked via the web using imaging and work flow tools. As the pharmacy technician completes tasks and documentation, he or she captures completed work in an image that is transmitted to the pharmacist. As the order moves through the various stages of preparation and is ultimately dispensed, the pharmacist remains in communication with the technician. By annotating the images with tools such as “virtual sticky notes”, the pharmacist can direct the technician to further process the work according to the facility’s established procedures and the pharmacist’s professional judgment. Some of the duties that can be performed under the guidance of a remote pharmacist include but are not limited to: work pursuant to a drug order, medication order entry and data entry of drug distribution information, distribution of orders from stock supplies to patient care areas, unit dose or multi-dose prepackaging, compounding sterile pharmaceuticals and accessing and restocking automated medication supply systems.

Remote Order Entry (ROE) is a service that enables a remote pharmacist to provide prospective order review and perform order entry for a facility. This option offers versatility in that a remote pharmacist can provide support as an addition to on-site staff during peak demand hours, after hours, as a replacement for on-site staff, or even as a much needed relief during times of reduced staffing, unexpected or planned.

By using the facility’s own pharmacy order entry system and by following the hospital’s policies and procedures, this service is tailored to the pharmacy practices of each facility. Envision’s web-based tools have the capability of producing an instant image of orders currently in process, allow the pharmacist to prioritize orders using professional judgment, and create a fast and convenient way for the remote pharmacist to communicate with the nursing staff. With these tools, order processing information is made available to nursing staff in actual time and alerts them to delays or requests for additional clarification. This translates to reduced times to first dose and earlier recognition and correction of prescribing errors.

The process begins when a member of the nursing staff transmits the physician’s written order via a scanning device to the remote pharmacist. The pharmacist is then able to view the order and while simultaneously securely accessing the patient’s information in the hospital’s patient data system, can then perform a drug regimen review. Orders are assessed for accuracy and appropriateness and are then either entered into the pharmacy’s order entry system, or are flagged and annotated by the pharmacist so that nursing staff can quickly recognize the issue and respond accordingly. Through the use of web-based tools, the on-site team and the remote pharmacist are linked together in real-time making quick and efficient communication possible. This results in expedited decision-making which can be of great importance in acute care, where issues that require immediate attention frequently arise. These tools also have the capability of maintaining a complete records of all orders processed by the remote pharmacist and allows him or her to file them in such a way that communicates to the on-site pharmacy staff which orders have been completed, which have been held and which require further clarification.

For six years, Envision Telepharmacy has been bringing quality pharmacy services to hospitals in rural and underserved areas using these and other services tailored to the needs of each facility. Envision’s unprecedented growth and success in just these few years has been a true testament to the demand for these types of services, the feasibility of their implementation and the clear benefit that they provide. While we can all agree that having an on-site pharmacist is the best way to ensure rational, safe and cost-effective medication use in hospitals, by using cutting edge technologies and innovative web-based tools, telepharmacy is surely offering us the next best thing.

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LEARNING TO TEACH

AT THE 2010 FIP CONGRESS

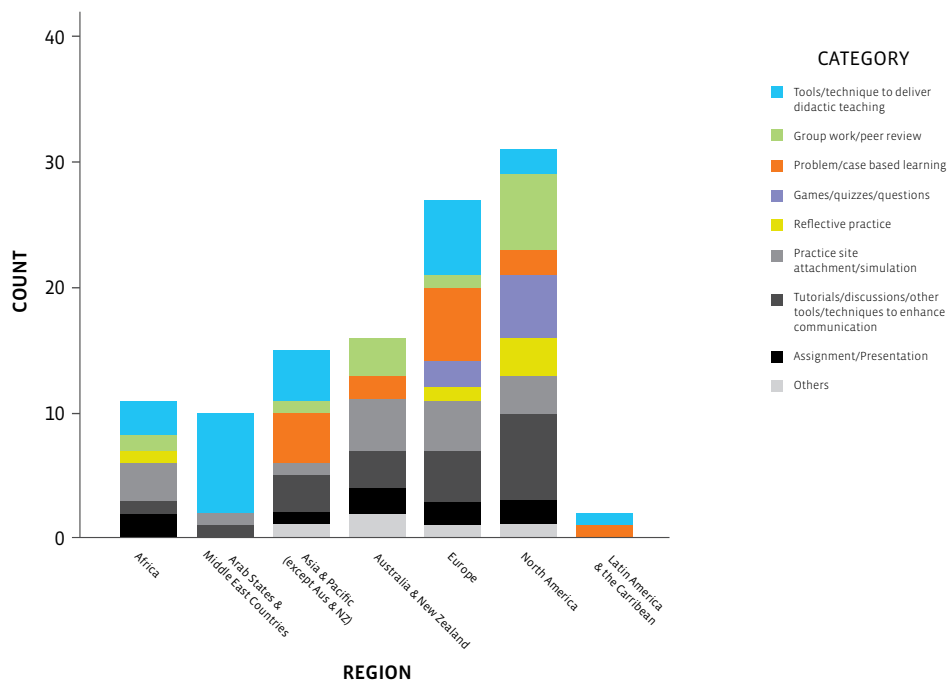
Luther Gwaza, Zoe Lim, Vibhuti Arya

Academicians from around the globe united at the second Learning to Team Workshop co-organized by the WHO UNESCO FIP Pharmacy Education Taskforce and the FIP Young Pharmacists Group during the 70th International FIP Congress in Lisbon, Portugal.

The second Learning to Teach Workshop (LTT) was held as a pre-satellite half day workshop during the 70th FIP World Congress on Pharmacy and Pharmaceutical Sciences. More than 30 participants from academia and industry participated in the workshop. This workshop was held after the successful hosting of the 1st LTT workshop in Istanbul during the 69th FIP Congress that drew participants from 28 countries. The workshop was organized by WHO UNESCO FIP Pharmacy Education Taskforce and FIP Young Pharmacists Group, and co-sponsored by the University of Nottingham and MediaPharm. The session offered the participants an opportunity to learn about the successes and challenges of teaching, from the perspectives of both young and senior faculty.

The Chair of the session, Vibhuti Arya (St. John's University), gave the introductory remarks and highlighted the key objectives of the session which included (1) to provide a space for exchange of ideas and tips on effective teaching (2) challenges of balancing academic life: teaching, scholarship/research, and service activities, (3) sharing of novel teaching tools from teaching environments across the world and (4) exchanging perspectives on new faculty development, and senior professional development: how junior and senior faculty can create an empowering exchange.

The first presentation *Young Educators in Pharmacy: Where do we go from here?*, was co-presented by Tina Brock from University of California San Francisco and Yaman Kaakeh from Purdue University School of Pharmacy. The presentation took the participants on a journey through Portugal, from the mountains of Serra da Estrela, to the city of Lisbon, as they discovered and explored their own path to learning. The "East Peak" of the mountains reflected Maslow's Hierarchy of needs based on Theory of Human motivation (1943) by Abraham Maslow. The "North peak" covered Systemic Capacity building that addresses individual and institutional capacity building. The "West peak" covered different forms of teaching through Dale's learning cone, which highlights that people remember 90% of what they do, e.g. via simulations or hands on experience, compared to only 20% of what they hear. The presentation highlighted the need to match teaching methods to the intended learning outcomes. The higher level cognitive skills such as analytical, creativity and evaluation abilities are achieved through performing



Learning to Teach Workshop, FIP 2010



the task, i.e. active participation in learning compared to passive learning methods. Miller's pyramid, highlighting the development of professional expertise from knowledge to performance to action, was represented by the "South peak" of the mountains. The second stop after the mountains was Cascais – a beach area just outside Lisbon, where the Lisboaetas find refuge from city life. In relation to sea diving, participants explored surface learning and deep learning as these apply to both the learner and the educator. Educators, particularly new academicians, were encouraged to seek deep learning to develop the ability to respond to change, be self-directed and motivated, eventually developing versatility and skills transferable to various environments. The 3rd stop was Aqualand Algarve, a well-known water-park and site of the anaconda water slide, which mirrors Kolb's cycle of experiential learning. The key message from this cycle of learning was the crucial role of self reflection, which can help individuals to learn from past experiences and make progress rather than finding themselves in the same cyclic pattern of repeating old mistakes and behaviors without any time for reflection.

The final stop in the tour of Portugal was Lisbon, a place where, after the remnants of a devastating earthquake, acceptance of the past and a positive outlook on change led to a successful future.

After exploring the learning journey of young faculty, Zoe Lim (University of Nottingham), Majid Ali (University of Hertfordshire) and Yaman Kaakeh (Purdue University) went a step further to discuss the tools and techniques for learning and teaching. The discussion was introduced through a case study of a young faculty who had just received a low satisfaction score on her teaching from students on her first annual appraisal. She had to come up with an explanation on how she would improve her teaching in the future. A potential solution to this perplexed young faculty was to consider

new ways of teaching amongst other potential solutions. Zoe then presented results of a global survey which captured an overview of tools and techniques employed by schools/education centers of pharmacy to supplement or substitute traditional teaching. Although technology was increasingly used in current teaching, it was not perceived as a must in enhancing learning by most pharmacy educators around the world. Indeed, most responses from the survey discussed tools/techniques that enhanced didactic teaching, which included tools as simple and widespread as Microsoft Office PowerPoint for presentations. Other methods that were perceived as effective include feedback system, practice site attachment/simulation, and problem-based learning. Based on the survey results, participant then engaged in a debate on whether technology was necessary to enhance teaching/learning, and how technology could be used in a global framework for exchange of ideas and strategies.

After a break, a panel discussion of five young faculty members – Zoe Lim (University of Nottingham, UK), Yaman Kaakeh (Purdue University School of Pharmacy, USA), Luther Gwaza (University of Zimbabwe, Zimbabwe), Vibhuti Arya (St. John's University, USA) and Conan MacDougall (University of California San Francisco, USA) – had an opportunity to share their own experiences and thoughts on the importance of creating a learning plan. Key issues discussed were (1) importance of consulting with a mentor and how to identify mentor(s), (2) strategies to help juggle competing priorities, and (3) feeling of isolation/disconnect from other faculty. In order to balance competing priorities, such as effective teaching, maintaining clinical evidence-base knowledge, research, and other projects that may include serving in committees, creating a self learning plan can be quite beneficial. A first step may be to know what one's own priorities and goals are, and what the institution expects of a young faculty member. Seeking mentorship can be quite critical; though having a mentor in a similar discipline is important, young faculty should not hesitate from seeking mentors outside of their institution and/or discipline. A critical piece about creating a learning plan is that of setting goals that are attainable within a realistic timeframe, and taking the time for self-reflection to revisit set goals and focus on personal and professional development. Another critical issue discussed was taking initiative as a young faculty member to seek resources, mentors, and opportunities that enhance learning and skills to be an effective educator, researcher, and successful individual.

The workshop concluded with a problem-based learning case study about "Dr Victoria Ideal", a young academic with a recent appointment as a Lecturer at the "Great University". Vibhuti Arya of St. John's University led the case discussion along with the session presenters, who served as small group facilitators. The case study highlighted "typical" situations that young academics often find themselves in as they start their careers – heavy workload, especially where there are shortages of academic staff, challenges in prioritizing competing responsibilities, need to do "good" at the expense of self and lack of mentorship/help when needed.

The case study allowed the participants to explore opportunities for "Dr Victoria Ideal" to be an effective educator, discuss work-life balance and how to prioritize issues, particularly in balancing teaching load and requirements for service and scholarship/research. The case discussion also explored strategies and options for young faculty to seek mentorship when in need. An important aspect of learning emerged when "Dr. Ideal" was challenged by taking on additional responsibilities that were proving to be overwhelming; one of the key messages that was prevalent among the group was the recognition for young academics to learn how to say no to extra workload when one is overwhelmed with responsibilities. This was noted as a challenge for new young academics, and a possible solution was to discuss with a mentor who may serve as an advocate for the young faculty member.

Overall, this session provided the space for an exchange of ideas and strategies for new and experienced faculty, recognizing self reflection and commitment to lifelong learning as an important aspect for educators to adopt themselves as well as pass on to students. Participants and presenters also agreed that making such a workshop available annually would be a valuable addition to the FIP congresses. The consequent workshops will be similarly planned with the efforts of the FIP Young Pharmacists Group and the FIP Global Pharmacy Education Taskforce.

For more information and interest to join the online community of practice, please email education@fip.org.

Key Points from Learning to Teach Workshop

1. Self reflection and feedback are important for personal and professional growth among new academics
2. Use of a variety of tools and teaching techniques, whether with advanced technology or not, can be important enhancements for effective teaching and global information exchange
3. Creating an individual learning plan with attainable goals in a realistic time frame can be useful in prioritizing tasks
4. Young academics should strive for deep learning in order to be lifelong learners and effective educators
5. It is important for young academics to take initiative themselves to seek guidance via mentorship – within or outside of their institution – and keep connected with a support network

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THE NEXT STOP ON THE JOURNEY

2011 FIP CONGRESS – HYDERABAD, INDIA

After several years of staying close to Europe, the 2011 FIP Congress is once again venturing into yet-unvisited lands, this time bringing participants to Hyderabad, India.

The mention of this location often begs the question – where, exactly, is Hyderabad? Although lagging in recognition behind more world-renowned Indian destinations such as Mumbai, Delhi and the Taj Mahal, Hyderabad is an up and coming global centre point for research and information and technology development and in turn, international congresses. Located about 700 kilo meters southwest of Mumbai, the city is definitely gaining a reputation of its own.

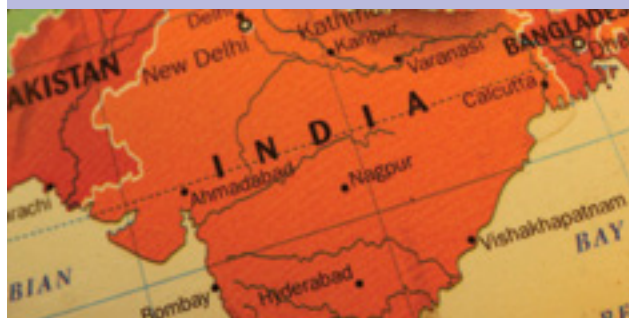
The FIP Congress will as always showcase the best of the Host City, inviting and encouraging participants to not only be enriched by the Congress Programme and international backdrop of the Congress itself, but to take the opportunity to explore their location – starting with the new Hyderabad Convention Centre and much further beyond.

With the following article FIP hopes to enlighten our 2011 Congress Participants with all that Hyderabad has to offer. More information on the FIP Congress Programme and Registration is available on the Congress website at www.fip.org/hyderabad2011.

LET'S MEET IN HYDERABAD AND JOURNEY FORWARD!

Please note – deadline for abstract submission is 1 April 2011.

Visit www.fip.org/hyderabad2011 for more information.



'Cyberabad' India's centre of congress gravity

(reprinted with kind permission from Association Meetings International)

They're heading there in their multi-thousands: specialists in gastroenterology, gynaecology, international law, biotechnology, pharmacology, pharmacy – even global convention organisers.

Yes, 800 members of ICCA – the International Congress & Convention Association – will gather for their 49th Congress at the Hyderabad International Convention Centre (HICC).

Hyderabad, or "Cyberabad" as the IT sector will have it, is not the headline city of India. Yet it is developing as the sub-continent's centre of gravity for global congresses. The Rajiv Gandhi International Airport is within two hours' flying time of every major city in India.

It is the first time ICCA has taken its congress to India so to choose the capital of Andhra Pradesh, which spreads across the central Deccan Plateau, is noteworthy.

It has been said that Hyderabad "Could not be more auspicious. India is on the move. Mobile phone use is growing by 15 million handsets each month and will reach 800 million in under two years. There will be 100 million broadband connections within three years and a national strategy will link up every university, library and research institute."

"Our meetings industry in India is similarly on the move, with major new infrastructure projects – airports, congress venues and hotels – and a tremendous commitment to learning how to be as competitive as possible."

Harry added: "Hyderabad points the way to India's future, with the country's first world-class convention centre, a global award-winning airport and a diary packed with international events."



As one of India's largest metropolitan cities, high-tech communications capabilities are in abundant supply which helped convince the International Telecom Union to hold its 12-day World Telecommunication Development Conference at the HICC earlier this year.

Government ministers, heads of international organisations, development banks, regulatory authorities and private companies were in equally abundant supply.

Built across 15 acres of landscaped grounds, HICC offers a 6,480 sqm pillar-free hall, divisible into six. The foyer area exceeds 6,500 sqm. The complex features 32 breakout spaces similarly packed with high-tech infrastructure.

Now Green Globe certified, the Centre hosts everything from international conventions for up to 6,000 and cocktail dinners for 4,000 guests to corporate parties for 2,000 and board meetings for 15. Managed by Accor Hospitality, it operates in conjunction with the connected five-star 288-room Novotel Hyderabad.

ICCA congress delegates will also be using such five-star addresses as the Hyderabad Marriott Hotel & Convention Centre overlooking the Hussain Sagar Lake and the Ista Hyderabad located in the city's new financial hub in Gachi Bowli.

They are in for any number of intriguing encounters with Hyderabad's 400 years of heritage, including the massive Golkonda Fort from where, after 360 steps no less, there are great views over the Qutub Shahi Tombs and the Charminar.

Other tours will explore the venerable Purani Haveli palace, the fabulous art collections at the Salar Jung Museum, the Hussain Sagar Lake guarded in the centre by a huge Buddha atop a massive lotus pedestal. Pre and post tours (organised, of course, by ICCA members) are set to take in the Taj Mahal, Agra; Cochin in Kerala and Khajuraho in Madhya Pradesh.

But surely one of the highlight tours is that featuring Ramoji Film City, the largest film studio complex in the world, the place where Bollywood dreams are given a celluloid life. Set in sprawling gardens, its incredible movie sets provide entertainment from numerous shows.

That's show business. Big time! Just like 21st Century Hyderabad.



THE FIP ACADEMIC INSTITUTIONAL MEMBERSHIP

The International Pharmaceutical Federation Academic Institutional Membership, or FIP AIM, is a FIP Membership that allows Faculties and Schools of Pharmacy to become inter-connected on a global platform of discussion, leadership and shared challenges and successes.

The FIP AIM focuses on the parallel evolution of Faculties and Schools of Pharmacy alongside the ongoing changes in pharmacy practice, science, research and their respective funding. It is the goal to engage Faculty Deans, Heads of Schools and Colleges and Decision Makers in this process of growth and development.

All Faculties and Schools of Pharmacy from around the world are welcome to apply for a FIP AIM. These Academic Institutes are represented by their Deans, Vice Deans and other Decision Makers within the Membership activities such as online discussion platforms and the most important AIM event of the year, the annual Global Dean's Forum at the FIP Congress.

For information on how your Faculty/School can apply for Membership, please visit the AIM website at <http://aim.fip.org/>

THE 2ND AIM GLOBAL DEANS FORUM 3-4 September, Hyderabad, India

After a very successful first edition in Lisbon – hosting more than 40 Deans from around the world – FIP is already preparing for the second Global Deans Forum at the 2011 Congress. A programme committee consisting of a global representation from renowned Universities and Pharmacy Education Institutes are well at work to provide all in attendance a unique and enriching opportunity.

All AIM members are invited to join in this second edition – please visit the website for more information.



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IMPLEMENTING THE BASEL STATEMENTS ON THE FUTURE OF HOSPITAL PHARMACY

A GLOBAL CHALLENGE

Andy Gray^{1,2}, Roger Tredree¹

The end of the Global Conference on the Future of Hospital Pharmacy, held in Basel in late August 2008, provided the Hospital Pharmacy Section (HPS) of the International Pharmaceutical Federation (FIP) with an unprecedented agenda for change, but also a challenge of truly global proportions.

The Global Conference had been a seminal event in hospital pharmacy history, attended by 348 pharmacists from 98 countries. The goal of the Global Conference was simple: to develop a shared vision among hospital pharmacy leaders around the world about the preferred future of hospital pharmacy practice. To that end, the organisers had commissioned a global survey of hospital pharmacy practice and had six critical evidence-based input papers, covering the medication use process in hospitals (medication procurement, prescribing, preparation and distribution, administration, outcomes monitoring) and the overarching issue of human resources and training. The visible final product of the conference was the 75 consensus statements agreed upon by the delegates from each country, now well-known globally as the Basel Statements.¹ However, the Basel Statements represent the beginning of the process of achieving the envisioned future agreed upon in Basel, not the end of that process.

Options for global implementation

The Global Survey of hospital pharmacy practice had already provided a snapshot view of the wide diversity of practices in the hospital arena around the world.² It was clear that some parts of the world had already progressed considerably, and could boast a highly developed level of hospital pharmacy practice and highly specialised practitioners. In other countries, by contrast, hospital pharmacy practice had not progressed beyond a fairly basic supply function and pharmacists could not claim even to “take responsibility for all medicines logistics in hospitals” (as outlined in Basel Statement 8).

This level of diversity meant that the HPS could not follow a standard project management approach to the implementa-

tion of the Basel Statements. It could not develop a simple “cook-book” approach to implementation that could be applied in all settings. It also chose not to follow a demonstration project approach. It would have been relatively easy to choose a country in which the Basel Statements could be implemented with some effort, and to support such an effort, documenting the path followed and the lessons learnt along the way. While such an approach might have yielded interesting data, and might have resulted in further uptake in time, there was also the risk that the incredible global momentum developed in Basel might have been lost. If countries were to wait for the results of a single-country demonstration project, what could they do locally to maintain interest in the Basel vision?

In their editorial in the AJHP, Lee Vermeulen, Arnold Vulto and Bill Zellmer had written “From the vantage point of hospital pharmacy as it exists today, the Global Conference’s vision is compelling, not because it is near at hand or will be easy to achieve, but because it is the right vision from the patient’s perspective. Achieving the vision will require time, hard work, and astute leadership”.³ They suggested that “leaders of hospital pharmacy in every country should study the conference proceedings and begin outlining how to transform their practice into a clinical service that improves the health of patients who are treated with medicines”.

The HPS has therefore decided to follow a strategy of dissemination, popularisation, local and regional reflection and action, based firmly on local ownership of the process. In order for that local reflection and action to occur, the first hurdle to overcome has been that of access.

Dissemination and popularisation

The Basel Statements were developed in a single language – English. The first step in disseminating and popularising the Statements was thus achieved by enabling translation into as many languages as possible. The Statements are now available in all six of the official languages used by the United Nations (Arabic, English, French, Mandarin, Russian and Spanish), as well as in Bulgarian, Croatian, German, Greek, Hungarian, Indonesian, Italian, Japanese, Korean, Macedonian, Slovak, Portuguese and Vietnamese.

For many countries, this single step has provided the impetus for local reflection and engagement by professional associations or individual hospital pharmacists. In struggling to translate the Basel Statements, local pharmacists have had to seek local terms for the technical terms described in the Glossary.⁴ They have had to think about how the principles outlined in the Statements are expressed in their own language.

An important means of popularisation has been presentation at national and regional hospital pharmacy conferences. Various HPS officers have presented at conferences held in Spain, South Africa, Lebanon, Pakistan, China and Ghana. However, many more have been addressed by national leaders who attended the Basel Conference, and who reported back to their own national structures. To aid such efforts, a sample set of slides was placed on the HPS website.

Local coverage in pharmacy journals has also been used, including the International Pharmacy Journal. Knowledge of the content of the Basel Statements is not enough though – what is needed is critical reflection.

It is important that we take these statements beyond our own profession and make other healthcare colleagues aware of our aspirations. Furthermore, our administrators and politicians need to know that we have these standards and need their support to promote and implement them in the interests of patients.

National reflection and regional co-operation

Right at the beginning, the HPS decided to organise its global efforts in such a way that the structures of the World Health Organization (WHO) and the regional pharmaceutical fora could be used to the greatest extent possible. In March 2009, a lunchtime seminar on the subject was arranged at WHO headquarters in Geneva. Contact was also initiated with the WHO regional pharmaceutical adviser and the Pharmaceutical Forum in each of the six WHO regions (Africa (AFRO), Eastern Mediterranean (EMRO), Europe (EURO), the Americas (PAHO), South-east Asia (SEARO) and the Western Pacific (WPRO). The HPS has also re-organised its Council to include a Vice President from each of these regions.

In some areas, other regional structures exist that have also been used to good effect. The European Association of Hospital Pharmacists (EAHP) has driven much of the action across Europe; a joint China-Japan forum meeting in Beijing in 2009 allowed access to a large number of practitioners from this area; the Commonwealth Pharmacists' Association conference in Accra in 2009 provided access to pharmacists from many of the 55 countries in this grouping. Each year since 2008, the FIP Congress has also seen presentations on local actions taken at national and regional level, sharing lessons learnt from local reflection and action.

The real work starts when national or regional structures start to look carefully at which of the Basel Statements are

already in place (perhaps already entrenched in locally-enforceable Good Pharmacy Practice standards or legislation), which are achievable with some effort (but in the short term) and which will pose considerable challenges for some time to come. Workshops along these lines have occurred in Pakistan, South Africa and Nigeria. South American networks (notably in Uruguay and Paraguay) have also engaged in similar processes. The SEARPharmForum is planning such an event in late October 2010 in Dhaka, Bangladesh. The WP-PharmForum has engaged with hospital pharmacists across this wide-flung and diverse region. The relevance of the Basel Statements in the most developed settings has been confirmed, for example, by creating explicit comparisons or “crosswalks” between the consensus statements and the elements of local practice excellence initiatives.⁵

Effective local and regional action needs to be based on a firm footing, which requires in-depth insights into the current state of hospital pharmacy practice. This needs to go well beyond the snap-shot provided by the Global Survey, which relied on a single respondent per country. Work in this regard is being pursued within the WPRO region and is described elsewhere in this issue. In time, the plan is to provide each country with a validated instrument with which to measure practice in relation to each of the 75 Basel Statements at the level of individual hospitals.

The future – repeated quality improvement cycles

Globally, many quality improvement processes in healthcare rely on the well-established cyclical approach characterised as “plan-do-check-act”. Both nationally and regionally, the same quality improvement cycles can be used to drive implementation of the Basel Statements, to bring hospital pharmacy practice closer to the future envisioned and agreed upon in Basel.

As these cycles are documented and discussed, they will provide potent evidence for other settings and inspiration for many. In time, the relevance of the Basel Statements themselves will need to be considered, and they will perhaps need updating or revision. For now, though, the means exist to start the process of dissemination, popularisation, reflection and, most importantly, action. This global task has commenced and is already energising hospital pharmacists around the world.

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DEVELOPING A VALIDATED SURVEY TO ASSESS THE BASEL STATEMENTS: *THE WESTERN PACIFIC REGION'S RESPONSE*

Jonathan Penm, Dr Betty Chaar and Dr Rebekah Moles

The Basel Statements constitute the first set of international consensus statements that reflect the future of hospital pharmacy practices world-wide.¹ The 75 Basel Statements are divided into “Overarching statements” and six themes: medicines procurement, influences on prescribing, preparation and delivery of medicines, administration of medicines, monitoring of medicines, and human resources and training.¹ As the Basel Statements have a strong focus on evidenced-based practices and medication safety, they may be a valuable tool in assessing and comparing hospital pharmacy practices.

Numerous countries have sought to monitor the scope of hospital pharmacy practices in their own country based on regional guidelines. For example, the American Society of Health-System Pharmacists conducts a national survey of hospital pharmacy directors annually to assess trends in: prescribing and transcribing, dispensing and administration

or monitoring and patient education.²⁻⁵ With results spanning from 2001-2009, US hospital pharmacy practices are monitored and areas requiring improvement highlighted.²⁻⁵ Similarly, Canada also publishes ongoing surveys to assess its hospital pharmacy services.⁶

Snapshot studies of hospital pharmacy services have also been conducted in Australia,⁷ the United Kingdom⁸ and Puerto Rico.⁹ However, with growing focus surrounding international standards, leading to the production of the Basel Statements, looking outside a country's border is important for the future. Few studies have focussed on multiple countries and sought to learn from different hospital pharmacy systems with the exception of The European Association of Hospital Pharmacists (EAHP)¹⁰ and a recent study by Doloresco and Vermeulen (2009).¹¹ In the 2005 EAHP survey, 22 out of 26 member countries participated with data from 825 hospitals.¹⁰ This study may have been possible due to the close proximity and similarities between each of the countries surveyed and the support of the EAHP.

More recently, Doloresco and Vermeulen aimed to assess the current state of hospital pharmacy around the globe, in preparation for the Global Conference on the Future of Hospital Pharmacy.¹ This study received responses from key individuals in 85 nations. Although this study assessed the

general scope of hospital pharmacy practices globally and was key in developing the Basel Statements, generalising individual responses to represent a national level has its limitations as individual responses are difficult to generalise. Thus, to advance the future of hospital pharmacy globally, future studies should aim to assess hospital pharmacy practices based on the Basel Statements at the hospital-level in several proximal countries at a time.

The Western Pacific Region

The Basel Statements provide a strong basis for international standardisation between countries. In our study, the Western Pacific Region (WPR) will be assessed due to the diverse countries that it contains allowing us to develop a validated survey that may also be valid globally. The WPR is one of the six regions of the World Health Organisation (WHO) and consists of nearly one-third of the world's population with around 1.6 billion inhabitants.¹² The WPR contains 37 member states and nations as seen in *Figure 1*.



Figure 1: The 37 member states and nations within the Western Pacific Region are highlighted in yellow. The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of FIP or the authors concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Aim:

The overarching aim of this study will be to identify factors that may aid or hinder the implementation of Theme two of the Basel Statements, 'Influences on Prescribing' (*Table 1*) in the WPR. This paper aims to describe the essential elements of the methodology used to validate and assess the Basel Statements pertaining to Theme two in the WPR.

Method

To accurately assess the WPR's hospital pharmacy practices, we plan to survey a representative sample of hospital pharmacy directors in the WPR. Theme two of the Statements, 'Influences on Prescribing', was chosen to be assessed as it has been the topic of much discussion within the profession

and the extent it is implemented ranges drastically around the world from a passive dispenser to an active participant in therapeutic decision-making.¹³

THEME 2 – INFLUENCES ON PRESCRIBING

26. Hospitals should utilize a medicine formulary system (local, regional, and/or national) linked to standard treatment guidelines, protocols, and treatment pathways based on the best available evidence.
27. Hospital pharmacists should be members of pharmacy and therapeutics committees to oversee all medicines management policies and procedures, including those related to off-label use and investigational medicines
28. Hospital pharmacists should have a key role in educating prescribers at all levels of training on the access to and evidence for optimal and appropriate use of medicines, including the required monitoring parameters and subsequent prescribing adjustments.
29. Hospital pharmacists should be involved in all patient care areas to prospectively influence collaborative therapeutic decision-making.
30. Hospital pharmacists should be an integral part of all patient rounds to assist with therapeutic decision-making and advise on clinical pharmacy and patient safety issues.
31. Hospital pharmacists should provide continuity of care by transferring patient medicines information as patients move between sectors of care
32. Postgraduate clinical courses should be developed to prepare hospital pharmacists for collaborative prescribing of medicines, including instruction in legal and professional accountability; this role of hospital pharmacists should be promoted in the curricula of other health professionals

Table 1. Reproduced from the Basel Statements: Theme 2 – Influences on prescribing²

Also, to further ensure each of the above seven statement is fully investigated while minimising the survey completion time, each statement will be assessed using an individual survey. Thus, seven surveys will be produced.

The WPR contains over 35,000 hospitals, not including district/first-level referral hospitals.¹² As a result of this large number of hospitals, the support from the respective societies of hospital pharmacists and the Western Pacific Pharmaceutical Forum (WPPF) has been sought. The WPPF is supported by the FIP and collaborates with both the WHO and respective national pharmacy associations to improve pharmacy services and health. A WPR Advisory Committee has also been formed including prominent leaders of hospital pharmacy from Australia, China, ChinaTaiwan, Philippines and Singapore to aid in contacting hospitals and developing and evaluating the survey.

To ensure accurate results are obtained, the survey will initially be piloted in a small sample of hospitals for reliability and validity. Also, to aid timely collection of data, a web-survey will be used. In the minority of countries where internet use is unreliable, a hard copy of the survey will

be faxed or posted. Additionally, countries that may have difficulties completing the survey in English will have the survey translated.

Translation

Whilst there is controversy regarding methods of translation, the standard forward-backwards approach as described by Beaton et al. (2000) will be used.³⁴ This method requires the survey to be translated to the desired language and then translated back into English by a blinded accredited translator to identify any discrepancies in translation.³⁴ Leplège and Verdier's (1995) also highlight that back translation can be at least as misleading as it is informative.³⁵ In response, they place a large emphasis on obtaining high-quality forward translations instead of relying heavily on back translations and recommend strict translator recruitment.³⁵ Accordingly, high quality forward translations, as well as back translations, will occur as the translators recruited will be linguistically competent, fully briefed on the survey, will have prior experience in hospital pharmacy and will be able to comment on their own translations.^{35,36}

Survey development

Statement 26 states:

"Hospitals should utilize a medicine formulary system (local, regional, and/or national) linked to standard treatment guidelines, protocols, and treatment pathways based on the best available evidence."

This Statement was chosen to be surveyed first as formularies heavily influences prescribing and can be applied in all hospitals. A medicine formulary is a list of medications stocked in the organization or easily obtainable from an outside source and may also be referred to as Essential Drug List, Essential Medicines List or Standard Treatment Guidelines. A medicine formulary aims to reflect the current clinical judgment of the medical staff and is tailored to the special requirements of the hospital's patient population.³⁷ Thus, the formulary promotes the appropriate use of safe, effective and good quality medicines as well as eliminating the use of unsafe, ineffective or poor quality medicinal products.³⁸ As only medicines listed in the formulary are stocked, secondary benefits are seen towards storage space and price negotiations with manufacturers.

Statement 26 contains numerous elements and can be divided into 3 factors:

1. Hospitals should utilize a medicine formulary system
2. The formulary should be linked to standard treatment guidelines, protocols, and treatment pathways
3. The formulary should be based on the best available evidence.

To ensure all three factors of the Statement are properly evaluated, each factor will be assessed individually as a hospital can use a medicines formulary but not link it to standard treatment guidelines or base it on the best available evidence. To assess factors 2 and 3, the percentage of medicines on the formulary that are linked to standard treatment guidelines or based on best available evidence will be sought. A scale similar to Doloresco and Vermeulen (2009), of 3% (Very few), 3-50% (Some), 51-97% (Most) and >97% (Nearly all) will be used.³¹ Pharmacy directors' perceptions on formularies will be assessed by measuring their level of agreement on survey items using a 5 point Likert scale (Figure 2). In this pilot survey, 17 survey items were compiled. These survey items will determine if respondents' perceptions of the Statement affect its utilisation.

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
a. Medicines formularies are beneficial to patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Medicines formularies are primarily aimed at cost minimization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 2: Example of survey items used to assess respondents' perceptions of Statement 26. These survey items are still in the piloting stage and may not be in the final survey.

Questions identifying the types of information on hospital's medicines formulary and policies regarding the formulary will be asked. In addition, other hypothesized factors that may affect the implementation of the Statement will be investigated such as number of hospital beds, pharmacist-to-patient ratios, access to computers, funding models etc.^{2,11} In total, the pilot survey will contain 26 questions.

To assess Statement 26 accurately, it is important that the survey developed is both reliable and valid. For the survey to be reliable, it has to produce consistent results on repeated trials. Furthermore, for it to be valid it should measure what it is intended to measure.³⁹ Methods for testing reliability and validity of our survey are listed below.

1. RELIABILITY

a. Re-test Method

The re-test method assesses reliability by administering the same survey to the same people after a period of time.³⁹ A correlation of the scores between the two administrations of the same survey is then obtained.

b. Internal Consistency Method

This method requires only one administration of the same survey to provide a unique estimate of reliability measured by Cronbach's alpha.³⁹ Cronbach's alpha examines the inter-item correlations, with a value of greater than 0.70 being generally acceptable for a new scale.²⁰

2. VALIDITY

a. Face Validity

Face validity refers to whether the questions, on the face of it, appear relevant, reasonable, unambiguous and measure what they are intended to measure.^{21,22} To assess face validity, the WPR Advisory Committee was consulted to identify items that were confusing or unclear.

b. Content Validity

Content validity ensures that the complete content range of the chosen construct under study is being tested.¹⁹ This may be achieved via literature searching, expert opinion or through qualitative research.²⁰ Both a literature search and expert opinion of the WPR Advisory Committee were sought to ensure content validity of our survey.

c. Construct Validity

Construct validity refers to the degree to which the survey measures the theoretical construct it is intended to measure. Construct validity may be evaluated using factor analysis, a statistical method used to analyse relationships among large number of variables.²² Factor analysis allows related items to be grouped into a part of a construct or factor.²² These factors can then be interpreted by theoretically derived hypotheses concerned with the concept being measured.

Factor analysis identifies the greatest variance in scores with the smallest number of factors, seen by an eigen-value > 1.0 .²² As a result, the exact method of factor analysis cannot be pre-determined as it is based on the most easily interpreted solution. Furthermore, factor analysis also identifies whether all the survey items of the survey should be treated as one scale or as individual subscales. Items that are unrelated to the construct are seen to have poor factor loadings (< 0.30) or cross-load on two or more factors and should be removed.²² Thus, factor analysis can ensure redundant items are removed from the survey.

Sample size

Sample sizes ranging from 5-20 respondents per survey item have been recommended for factor analysis.^{22,23} Generally, and for the purpose of factor analysis of our survey, a minimum of five respondents per survey item is deemed sufficient.²⁴ As our survey contains 17 survey items, a minimum of 85 respondents will be required to adequately validate the survey.

Future directions

Our survey is currently being piloted to ensure its reliability and validity. Once validated, it will be administered to a large representative sample of hospital pharmacy directors in the WPR. We encourage other researchers to use a similar method to assess other Basel Statements in other regions. From this, numerous sets of validated surveys can be developed to assess all the Basel Statements. When validated surveys for each theme are developed, these surveys could be used on a rotational basis to assess a different theme each year

globally. Consequently, hospital pharmacies that perform highly could be identified and provide valuable information for other hospitals to follow. Regular use of these validated surveys will also aid hospital policy makers to ensure that optimal pharmacy practices are maintained. Ultimately, we envision the Basel Statements and these validated surveys will lead to standardized hospital pharmacy practices and ensure optimal patient care.

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FIP BASEL STATEMENTS

AND THE FUTURE OF HOSPITAL PHARMACY SERVICES IN URUGUAY

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The new millennium brought an explosion of technologies, an imposing globalization, medical breakthroughs and, as a direct consequence of these changes in the health area, great challenges surged in assessing and improving the quality of Health Care.

Since 1997, the private, not-for-profit Joint Commission International can accredit hospitals and other Healthcare Organizations all over the world. Health professionals and, in particular, hospital pharmacists take part in this cultural change and focus their action on developing quality in their Services. FIP approved "Standards for Quality of Pharmacy Services" in 1997 too.

The essential roles of hospital pharmacists widen to new areas such as clinical, regulatory, technological, analytical requiring new expertise.¹ Hospital Pharmacy Services are gaining a specific profile. Uruguay opens an extended dialogue between Health Authorities, the Academy and the Professional Pharmacists' Association (AQFU) to draw strategic lines for implementing Good Hospital Pharmacy Practice (GHPP).^{2,3} FIP Global Conference on the Future of Hospital Pharmacy (Basel 2008) developed consensus statements that reflect the "profession's vision of practice" in the hospital setting.⁴ This vision must be matched to Uruguay's unique situation, must be aligned with the Uruguayan strategic goal in favor of the implementation of GHPP.

In Uruguay, professional associations are not compulsory and their aim is to promote professional development. The Association of Chemistry and Pharmacy of Uruguay (Asociación de Química y Farmacia del Uruguay [AQFU]), which has 90% of pharmacist membership on voluntary basis, has played a key role in the development of qualified pharmaceutical human resources, acting as a facilitator in the progression and integration of new trends and methodologies in pharmacy sciences and practice in Uruguay.

In the year 2000, the Ministries of Health of the MERCOSUR (Southern Common Market), Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela reached an agreement to implement Good Pharmacy Practices (GPP) across the region. However, pharmacies of the signatory countries, such as Uruguay, still do not adhere to the WHO guidelines for GPP.

The beginning:

BACKGROUND TO CHANGES IN HOSPITAL PHARMACY SERVICES IN URUGUAY

- The ever-increasing complexity of hospital pharmacy services requires professionals with advanced credentials such as postgraduate degrees through the specialization in this area. The National Uruguayan University (UDEAR) created the Diploma in Hospital Pharmacy in 2003.^{5,6,7,8,9,10}
- In 2004, the National Technical Group,¹¹ integrated with representatives of the Professional Pharmacist Association, the National Uruguayan University, the Ministry of Health and the Pan American Health Organization (PAHO) was created by the Ministry of Health with a defined objective: the development of Pharmacy Practice through
 1. the implementation of GPP
 2. the pharmacy workforce (both pharmacists and pharmacy technicians) education
 3. the update in regulatory aspects
- Workshops on GPP in which pharmacists were engaged in the analysis and development of the following proposed standards:
 1. Self Medication
 2. Rational Use of Drugs
 3. Good Dispensing Practice
 4. Pharmaceutical Care
 These standards were approved by the Professional Pharmacist Association in the period 2005-2008.^{12,13,14,15,16}
- Annual seminars on National Medicine Policies: the policy dialogue among members of the Professional Pharmacist Association, the Academy and Health Authorities concluded in an implicit annual plan of action.¹⁷
- Annual Hospital Pharmacy Congress: organized by the Professional Pharmacist Association (Asociación de Química y Farmacia de Uruguay) and Spain and Latin America Pharmacists Organization (OFIL). This meeting is a successful tool for knowledge update but also for debate, for exchange comments, for defining specific policies based on strategic lines, for moving the Pharmacy Profession forward.

Changes in hospital pharmacy services in Uruguay

The FIP Global Conference on the Future of Hospital Pharmacy and its 75 final statements was reviewed in Uruguay:

The Global Conference platform and methodology were reproduced in various opportunities in order to give an important diffusion to the statements. In the framework of the XII South America Pharmaceutical Federation Congress (November, 2008) and in the XIII Hospital Pharmacy National Congress (November, 2009), workshops with the participants divided in six working groups (one group, one topic). The topics were: Procurement, Influences on Prescribing, Preparation and Delivery, Administration, Monitoring of Medication Practice and Human Resources and Training) conducted by one facilitator per group, analyzed the proposed statements. The enthusiastic atmosphere created by the colleagues working in matching the statements to our country's reality, discarding some of them and adding others invoked the evidence that an irreversible cultural change is taking place: there is a professional agreement on adapting Basel Statements to our reality.

Uruguay has no recent data on Hospital Pharmacy Services

A survey of hospital pharmacy practice was conducted in the framework of Paraguay-Uruguay GPP Project. This is a bi-national project supported by FIP.¹⁸ In Uruguay, the sample covered 60% of the private and public, urban and rural hospital pharmacy services. The survey was validated in April 2009 and implemented in May-June 2009.

Survey's highlights:

- Each HP is supervised by a pharmacist in populations over 30000 inhabitants
- In 60% of the hospitals, the hospital pharmacist is responsible for the medicines-use process and for medicine logistics
- In 60% of the hospitals, the workforce's education, competency, training and size are appropriate to the pharmacy service
- 100% HP have computers and 60% access to internet
- 60% of the pharmacists participate in medicines selection for the hospital formulary
- All HP Services have pharmacy technicians as specialized personnel

A new Standard on "Areas in Hospital Pharmacy" was approved in April 2009 by the Professional Pharmacist Association (AQFU). These recommendations propose operational parameters such as physical areas, layout, etc in order to facilitate the implementation of GPP. The essential concepts of this standard took into account ASHP Guidelines.

Communication of results¹⁹

The advances on GPP Paraguay- Uruguay project were shared in the region:

- XIII South America Pharmaceutical Federation Congress (Argentina-October 2009)
- First National Seminar (Paraguay-November 2009).
- XIV South America Pharmaceutical Federation Congress (Brazil-May 2010)

Setting standards for hospital pharmacy services

The Paraguay-Uruguay GPP Project, the Basel Statements and the new standard on "Areas in Hospital Pharmacy" could be harmonized in one document: STANDARD FOR HOSPITAL PHARMACY SERVICES, document to be presented for discussion next March 2011 together with the STANDARD FOR COMMUNITY PHARMACY SERVICES, prepared by Paraguay, as steps of the just mentioned Paraguay-Uruguay GPP Project.

Conclusion

Basel's Global Conference on Hospital Pharmacy has conveyed a valuable framework to further develop our profession in the next 10 years. An extensive discussion at national level is required in order to establish goals, priorities and specific plans.

At the same time, all our efforts have also been orientated towards the medicines-patient binomial and to the patient as the central actor in the health system. Good hospital pharmacy practice implementation plays a key role in order to achieve this general strategy.

The professional association, AQFU, is playing a critical role, in partnership with the University and other stakeholders, in coordinate, support and lead GHPP implementation as well as pharmacy development.

Changes will only be possible with competent pharmacists, committed to their role in the health care system.

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A COMPARISON OF CHINESE HOSPITAL PHARMACY PRACTICE AND THE BASEL STATEMENTS

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As participants in the FIP Global Conference on the Future of Hospital Pharmacy, Chinese pharmacists should put the Basel Statements into practice with enthusiasm and responsibility. We are writing to reflect the experiences of a particular hospital, XuanWu Hospital of Capital Medical University (Beijing), one of the top level hospitals in China.

XuanWu Hospital was founded in 1958. It is a municipal-level general hospital involved in medical treatment, teaching, scientific research, prevention, health care and rehabilitation. It has 1053 beds. Daily outpatients number about 5000 persons. The hospital has 33 clinical departments, 14 technical departments, and 14 laboratories for clinical and basic research. The hospital has a staff of 2158 persons, including 354 with high-rank professional or technical titles. It provides postgraduate training for doctor's degree and master's degree graduates.

Practice and Innovation of Hospital Pharmacy at XuanWu Hospital

We will discuss the scope and depth of the services of the pharmacy department at XuanWu Hospital in the context of the six domains of the Basel Statements.

Procurement

In XuanWu Hospital, a Drug and Therapeutic Committee is set up, to compile and review the formulary every 3 years. A pharmacist is a member of committee to oversee all medicines management policies and procedures.

Procurement is under a committee director, and it uses a computerized process. It is transparent. Some hospitals in China have set up modern logistics for the procurement process.

Influences on Prescribing

Pharmacists at XuanWu Hospital have made a philosophical shift, from products to patients; not only do we supply products, but we also supply pharmaceutical services. This means that we believe drug use should be safe, effective, and economic, to guarantee quality use of medicines, and to

improve public health. It is a challenge to make this shift in hospital pharmacy but we are working on it.

Rational use of medicines is the aim of pharmacists, and the influence on prescribing can reflect the values of pharmacists. In our outpatient and inpatient pharmacies, pharmacists inspect the prescription and medical orders every day. There is also a prescription evaluation system in the hospital.

A multi-center study of antibiotic prophylaxis intervention in surgery was done in 2005 and was supported by WHO and the China (Sino) Food and Drug Administration (SFDA). The results showed that the rate of rational use of drugs increased substantially because of pharmacists' interventions. A follow-up during the 6 years after the original study showed that the mean cost and the mean length of hospital stay was going down, and compliance with medicine therapy was increasing. That means that pharmacist intervention has a positive long-term effect.

As experts on medicine use, pharmacists should be an integral part of all patient rounds to assist with therapeutic decision-making, and to advise on clinical pharmacy and patient safety issues. Pharmacists in our hospital advise physicians to change dosage regimens according to the results of therapeutic drug monitoring (TDM). Pharmacists are an integral part of all patient rounds to assist with therapeutic decision-making and offer advice on clinical pharmacy and patient safety issues. In addition, we have pharmacists who are members of the intravenous infusion team, and this fosters safe use of injectable medicines.

We have established a clinical pharmacist team. Our traditional Chinese medicine (TCM) clinical pharmacist team was the first such team in China. These teams take part in clinical rounds and communicate with patients. For example, TCM pharmacists have done an analysis of the adverse drug reactions (ADRs) on 100 patients who used Xing Nao Jing injection. Patients who accepted therapy under TCM theory received more effective treatment and had fewer ADRs. Patients not treated according to TCM theory experienced less effective results and more ADRs. TCM clinical pharmacists are having a major effect on the rational use of TCM.

Another example of the positive results from pharmaceutical service involves a patient who underwent heart transplan-

tation. Three weeks after the operation the patient experienced a fungal infection and was treated with fluconazole. The patient's blood concentration of tacrolimus suddenly rose sharply to 26.9 µg/ml. The clinical pharmacist suspected that an interaction with fluconazole was the reason for the problem and the physicians were advised accordingly. After dosage adjustments, the concentration of tacrolimus was maintained within the therapeutic range.

Almost all experts agree today that patient education is vital to improving adherence to drug therapy. We have proof of the value of this concept in the work our pharmacists have done for the past 10 years in educating epilepsy patients about their medicines. Compliance with drug treatments has improved greatly, and the patients have become more aware that pharmacists have the knowledge to help them in this way. Hospital pharmacists should draw lessons from this experience and pay more attention to educating patients.

Preparation and Delivery

Pharmacists should ensure that proper storage conditions are provided for all medicines in the hospital. The storage room temperature at our hospital is automatically controlled by computer. Pharmacists should assume responsibility for the appropriate labeling and control of medicines stored throughout the hospital, and they should ensure that compounded medicines are consistently prepared to comply with quality standards. We perform the quality inspection of compounded preparations, inspection of drug quality, and double checking of stock placed into warehouse inventory.

Administration

International criteria for the rational use of drugs are included in pharmacy-department standards established by Beijing City. Hospital pharmacists have a responsibility to assist physicians and nurses in providing high quality services. In our hospital, pharmacists regularly inspect drug-related matters at nursing stations, which is an important aspect of ensuring quality in the administration of medicines.

Monitoring and Medication Practice

The ADR monitoring program at XuanWu Hospital, which we established in 2003, operates within the context of the Beijing ADR Monitoring Center and the National ADR Monitoring Center. ADR experts regularly conduct seminars at our hospital.

Pharmacists at our hospital monitor several facets of antibiotic use, including surgical prophylaxis, long-term use, and overall volume of use. We do this in conjunction with national antibiotic monitoring by the health ministry. In response to a health ministry requirement, we recently began to monitor (1) rational use of drugs according to clinical pathways and (2) medication errors. The mean rate of medication errors is 13%; of these, 42% are in the category of wrong drug (mainly errors made by nurses in dissolving drugs in solutions). Consistent with a team philosophy of providing patient care, pharmacists should ensure that physicians and nurses have correct information about the use of drugs.

Human Resources and Training

In December 2005, our department became one of the first pharmacist training centers approved by the health ministry. There are now 50 training bases and 13 teacher training bases in China. We conduct a clinical pharmacist training class every year.

In China, the undergraduate pharmacy curriculum includes hospital-relevant content, and we have a need to develop post-graduate training programs and specialization in hospital pharmacy. There are 14 hospital bases for pharmacy residency training in Beijing. At XuanWu Hospital, pharmacy residency training extends over 5 years, culminating in an examination that is conducted every year by the Beijing health bureau. XuanWu hospital pharmacy also trains community pharmacists. So far, we have trained more than 2000 community pharmacists. Our training model for community pharmacists will be implemented all over the country. Our department devotes major attention to continuous professional development of pharmacists. Since 2006, we have conducted theoretical and practical training on the competencies required for specific positions in the department. We also use the following techniques: "morning information corner" (conducted for the past 8 years), clinical practice seminar and research salon (every 2 weeks), lunch learning meeting (2 or 3 times per month), and humanistic cultural training (2 or 3 times a year). In 2009, our department held special international educational programs on medical insurance coverage and pharmaceutical analysis with sponsorship from the government and Harvard University.

We are also involved in research, and our publications in national journals have increased over the years. Current projects include evaluation of essential drug use in a basic-level medical institution, and establishment and extension of an elder medical general evaluation system. Both projects are supported by the government.

Comparison with the Basel Statements

The Basel Statements give us confidence that we are on the right path in developing hospital pharmacy in China. Chinese pharmacists have changed their vision on pharmacy practice, moving from a focus on drug products to caring for patients, consistent with the vision that emerged from the FIP Basel Conference. Hospital pharmacists in China recognize that fostering the rational use of drugs should be the core service of their departments. Pharmacists are beginning to have a more important role in patient care and public health in China.

Nevertheless, we have some challenges, including a shortage of human resources, immature regulation of the drug supply, limited computerization, and the lack of an evaluation system for pharmacy practice. It would be helpful if FIP established a Good Pharmacy Practice evaluation system.

Perspective on the Future of Hospital Pharmacy

Hospital pharmacy in China will move toward becoming a stronger force in achieving rational use of drugs, with a major focus on medicine-use safety, particularly among elderly patients.

The theme of the 2008 FIP Congress was Reengineering Pharmacy Practice in a Changing World, and hospital pharmacy in China has changed. The 2009 FIP theme was Responsibility for Patient Outcomes – Are you Ready? Our answer is: yes, we are ready. The 2010 FIP theme was From Molecule to Medicine to Maximizing Outcomes: Pharmacy's Exploratory Journey. We are well on our way in that journey!

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THE BASEL STATEMENTS AS STIMULUS FOR ADVANCEMENT OF HOSPITAL PHARMACY IN A DEVELOPED COUNTRY

William A. Zellmer, Bruce Hawkins

Objective

This paper reports a study of the extent to which the FIP Basel Statements¹ have utility in promoting the advancement of hospital pharmacy in a developed country such as the United States, which has devoted substantial resources over the years to the creation of hospital pharmacy practice standards. We wanted to know if there were any gaps between the professional policies and practice standards of the American Society of Health-System Pharmacists (ASHP) and the Basel Statements (BSs). Documentation of any gaps could influence ASHP's future development of practice standards.

Background

The U.S. has had the benefit of a Minimum Standard for Pharmacies in Hospitals since 1936. The original version of that document was issued by medical and hospital associations; ASHP assumed responsibility for updating the Minimum Standard when the Society was founded in 1942, and it began to develop other standards for specific aspects of hospital pharmacy practice. At the time of our analysis, ASHP had approximately 200 professional policy positions (succinct expressions of ASHP's views on discrete issues in hospital pharmacy) and 85 practice standards (documents that express a philosophical stance or elaborate on how to address a practice issue in hospital pharmacy) (see Table 1).² (In the balance of this paper, ASHP policy positions and practice standards are referred to collectively as "ASHP standards.")

ASHP standards, which are drafted by experts in the field and are approved by the ASHP Board of Directors, are one component of an extensive program designed to improve and advance hospital pharmacy practice. Other key aspects of this effort include consensus building about a vision for the future, systematic pursuit of that vision,³ accreditation

of postgraduate pharmacy residency training programs, accreditation of pharmacy technician training programs, influencing the requirements for hospital accreditation (e.g., the standards of The Joint Commission), advocating appropriate laws and regulations, public education on the capabilities of pharmacists, and professional education.

Methods

In early 2009, we systematically assessed alignment between the Basel Statements (BSs) and ASHP standards. We each independently compared all 65 BSs that apply directly to hospital pharmacy practice to the entire body of ASHP standards to determine if the content and intent of each BS was covered by ASHP. In cases where our results differed, we discussed the discrepancies and developed a consensus assessment. For the 10 BSs related to human resources and training, which speak to national work force planning rather than the activities of pharmacy departments, our reference point was whether a particular recommendation is consistent with work force planning in the United States.

Results Related to Hospital Pharmacy Practice

Our analysis yielded three types of findings: explicit congruence, implicit congruence, or no congruence (see Table 2). In cases of “explicit congruence,” there was an exact match between the content and intent of a BS and the content and intent of one or more ASHP standards. In “implicit congruence,” the content and intent of a BS are well ingrained in U.S. hospital pharmacy but are not explicitly stated in ASHP standards. For example, there was implicit congruence with BS 24 (“A formal mechanism must be in place for pharmacists to request designated funds to procure medicines for their patients”); this practice exists in all U.S. hospitals but it is not spelled out in ASHP standards.

Two of the four BSs in the “no congruence” category deal with influences on prescribing:

- *BS 30 – Hospital pharmacists should be an integral part of all patient rounds to assist with therapeutic decision-making and advise on clinical pharmacy and patient safety issues.*
- *BS 32 – Postgraduate clinical courses should be developed to prepare hospital pharmacists for collaborative prescribing of medicines, including instruction in legal and professional accountability; this role of hospital pharmacists should be promoted in the curricula of other health professionals.*

The two other BSs rated “no congruence” involve administration of medicines:

- *BS 49 – Pharmacists should ensure that strategies and policies are implemented to prevent wrong route errors, including, for example, labeling of intravenous tubing near insertion site to prevent misconnections, and use of enteral*

feeding catheters that cannot be connected with intravenous or other parenteral lines.

- *BS 51 – Oral syringes that are distinctly different from hypodermic syringes should be used to prevent injection of enteral or oral medicines, especially in pediatric patients.*

These four BSs do not reflect universal practice in the U.S., and they had not yet found their way into ASHP standards at the time of our analysis. It is quite likely that these gaps will be addressed in the future as ASHP revises existing standards and creates new ones. (In fact, an addition was made to ASHP standards in June 2010 that now brings them into congruence with BSs 49 and 51.)

Overall, we found a high degree of alignment between ASHP standards and the 65 BSs that deal directly with the responsibilities of hospital pharmacists. Our assessment represents “global validation” of ASHP policy positions and practice standards, and it will serve to further strengthen ASHP standards as the Society takes into account the gaps we identified.

Results Related to Human Resources and Training

For each of the 10 BSs related to human resources and training, the question we asked was, “Does the recommended practice occur in the United States?” We found that two BSs are consistent with practices in our country:

- *BS 72 – Hospital human resource policies should be founded in ethical principles, equal opportunity, and human rights and be compliant with labor regulations, guidelines, and hospital pharmacy practice standards.*
- *BS 73 – Nationally, levels of practice and associated competency requirements should be defined and regularly assessed to form a competency framework for all cadres.*

U.S. practices are partially consistent with three BSs (69, 70, and 74) and not in conformance with five BSs (66, 67, 68, 71, and 75). These latter five gaps stem from our country’s culture and “free market” approach to health work force planning.

Hospital pharmacy leaders in the U.S. are very concerned about the gap with the following BS:

- *BS 71 – The training programs of mid-level pharmacy human resources (technicians or the equivalent) should be nationally formalized, harmonized, and credentialed for the attainment of defined competencies within a defined scope of practice.*

ASHP is actively working to correct this serious deficiency in our country’s pharmacy work force structure.⁴ One may hope that BS 71 will give added impetus to this advocacy initiative.

Conclusion

Based on our study, we believe that the Basel Statements are a useful touchstone for countries that already have a well-organized process for improving hospital pharmacy practice. In the United States, the Basel Statements should be useful in strengthening hospital pharmacy's practice standards and in rationalizing its work force planning, particularly related to pharmacy technicians.

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TABLE 1.
EXAMPLES OF TOPICS COVERED BY ASHP STANDARDS²

EXAMPLES OF TOPICS COVERED BY POLICY POSITIONS

- Regulation of automated drug distribution systems
- Uniform state laws and regulations regarding pharmacy technicians
- Ethical use of placebos

EXAMPLES OF TOPICS COVERED BY PRACTICE STANDARDS

- Preventing medication errors in hospitals
- Pharmacy and therapeutics committee and formulary system
- Handling hazardous drugs
- Pharmacist's role in infection control

TABLE 2
CONGRUENCE BETWEEN ASHP STANDARDS AND BASEL STATEMENTS

BASELINE: 65 BASEL STATEMENTS ON HOSPITAL PHARMACY PRACTICE (EXCLUDING BSS ON "HUMAN RESOURCES AND TRAINING")

Explicit congruence: 53

Implicit congruence: 8*

No congruence: 4**

Total: 65

* "Implicit congruence" applied to Basel Statements 5, 17, 20, 23, 24, 29, 54, and 62 (see Reference 1).

** "No congruence" applied to Basel Statements 30, 32, 49, 51 (see Reference 1).

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CURRENT STATUS OF THE BASEL STATEMENTS

AND WORK OF HOSPITAL PHARMACISTS IN GHANA

Rebecca Buckle Nordor, Raymond Tetteh

Ghana was fully represented at the Global Hospital Pharmacy Conference that took place in Basel in 2008, and therefore had to implement aspects of the Basel Statements and adapt them into the short, medium and long term strategic plans of the Ministry of Health starting from 2010 to 2015.

Official Endorsement of the Basel Statements

To this end, an implementation plan of the Basel statements was prepared with the collaboration of the Ministry of Health Pharmacy Division and the Government and Hospital Pharmacists leadership in November 2009. The final implementation plan document which covered all the six thematic areas together with the overarching statements and the March 1st 2009 hard copy of AJHP supplement were presented on 17th March 2010 to Dr Benjamin Kunbour, the Minister of Health who received and accepted them as a working document. On the 25th of March 2010 the Government and Hospital Pharmacists Association of Ghana held their annual conference which drew about 150 members and the main agenda was on the Basel statements. Pharmacists' administrators from the ten regions were given copies of the Basel statements implementation plan for study and adaptation to their local environment. Also in May 2010 the chairman of the Pharmacy Council accepted and adopted the Basel statements as part of the governing council's strategic plan for 2010 to 2013 to regulate the practice of pharmacy.

Various activities had taken place with the Basel document playing a central role since its adoption by the Ministry of Health, the Ghana Health Service and the Pharmacy Council. Some of the major changes include the development of a strategic framework for Pharmaceutical Human Resources in May 2010 with support from the European Union, WHO and the Ministry of Health with collaboration of the Pharmacy Council championing the implementation. This Strategic Framework for Pharmaceutical Human Resource development is to serve as road map for strategic direction for pharmaceutical service providers and set the agenda for change in the practice of pharmacy.

Pharmaceutical Sector Strategic Plan

The World Health Organization (WHO), on 9th September 2010 supported the Ministry of Health and its stakeholders in the Pharmaceutical sector to develop a National Pharmaceutical Sector Strategic Plan 2011-2014. This new comprehensive policy replaces the 2004 National Drug Policy. The new policy is also aligned to the Health sector Medium Term Development Plan of 2010-2013.

Some policy areas identified in the strategic plan are:

- Regulation
- Pharmaceutical Industry
- Procurement
- Pharmaceutical Service Providers
- Rational Use of Medicines
- Sector Planning and Policy
- Monitoring and Evaluation
- Pharmacovigilance
- Medicines Availability

Influence of the Basel Statements in Ghana

1. Procurement

The New Medicine's Policy guidelines (2011-2014) demand the establishment of functional Drug and Therapeutics Committee (DTCs) in all health care institutions, who should work collaboratively with procurement staff to procure cost effective medicines, and to ensure that procurement does not occur in isolation but rather be informed by the formulary selection process. The Ghana Health Service with support from Management Sciences for Health had been organizing trainer workshops to train pharmacists, medical practitioners, nurses and other clinical staff on drug and Therapeutic Committees' role for promoting rational use of medicine since 2009 and it is currently ongoing across the country.

2. Influences on Prescribing:

An in-house training in clinical skills is being actively promoted in all the major hospitals to allow pharmacists to make interventions in clinical decisions on the wards (especially Korle Bu Teaching and Komfo Anokye Teaching hospitals, Polyclinics in Greater Accra Regions). Adherence counseling sites for antiretroviral therapy for HIV/AIDS patients have been established in all the ten regional hospitals and districts in Ghana and pharmacists have been trained to make interventions in antiretroviral treatment and they are recognised by the other team members for their pivotal

role in the sustainability of the programme. Pharmacists are now allowed to write their interventions on separate sheets provided in the patient's folder in the Teaching Hospitals and the antiretroviral treatment sites. Pharmacists in the Teaching hospitals have been assigned to wards where they are made responsible for their stocks and clinical services such as interventions and follow up on patients who need additional information on their therapy, medicine information and safety monitoring activities.

3. Preparation and Delivery:

New labeling techniques which take into account the low literacy level of patients are being developed. At two of the teaching hospitals, Radiotherapy and Oncology clinics have pharmacists who have acquired the knowledge and skills to prepare and administer the medications. These pharmacists deliver update lectures to inform their colleagues about activities in their department. More pharmacists are now involved in specialized units of major hospitals such as the Neonatal intensive care unit, the Renal unit and the Clinical genetics unit to assist with providing specialized pharmaceutical services. In the department of Anaesthesiology of Korle Bu teaching hospital for instance pharmacists attached to this department provide self sticking labels to nursing and other staff of the theatres for reconstituted medicines to avoid medication errors. They also identify high risk medications and ensure their proper storage and handling.

4. Administration / Use

The Ministry of Health's (MOH) manuals, Standards of Pharmaceutical Care and Standard Operating Procedures (SOP) are being reviewed to include some the demands of the Basel Statements. This includes provision for Investigational Medicines and other Research Protocols. Pharmacists in other specialized clinical areas also assist in providing appropriate dosage forms of medicines for which paediatric forms may not be readily available. This notwithstanding, pharmacists continue to devise simple procedures for medicines handling and administration including the right patient. Management Sciences for Health had since August 2010 provided support for training pharmacists in malaria case management in Ghana and it is ongoing. The training, even though targeted toward community pharmacists, involved hospital pharmacists as well. These pharmacists would eventually be provided with the Rapid Diagnostic Test kit to test for malaria in patients and to perform directly observed treatment for anti malaria medications to ensure adherence to therapy after initial diagnosis.

5. Monitoring Medication Practice:

Currently there is on-going skills training for all clinical staff for safety monitoring and reporting of adverse reactions. There are many more pharmacists employed by the Malaria Control and Tuberculosis Programmes to monitor adverse reactions from medications and other devices. The Food and Drugs Board (FDB) already has adverse drug reaction monitoring forms and these are sent to all health institutions' focal persons for documenting and providing feed back to FDB for regulatory action to be taken after

initial investigation by a technical team. Even though people experience adverse drug reactions, reportage had been very low. The FDB had intensified its educational programmes for Pharmacovigilance activities. The National Drug Information Resource Centre also sends out warnings about medicines information received from other sources to all health institutions and this is a very useful service.

6. Human Resources and Training:

The Pharmaceutical Society of Ghana, the Pharmacy Council,, Ministry of Health, and W.H.O. with support from the European Union developed a Pharmaceutical Human Resource Development Framework and Strategic Plan for the Pharmaceutical Sector in Ghana, in May 2010. This framework would provide the framework for pharmaceutical service providers, their development and distribution especially to deprived areas. The Ministry of Health is awaiting funds for implementation. The Pharmacy Council and the Pharmaceutical Society of Ghana continue to organize continuing education programmes for pharmacists as a way of building capacity in the knowledge and skills of all practicing pharmacists.

Conclusion

In conclusion, the Basel statements provide a road map for change in pharmacy practice in general and more especially hospital pharmacy practice. It is worth noting, that in this age of globalization, it makes sense to strive for a measure of agreement across borders about the essential characteristics of hospital pharmacy practice.

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ISSUES & CHALLENGES

FACING A HOSPITAL PHARMACISTS SOCIETY IN A DEVELOPING COUNTRY

Abdul Latif Sheikh, M.S.; R.Ph.¹

The health care system in Pakistan is a multitude of diverse modalities and interventions consisting besides an allopathic system of household herbal remedies, faith healing, and alternative medicine. Allopathic systems never the less have primary presence and are comprised of a wide range of public and/ private hospitals, primary and basic health units and dispensaries.

Healthcare is generally poor in public hospitals while private hospitals and clinics provide good quality services but at higher costs to the average person. There is no minimum hospital standard currently established in the country and hospitals normally face shortages of quality staff. Most hospitals do not provide the basic comprehensive clinical and support services such as pharmacy, radiology, diagnostics, food and nutrition under one roof.

Medical store or a chemist shop is mostly the first patient encounter which invariably is not manned by a qualified graduate pharmacist. In large urban areas, hospitals particularly and large drug stores generally are being sensitized with the criticality of pharmacists' presence and the role played by them in enhancing patient safety.

Routine and unchecked over the counter selling of medication is common in the country thus promoting self medication that enhances adverse drug reactions and events related to medications. The drug storage conditions for most drugs are sub optimal which leads to dispensing and sale of sub therapeutic drugs. Very few hospitals in the country have professional hospital pharmacies set up. Generally a hospital pharmacy is merely a chemist shop in a hospital.

The aforementioned reasons and challenges served as an impetus and resulted in bringing together group of hospital pharmacists at a platform and establishment of The Society of Hospital Pharmacists of Pakistan (SHPP).

Society of Hospital Pharmacists of Pakistan

SHPP is a group of professional pharmacists working under the leadership of competent, qualified and trained hospital pharmacists with the vision to optimize patient outcomes through the judicious, safe, efficacious, appropriate, and cost effective use of medicines in the hospitals and beyond by introducing, establishing and / implementing good hospital pharmacy practice guidelines. SHPP visualizes bridging the gaps related to the human resources in the hospitals of Pakistan through extensive training and development.

SHPP is committed to the advancement of safe, effective, medication use and patient care in hospitals; support the continuing professional development of its members; working towards creating a strong bond amongst the hospital pharmacists of the country and working with the key stakeholders in the medication usage as a partner and establishing national and international linkages.

Dissemination of the Basel Statements

Subsequent to the 68th FIP congress held in Basel, the Society of Hospital Pharmacists of Pakistan (SHPP) initiated the dissemination and discussion of the Basel Statements to the WHO Eastern Mediterranean Regional Office (EMRO) region with the main focus to create awareness about the hospital pharmacy practices, training of pharmacists and academic initiatives to promote the standards of hospital pharmacy in the region. Basel statements served as a valuable tool to highlight the current gaps in the status and standards of hospital pharmacies and establish a roadmap to achieve the objectives of an optimum medication management system by the hospitals in order to provide safe, and effective drug usage in the hospitals.

As an initial step SHPP facilitated the wide circulation of the Basel statements and global conference executive summary to the key stakeholders in Pakistan, in particular and to the EMRO region in general. Following were some of the key recipients:

- FIP Hospital Pharmacy Section EMRO region members
- FIP member organizations EMRO region
- Regional office WHO, EMRO region
- Pharmacy schools & universities of EMRO region

- Tertiary care hospitals of Pakistan
- Central & Provincial Director General Health Pakistan
- All the members of the Society of Hospital Pharmacists of Pakistan (SHPP)
- Ministry of Health Pakistan
- Drug control organization, MOH Pakistan
- Pakistan Medical Association
- Pakistan Nursing council
- Midwifery Association of Pakistan
- Members and Executives of the Pharmacy Council of Pakistan

The Statement was also published in the September 2008 issue of Pulse International, a fortnightly Medical Newspaper from the platform of the Society of Hospital Pharmacists of Pakistan for its wide distribution in the country.

Revising the Doctor of Pharmacy (Pharm.D.) Curriculum

The Society also presented the consensus statement to the Pharmacy Council of Pakistan and highlighted the salient features and recommended updating of the pharmacy curricula of the country with special focus on the hospital pharmacy practice. Subsequent to presentation of the consensus statement to the Council SHPP was invited to the council meetings and workshops to provide an expert opinion for the curricula revision of the Pharm.D. program for the country with special focus on the hospital and community pharmacy practice.

Key members of the SHPP recommended a necessary update of the curricula, and were instrumental in demonstrating the need of hospital pharmacy clerkships in Pharm.D. curricula which currently are not available in the syllabi. SHPP also highlighted the need of training the trainers i.e. Faculty in order to provide practice exposure and oversight to the fresh Pharm.D. graduates.

Collaboration with Medical Societies

The Society initiated dialogues for the enhancement of hospital pharmacy practices consistent with the Basel Statements with the Obstetrics & Gynaecology Society of Pakistan, the Society of Midwifery of Pakistan, and the Pakistan Pediatric Association in order to assist and promote Millennium Development Goals 4 and 5 (reduce child mortality; improve maternal health). SHPP worked with the Pakistan Society of Obstetrics and Gynaecology to streamline registration and availability of misoprostol in the country for treating postpartum hemorrhage besides arranging educational sessions for midwives in conjunction with the Pakistan Midwifery Council. SHPP helped the Pakistan Pediatric Association for the registration and availability of zinc preparations in the country.

Educational Conferences

While extending the efforts to promote hospital pharmacy practice in Pakistan SHPP in collaboration with Ripha University, Islamabad, organized a one-day symposium on “Hospital Pharmacy Practices in Pakistan” which was attended by drug control officials, hospital pharmacists, faculty members, and pharmacy students. The Global Conference proceedings (including the Basel Statements and the global survey findings) were shared with and disseminated to the participants. During the panel discussion various strategies were discussed to develop and enhance hospital pharmacy practice in Pakistan.

SHPP in collaboration with Ziauddin College of Pharmacy organized a one-day symposium in Karachi on Hospital Pharmacy Practice. The symposium was attended by more than 300 participants including students, pharmacists, regulatory authorities, and faculty members. The symposium covered lectures on all aspects of hospital pharmacy practice, the findings of the global survey on hospital pharmacy practice, and salient features of the Basel Statements were also presented. Copies of the Basel Statements were circulated to the participants who were encouraged to implement the Statements at their workplaces.

SHPP in collaboration with Allama Iqbal Medical College/ Jinnah Hospital organized a three-day international conference with the title of “Multidisciplinary Approach in Medication Usage” at Lahore, which was attended by more than 1500 participants, including government officials, ministry of health officials, pharmacists, representatives of pharmacy associations, and students. The conference highlighted the role and importance of pharmacists in the health care system and covered almost all aspects of pharmacy practice.

The congress included an official message of Mr. Andy Gray, President of the FIP Hospital Pharmacy Section, and salient features of the Basel Statements were presented in the keynote lecture. At the conclusion of the conference, a set of recommendations were adopted from the Basel Statements and forwarded to the Government of Pakistan for approval and implementation.

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STANDARDS FOR HOSPITAL PHARMACY

IN SERBIA AND THEIR ALIGNMENT WITH THE BASEL STATEMENTS

Tatjana Sipetic

In Serbia, 172 hospital pharmacists work in 65 health institutions of secondary and tertiary types. By law (Official Gazette of Republic of Serbia from 23rd of May, 2006), in a hospital for the performance of pharmaceutical health services, one graduate pharmacist and one pharmaceutical technician are required per 200 hospital beds, provided that if the pharmacy has a Galenic laboratory at least one graduate pharmacist specialized in pharmaceutical technology is needed to perform these tasks.

In practice, 46.9% of health institutions have less than one pharmacist per 200 beds, 40.6% have one pharmacist per 200 beds, and only 12.5% have more than one pharmacist per 200 beds. Staff pharmacists in hospital pharmacies are united in the view that this number must increase.

Pharmacists in Serbia are organized in two professional organizations: the Pharmaceutical Chamber of Serbia and the Pharmaceutical Society of Serbia. The Pharmaceutical Chamber of Serbia (PCS), as a professional and independent organization of graduate pharmacists who work in the health system of Serbia, has realized its obligation to bring their professional standards in accordance with the applicable legislation in the field of health care and condition of pharmaceutical practice.

Standards for Hospital Pharmacy

The Pharmaceutical Chamber began to prepare the document Good Pharmacy Practice (DAP) in February 2007 by forming a Working Group for the development of professional standards of Good Pharmacy Practice. In developing a DAP, a Working Group composed of eminent professionals from the public and hospital pharmacies has used the International Pharmaceutical Federation's (FIP) recommendations as well as the views of many other countries that have already adopted such a professional standard and implemented it. The aim of developing a DAP was to define and standardize pharmaceutical services and activities of the pharmacists in

the pharmacy and to standardize work processes in pharmacies in order to improve the quality of services and products as well as to minimize the possibility of errors.

The PSC Working Group for drafting professional standards of the DAP took care that the proposed objectives be: relevant, achievable, measurable and documented. Given that the DAP must be supported by experts, during the drafting and adoption process a broad public debate was led in order to collect suggestions on the content of this document. After review by the professors of the Faculty of Pharmacy, University of Belgrade, DAP was adopted as a professional standard of Pharmaceutical Chamber of Serbia at the session of its Assembly on February 12th, 2008, as the first such document in its modern history. The Ministry of Health of Serbia, as the ministry responsible for adoption of regulations in the areas of health care, is reviewing this document and the decision of its adoption is expected, and until then this document has no binding form.

The DAP document is a description of requirements that allow the pharmacists in the hospital and public pharmacies to provide proper quality of pharmaceutical services to each user. It is divided by areas of standardization, and each of these areas is complemented by policies that are supposed to clarify quotes in the standards and help to more easily meet the requirements of standards in practice. The importance of this document for pharmacists in the hospital sector in Serbia is that it gives:

1. *standards for facilities, i.e. space in which to carry out pharmaceutical activities such as: size, number and arrangement of rooms in the hospital pharmacy, appearance, status, tidiness, storage conditions of medicines and medical supplies at the pharmacy, security of the storage and maintenance of hygiene in the pharmacy. So far this area has not been legally regulated.*
2. *standards for the interior of the pharmacy, equipment and reference literature the pharmacy must have*
3. *standards for the appearance and behavior of employees in the pharmacy*
4. *standards for procurement and supply sources. In the hospital pharmacy, the supply of medicines and medical*

devices is regulated by the Law on Public Procurement. The pharmacist is responsible for the technical aspect of procurement, i.e. pharmacist must not acquire, issue or sell any product if there is even a little doubt in its quality, safety or effectiveness.

5. standards for the issuing of medicines and medical devices in the hospital pharmacy, where issuing includes all activities from the moment of receiving a request from a doctor to the taking of medicine or medical support by the nurse, and that includes review of requests and inquiries from pharmacists, consideration of the therapeutic aspects of administration, checking of dosage and time of dosing, contraindications and potential interactions, consideration of any doubt and taking measures to resolve the dilemma, proper issue, correct signature and providing information and advice. The standard left the possibility that the method of dispensing medicines in different hospital pharmacies will vary depending on the number of employees, as well as equipment levels of the pharmacy and the institution it belongs to itself. And therefore it gives detailed guidelines for the following ways of issuing:
 - per day, per patient individually, to each in a separate container
 - per day, per patient individually, collectively for the entire department
 - issuing therapy for several days, on the satellite pharmacy stock
 - combination of these methods depending on the type of medicines, (medicines of high prices, with strong effect, with special issuing regime are issued daily, one by one per patient, while other medicines are issued on the satellite pharmacy stock, which is the most common)
6. standards for education, training and development of personnel, both pharmacists and pharmaceutical technicians. The pharmacist and pharmaceutical technician at the beginning of their work in health care receive a license to work issued by the competent Chamber (Pharmaceutical Chamber of Serbia, Chamber of Nurses and Health Technicians of Serbia), and its renewal requires adequate continuing education
7. standards for communication and the relationship with patients. In previous practice the hospital pharmacist had no direct contact with the patient, and now, for the first time, there are detailed guidelines for how the pharmacist should interview the patient on his/her admission to hospital, during treatment and at discharge from the hospital
8. standards for relationships with other health care workers. Until now it was the practice for a hospital pharmacist to respond from the pharmacy at the request of other health care professionals, and there are only sporadic examples of colleagues going to hospital wards and work as part of the clinical team. By the standards, a pharmacist is obliged to offer advice to the doctor and nurse on the proper use of the medicine in accordance

with the appropriate therapy, as well as to influence the doctors in rational prescribing and use of medicines.

9. standards for pharmacy management, which means that responsibilities must be clearly defined and compliance with the obligations of the employees should be checked regularly;
10. standards for production and issuing of magistral prescription drugs, which require compliance with a secure source of supply of pharmaceutical substances, quality control of both pharmaceutical substances and finished products, safe system of work, having adequate equipment and a safe way of issuing
11. standards for the pharmaceutical waste management, which provides a safe procedure for the collection, preservation, storage and removal of pharmaceutical waste

Alignment with the Basel Statements

Standards set by this document match the conclusions of the General FIP Global Conference (Basel, Switzerland 30-31st August 2008) on the future of hospital pharmacy, even though the document was written some months before the Basel conference.

When observing the current situation in the hospital pharmacy, we must emphasize that the purchase and storage of medicines, even now, is carried out in accordance with the Basel Conference, that all hospital pharmacies have information systems for monitoring the traffic of medicines, but that most pharmacies do not have information systems to track patients. Introduction of information systems for tracking patients in all hospitals in Serbia is one of the goals of the Institute for Health Insurance of Serbia, which has commenced a pilot project of implementation of this system in 2010.

Hospital pharmacists in Serbia have influence on prescribing through complete insight into the treatment of patients (53%), participating in the hospital Commission for Medication and Therapy (69%), consulting a doctor for the selection of treatment and providing information about medicines to other health care professionals (53%). The continuous education that Serbian pharmacists have abroad (FIP congresses, EAHP congresses) increases awareness of hospital pharmacists about their role in the treatment of patients. As a result, the number of pharmacists involved in monitoring the implementation of medicines and rational pharmacotherapy has increased in recent years.

Hospital pharmacies that compound products perform this activity completely in accordance with the guidelines of the Basel Statements.

Hospital pharmacies are not equipped for the preparation of injectable medicines and dissolution of cytostatics, so that these activities are conducted on the wards by nurses. The

influence of hospital pharmacists on medicine administration is reduced to giving advice and information about how to use the medicine when it is issued to a nurse. Today, in some hospitals, pharmacists are present on the wards and may influence the quality of the administration of medicines, including the monitoring and detection of errors in giving medication.

In June 2010, the Standards for Accreditation of Pharmacies were passed, so a system of internal and external control of hospital pharmacy and the possibility of comparing the quality of an institution in relation to another are being established. The standard requires documentation of each clinical pharmacist intervention, which has not been the practice until now, and will further lead to improvement of services of pharmacists. In many hospitals, pharmacists are responsible for reporting adverse effects of medicines. Through the educational activities of the Medicines and Medical Devices Agency of Serbia, all pharmacists in hospitals will be trained to detect and report adverse reactions, which will improve monitoring of medicines after marketing approval.

When it comes to human resources, there are no plans for human resources in the hospital pharmacy, at neither the hospital nor the state level. Faculties of Pharmacy in Serbia have no course in hospital pharmacy, so that introduction with specific jobs in hospital pharmacy is reduced to practice and post-graduate activities, such as specialization in pharmaceutical health care, clinical pharmacy, and pharmaceutical informatics. Notwithstanding this, trends are changing, and unlike previous years when only rare pharmacists were interested in working at hospital pharmacies, according to the research of the National Association of Pharmacy Students, today, 23% of pharmacy students want to practice clinical pharmacy.

Conclusion

We wish to emphasize that each hospital pharmacist in Serbia wants to be observant of high standards of personal and professional conduct during his or her professional career, as well as to ensure continued professional competence relevant for the hospital pharmaceutical sector.

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MAKING CONNECTIONS BETWEEN THE BASEL STATEMENTS AND THE HIGH-PERFORMANCE MODEL IN THE U.S.A.

Thomas S. Thielke, R.Ph., M.S., FASHP, FFIP

The primary purpose of this article is to compare and contrast the high performance hospital pharmacy dimensions and elements developed by the Health Systems Executive Alliance in the U.S.A. with the Basel Statements developed at the global conference on the future of hospital pharmacy. A secondary purpose is to describe how the high performance hospital pharmacy elements have been used to improve the level of hospital pharmacy practice in the U.S.A.

The High Performance Pharmacy is a ground breaking initiative of the Health System Executive Alliance, supported by the McKesson Corporation, is a collaboration of well known hospital pharmacy leaders who are dedicated to advancing hospital pharmacy's contribution to patient safety, clinical quality and financial performance through increased efficiency and effectiveness. Prior to the completion of dimensions of performance which serves as the road map in achieving the outcomes necessary to be a high performance pharmacy the Executive Alliance commissioned an article on leadership titled, "Leadership Skills for a High Performance Pharmacy Practice".¹ This article was written by five health system pharmacy leaders with a combined total of over 140 years of experience in key hospital pharmacy administration roles. The Alliance felt that a strong leadership was necessary to be in place in a hospital pharmacy to create the vision that results in a high performance pharmacy practice. There is proven synergy between leadership and high performing pharmacy practice.

After completion of the article which was disseminated to all hospital pharmacy directors and residency preceptors in the U.S.A., the Executive Alliance completed the landmark study which contained the core set of best practices for hospital pharmacy performance. The high performance dimensions and elements were a strategic approach to improving the medication use process in health systems using a framework to set priorities. The completed set of dimensions and elements along with references were published in August 2007 titled "Strategic Approach for Improving the Medication Use Process in Health Systems: the High Performance Pharmacy Practice Network²".

Synergy between high-performance pharmacy elements and Basel statements

The Basel statements contained seven dimensions and seventy-five statements and were produced at the Global conference on the Future of Hospital Pharmacy.

The seven dimensions are:

- Overarching Statements
- Medicine procurement
- Influence on prescribing
- Preparation and delivery of medicines
- Administration of medicines
- Monitoring of medicines
- Human resources and training

Prior to the Global conference the high performance dimensions, elements and references were shared with the six speakers to be used as references in preparing their presentations and manuscripts.

The high performance pharmacy framework contains eight dimensions and seventy-seven elements.

The eight dimensions are:

- Leadership
- Medication preparation and delivery
- Patient care services
- Medication safety
- Medication use policy
- Financial performance
- Human resource management
- Education

The Hospital Pharmacy Section of FIP completed a cross walk between the statements of the Basel conference and the high performance pharmacy elements and found a 87% match, which demonstrated a high degree of alignment between the two documents. The Basel overarching medication administration, and procurement dimensions were more in depth than the high performance pharmacy elements.

The high performance pharmacy elements provided more depth in the dimensions of leadership, medication safety, and financial performance.

High-performance website

Upon completion of the high performance pharmacy framework a website was developed and implemented in January, 2007 (highperformancepharmacy.com). The website contained an executive summary which described the content of the site and how to use the site. It provided a description of each dimension and element. Attached to each element were literature studies or supporting practice standards that documented or supported the positive hospital pharmacy practices upon implementation of the element. Many elements also had supporting case studies written by hospital pharmacy leaders on how to implement the element in a hospital pharmacy.

The website also contained a value assessment of each element, which was developed by several recognized hospital pharmacist experts. Three qualitative measures were developed. They are feasibility (the estimated level of resources necessary to fully implement a particular element) on a scale of 1-4, financial return on the investment of implementing the element on a scale of 0-4, and quality and safety return (the expected improvement in quality and safety after implementation) on a scale of 0-4. For both financial return and quality and safety, a higher number metric reflects a greater potential return; however, for feasibility it reflects a larger investment in resources necessary. These metrics allow the hospital pharmacy leader to prioritize which elements to complete and in what order.

The last document contained on the website is an assessment tool. This tool was developed by Executive Alliance members. This assessment tool allows hospital pharmacy leaders to assess their current department services versus the seventy-seven elements listed on the high performance pharmacy website. This can serve as a great tool to continue to measure the progress a department makes over time in becoming a high performance pharmacy service. Benchmarks against national and regional names are available to pharmacy leaders to see how they compare to other hospitals.

High-performance pharmacy as an established resource for hospital pharmacy in the U.S.A.

The Executive Alliance was interested in keeping track of the use of the website over time to see if it was having an impact in hospital pharmacy practice in the U.S.A. As of June 2010, or about three years' worth of data, the following information is available regarding website use:

Website visits: 27,946
Page views: 229,898
Percentage new users: 81%
Average time spent: 3.23 minutes
Documents downloaded: 10,259
Total dimensions assessed: 3,670
Complete assessments: 686

As you can see from the data, the website has been very active and continues to be with 81% new users. Also, the assessment tool has had great use which shows that hospital pharmacy leaders are actively using it to assess their progress. Executive Alliance members with help from the McKesson Company have been conducting seminars and workshops on the High Performance Pharmacy framework for regional and state pharmacy organizations as part of their education meetings. During the past two years 21 seminars and workshops have been conducted representing several hundred hospitals. Sixteen media articles have been published nationally about the high performance pharmacy.

Collaboration with ASHP

The Executive Alliance has been working with ASHP the past few years in order to get more participation by health system pharmacists in the use of the high performance pharmacy framework. ASHP has provided links to its practice management website as well as the ASHP Center for Health System Pharmacy Leadership website. There have been several presentations about the high performance pharmacy framework at the ASHP leadership conference the past few years. ASHP will be holding an invitational conference in November 2010 where the high performance dimensions and elements will be used as a resource for the practice model vision developed at the conference. ASHP will partner with the Executive Alliance and McKesson to conduct several affiliated state chapter seminars over the next few years.

Future plans

In August of 2010 the Executive Alliance commissioned another group of its members and recognized health system pharmacy experts to complete a comprehensive literature search from 2005 to the present. This review was done to upgrade the references for the current elements and to re-examine the current elements for revision or to develop new elements in each dimension. The literature search has been completed and several new elements have been identified. The second version of the high performance pharmacy model should be on the website by the fall of 2010.

The current high performance pharmacy model has focused primarily on inpatient hospital pharmacy services. The Executive Alliance will now begin to explore adding another section on ambulatory pharmacy services since many hospital pharmacies provide extensive ambulatory pharmacy services. Areas such as ambulatory clinic services, emergency room services, infusion center services, managed care services and retail pharmacy services will be explored. It is expected that this new section will be completed by the spring of 2011. This information could be shared with the Hospital Pharmacy Section of FIP to see if there would be interest in expanding the Basel Statement for ambulatory pharmacy services.

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THE BASEL STATEMENT ON MEDICATION RECONCILIATION:

BASIS FOR A STUDY IN A SLOVENIAN HOSPITAL

Lea Knez, Renata Režonja, Stanislav Šuškovič,
Mitja Košnik, Aleš Mrhar

The Basel Statements unify the vision of hospital pharmacists around the globe about the preferred future of our profession.¹ The commitment to the Statements forces us to a continuous improvement in the current level of practice; a commitment that can serve as a more than welcome obligation for the introduction of new pharmacy services in environments that are beginning to become familiar with the concepts of clinical pharmacy. The University Clinic Golnik, Slovenia, may serve as an excellent example of this kind of environment that used the Basel Statements as a lever to advocate for clinical pharmacy.

Research interest was focused on the role of pharmacists in providing continuity of care for patients who were transferred from one sector of care to another. This research relates to Basel Statement 31: "Hospital pharmacists should provide continuity of care by transferring patient medicines information as patients move between sectors of care."

Medication Reconciliation

Medicines have an important role in daily clinical practice, and the recording of accurate and complete information about a patient's drug therapy should be the goal at all times.² However, incomplete or absent drug histories and incomplete records of drug therapy are often a source of medication errors. Medication reconciliation is the process of verifying medication use, identifying variances, and preventing medication errors and has been introduced as a measure to improve continuity of patient care upon hospital admission and discharge. Within the different healthcare professionals, pharmacists were shown to perform medication reconciliation best, and to provide the most accurate drug histories.³ In Slovenia, medication reconciliation does not occur in routine clinical practice, and pharmacist-obtained drug histories are more an exception than the rule. This study was undertaken as the first step on the way to implementation of this service. The aim of the study was to provide evidence of the need for the implementation of medication reconciliation processes by evaluating the number of discrepancies between the recorded drug therapy and the drug therapy the patient was taking at home or receiving in the hospital and to assess the implications of such discrepancies on patient care.

Study methods

The study was designed as a prospective, descriptive, cross-sectional study of randomly selected patients who were hospitalized at the University Clinic Golnik between August and October 2008. For the purpose of this study, a patient's comprehensive medication history (CMH) was obtained by a research pharmacist through a detailed patient interview and review of a combination of different sources of information: examination of patient's medication vials and list of medicines, review of the pharmacy record, and consultation with the patient's caregivers.^{3,4} In the routine clinical setting, drug history was obtained by the admitting physician upon the patient's admission and was recorded in the hospital medical record as part of admission documentation. The latter may be reviewed and changed during a patient's hospital stay: the clinician may identify and correct discrepancies with the medicines the patient was taking at home, and changes to the drug therapy may be required because of the treatment goals. During the hospital stay, the physician wrote drug therapy orders in the drug chart. In the discharge letter, the clinician communicated the proposed drug therapy to the patient's general practitioner (GP).

The record of drug therapy in the admission documentation, in the drug chart, and in the discharge letter was reviewed by the researchers, and the completeness of information for the individual medicine was assessed for each time point separately. The medicine's record was identified as complete if it included sufficient information to allow its unambiguous identification and safe administration by a health care professional. Drug therapy recorded in the medical documentation was compared against the CMH and discrepancies between therapies were identified. Two areas of discrepancy were possible: (1) between the drug chart and the CMH and (2) between the discharge letter and the CMH. Each discrepancy was analyzed as to whether it was intended or unintended by the clinician; discrepancies for which the professional intention was not evident from the discharge letter were classified as unintended.

The clinical significance of unintended discrepancies was determined as a consensus of an expert panel of 3 pharmacists and 3 medical doctors of different specialities. A modification of the nominal group consensus method was used: first, each panellist was asked to individually rate the clinical significance using a five-point Likert scale (0 = not important, 1 = of minor importance, 2 = important, 3 = very important, 4 = potentially fatal), then the individual opinions were presented and discussed, and, finally, the panellists were asked to re-vote.⁵ In cases where consensus was not reached with the second vote, the votes' median value was used.

Results and discussion

The study included 108 patients, most of whom were elderly (median: 73 years, range: 15 – 89), male (57 %), and were treated with polypharmacy (median number of drugs in CMH: 6, range: 1 – 19).

In the reviewed documentation, a high percentage of records created by physicians did not include all the information needed for unambiguous identification and administration of the medicines; this percentage was 56% (251/446) in the admission documentation, 35% (260/739) in the drug chart, and 36% (216/606) in the discharge letter. The record of medicines in the drug chart serves as a direct prescribing order; incompleteness here can be considered as a "near miss" as it is prone to result in an adverse drug event. The provision of complete information on drug therapy is important in any medical documentation: missing information has to be resolved by the prescribing physician and may lead to delay or omission of medicine's doses or to medication errors. Drugs with incomplete medicine records were excluded from the following analyses: a comparison with the CMH was not needed, as the lack of important information was a priori classified as a discrepancy.

When the drug therapy in the admission documentation was compared to the CMH, discrepancies were noted in 58% (252/432) of cases. All discrepancies present in the admission documentation were classified as unintended as the admission documentation should be an accurate record of the patient's drug history. Although the medication history in the admission documentation does not serve as a medication order, the recorded information is often used when prescribing medicines in a drug chart, where not all discrepancies may be identified and resolved. In this study, 82 % (207/252) of the discrepancies in the admission documentation were present in the drug chart.

Of the 882 drugs prescribed in the drug chart a discrepancy with the CMH was present in 656 (74%) cases, 59 (9%) of which were stated by the clinician to be unintended. The expert panel rated 51 % of the 53 evaluable unintended discrepancies to be important in patient care. Many intended discrepancies were expected between the therapy prescribed in the drug chart and the CMH because the patient's condition during a hospital stay may require changes in therapy. However, the share of unintended discrepancies reported in this study may be lower than in reality because the treating clinician may have had a bias to indicate that the discrepancy was intended.

At discharge, a change in patient's drug therapy was identified in 75% (553/735) of cases with respect to the CMH. However, the professional intention of these changes was evident only in 154 (28%) of these cases. This means that for the remaining 399 cases, the patient's GP could not distinguish whether a drug from the CMH was discontinued on purpose (e.g. due to the occurrence of an adverse event) or as a result of an error (e.g. the use of the drug was not recorded at the time of admission). The expert panel determined the significance of the unintended discrepancies as at least important for patient care in 55 % (208) of 378 evaluable cases, 20 of which were rated as very important and one as potentially fatal.

The results show the limitations of the current clinical practice to provide continuity of drug therapy for patients admitted to and discharged from the hospital. More than half of the medicines in the CMH were not recorded in the drug history in the admission documentation, and more than half of the recorded medicines lacked important details in their identification. The majority of the abovementioned discrepancies were present also in the drug chart; however, the treating clinicians reported an unintended discrepancy for only 59 of the drugs prescribed in the drug chart. The intention of the changes made to the drug therapy upon discharge could not be identified from the discharge letter in 72% of cases, over half of which could have important clinical implications. The magnitude of implications of the study results on the quality and safety of care demands immediate action for improvement.

At the study hospital, the implementation of medication reconciliation process as a new pharmacy service was proposed as a way to enhance the continuity of care of hospitalised patients. At the time of writing, the service is offered within a study framework that evaluates its feasibility and benefits for patient care.

Conclusion

At the University Clinic Golnik, the vision of the Basel Statement is being transformed into new pharmacy services. Within this contribution the first step towards the implementation of pharmacy-led medication reconciliation is described: the need for improvement of current clinical practice was demonstrated, which brought consensus for greater pharmacist participation in medication reconciliation to assure the continuity of care of patients who are transferred between ambulatory care and inpatient care.

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THE MOMENTUM OF BASEL

William A. Zellmer

Gray and Tredree¹ in their introduction to the IPJ papers on follow up to the Global Conference on the Future of Hospital Pharmacy (Basel, 2008), rightly extol the impressive efforts that have been made to inform the world about the Basel consensus. It would be hard to imagine a better start to the long process of leveraging the conclusions of the conference to help transform hospital pharmacy.

Most hospital pharmacists around the world see themselves primarily as procurers and distributors of the medicines used in their institutions. This self-concept is reinforced daily through the expectations of physicians, nurses, administrators, and others in the hospital field. However, a higher-order need for hospital pharmacists has evolved: ensuring that medicines are used safely, appropriately, and cost-consciously. Out of a sense of moral and strategic imperative, hospital pharmacy leaders worldwide are trying to move their field in this direction.

Vermeulen et al² in the published proceedings of the Basel conference, framed this imperative in terms of patient safety:

“Immense risks are associated with the use of medicines in hospitals. Some of these risks are easily understandable, such as harm to a patient caused by a medication error. Others are more subtle, such as prolonged treatment and added expense related to use of a less-than-optimum medicine regimen. The well-known methods of minimizing these risks are best put into effect under the guidance of an expert, the hospital pharmacist.”

While the wisdom of recasting hospital pharmacy in this way is self-evident, achieving this transformation on a global scale will be extremely difficult. Among the main hurdles are these:

1. Culture. The deeply ingrained patterns of behavior of pharmacists (and, conversely, societal expectations of pharmacists) are often inconsistent with what should be expected from a health professional that empathizes with, and offers assistance to, people who need help in making the best use of medicines.

2. Education. In many countries, pharmacist education still concentrates on building technical understanding of drug products rather than on creating an expert in the clinically appropriate use of medicines.
3. Denial. Although the hospital field is devoting well-deserved attention to quality improvement in patient care, the leaders of many hospitals still deny that they have serious problems in their use of medicines—problems that can be ameliorated with the help of pharmacists.
4. Resources. No hospital ever believes it has adequate funding, so it can be difficult to find resources for new initiatives. Enhancement of pharmacy services may require reallocations from other areas that have less impact on improving patient care. In countries that are straining under very slim budgets for health care, even if an adequate number of competent hospital pharmacists were available, they would not be affordable.
5. Marketers. In some parts of the world, rational approaches to the prescribing and use of medicines are blocked or marginalized through unethical marketing practices by drug companies, including financial inducements to physicians and hospital administrators.
6. Organization. In many countries, hospital pharmacists are organized ineffectively (or not at all) to express their collective professional aspirations and to cooperate in achieving their preferred future.

The articles that precede this essay tell marvelous stories about how barriers such as those listed above are being addressed in a range of countries, under widely varying economic conditions. A common thread in several articles is the development of country-specific practice standards, a process that now can be informed by the Basel Statements. May these stories inspire others to move the Basel vision forward!

At all levels of the change process in hospital pharmacy – international, national, and the individual hospital – there is much to be learned from the experiences in some countries of working systematically over many years to improve hospital pharmacy. Some of the key lessons are as follows:

1. Facilitate self-discovery. It is far more effective if the stakeholders on an issue discover for themselves why change must occur, rather than being told to change by some authority. The Basel Statements, their embedded

wisdom notwithstanding, are merely words until a pharmacist or a physician or a hospital administrator is able to see them in context with the specific problems they are experiencing.

2. Translate vision into specific targets for change. Although each of the 75 Basel Statements expresses a clear idea about the preferred future of hospital pharmacy, it does not say how that idea should be achieved. Pharmacists at each practice site must determine that for themselves.
3. Focus on a small number of changes at a time. It would be imprudent for a hospital to tackle too many of the Basel Statements at once. The best formula is to build consensus on where to start and strive for early victories that create confidence in addressing more complex issues.
4. Stratify methods. The same approaches will not work in every country or at every hospital. A change process that has been successful at an academic medical center in a highly developed country, for example, will be out of step with the needs in a rural clinic or hospital in a low-income country.
5. Measure and report progress. A particularly important role for national and regional associations of hospital pharmacists is to survey the pace of change among hospitals, and to adjust priorities and tactics based on the results.
6. Maintain focus over a long period. Will it be feasible for hospital pharmacists globally to stay focused on the promise of Basel over the long haul? It is entirely conceivable for this to be done, based on the success that some countries have had in elevating the level of hospital pharmacy practice over years of sustained effort. A favorable indicator on this point is the extensive dialogue about practice change that occurs among the leaders of national and regional hospital pharmacy societies at the congresses of the International Pharmaceutical Federation and the midyear clinical meetings of the American Society of Health-System Pharmacists.

Momentum behind the Basel Statements is growing, and for the sake of the well-being of patients in hospitals, we all must do our best to not let this momentum flag.

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the future of our profession. ”