

15th EAHP Congress in Nice: focus on pharmacotherapy – hospital pharmacists advancing patient care

The EAHP Congress is now recognised as one of the world's premier educational events for hospital pharmacists and is attended by pharmacists from all over the world.

Hospital pharmacists today expect a large, well organised and fruitful congress, and were not disappointed. Under the new President of the EAHP, Dr Roberto Frontini, the new Chairman of the Congress Organising Committee, Mr Tony West, and the continuing Chairman of the Scientific Committee, Professor Vagn Handlos, this year's congress grew in several ways. Firstly, 2,875 people attended from 63 countries, both of which were an increase on last year. The UK showed the highest participation with 333 registrations, followed by Italy, France, Belgium, Spain and The Netherlands. The largest and most complex programme thus far was held. As well as the usual three keynote presentations, and 12 seminars there were three workshops, building on a popular interactive session on therapeutic drug monitoring from 2009. The pharmaceutical industry is a vital part of the congress. The number of industry satellite seminars went up to nine, the number of exhibitors to 63, and the space taken by exhibitors rose to nearly 4,000 square metres.

All this means that from now on, the congress requires a really large venue, which was found in a pleasant setting as usual. The Acropolis conference centre was very suitable, being within walking distance of many hotels and the old town, well laid out and well equipped. The food was beautifully presented as only the French know how, with a wide variety of attractive-looking as well as delicious-tasting snacks appearing at regular intervals to keep up the energy levels.

The EAHP congress organising team felt that everything went more smoothly than

last year, when the in-house team took all responsibility for organisation for the first time. One of the compliments was that the abstract book was more professional this year than last. The excellent relations they have built up with the industry mean that the association finances and the future of the congress are secure, despite the economic slowdown. New this year were two industry showcases, in which Amgen and Pfizer each presented interactive sessions. Pfizer joined Bayer as a gold partner this year, with Amgen providing most support as platinum partner. The congress organisers, supported by industry partners, worked hard to achieve the good result.

This year marks a historic new partnership in which the ESCP was invited to contribute to the programme. It is always good to see different groups partnering, especially as clinical pharmacy was one of the themes running through the conference this year. The host nation chose to present pharmacist involvement with patients as their theme for 'Highlights of French hospital pharmacy', singling out geriatric oncology and patient education. Geriatric medicine is possibly the area where there is most need to help patients with adherence, and to educate physicians in dose adjustment and treatment reduction, so it is an ideal place for pharmacists to get involved as part of a multidisciplinary team. Both sessions noted that strategies to educate patients directly may actually be more effective than advising doctors.

Dr Frontini and Professor Handlos presented the ideas of pharmacotherapy and pharmacist involvement in patient care at the opening ceremony, setting the scene at the start of the congress. We

learned more of the symbolism of the new logo, which also takes hospital pharmacy away from the days of manufacturing and in a dynamic and interactive way towards patient care. We were called on to take the opportunity of the congress to renew old acquaintances and develop networking with new colleagues – to learn from one another as much as from the formal presentations. The evolution of the association into an important player on the European scene owes a great deal to past President Mrs Jacqueline Surugue, whose patience, tact, diplomacy and vision won her many friends and accolades. As this was the last congress with which she was involved, it was a good opportunity to remind attendees of the several awards she won during her 10 years of work with the EAHP and to thank her for the good position in which she leaves it.

Two hundred and sixty-two posters were exhibited this year, which means that 20% more were approved for display than last year, reflecting another record number of posters submitted. The congress continues to attract submissions from outside Europe, for example, two from Singapore. As usual three prizes were awarded for research with the greatest originality, scientific quality and practical applicability. The winner was an assessment of the accuracy of syringes prepared in anaesthesiology in the University Hospital of Geneva, Switzerland. When 500 syringes were analysed, only two-thirds had concentrations of the active drug corresponding to European Pharmacopoeia requirements. Injections have traditionally been prepared in the operating theatre, as and when required by the needs of the patient during the operation. This study

strongly supports the need for strict preparation protocols and the production of ready-to use syringes in GMP conditions in the pharmacy. All hospital pharmacists are encouraged to check on procedures for drug preparation in their own operating theatres. Mr Cyril Stucki and colleagues, Geneva, Switzerland, share first prize of Euros 750 while second prize of Euros 500 went to Mr Konrad Keller and J Goette, Berne, Switzerland, for an evaluation of drug dispensing systems. Third prize of Euros 250 went to Dr Gabriele Halsen and Professor Irene Krämer, Mainz, Germany, for an occupational safety study. The poster prizes were presented during the closing ceremony.

Speaking to EJHP, EAHP President Dr Roberto Frontini elaborated on the association's present aims for hospital pharmacy. The mood is that hospital pharmacists could make a greater contribution to patient care if clinical pharmacy were to be taken up more widely. The Basel statements from the 2008 FIP conference reflect the state of the art of hospital pharmacy, but the development of this aspect of hospital pharmacy varies widely, even within Europe. Dr Frontini urged pharmacists to assess their current level and where they should go from there.

As this is the 15th year of the congress, the opportunity was also taken to thank three of the important figures from past years. Dr Jochen Kotwas was thanked for his part in setting the congress off on the right track in the early days. Mr Robert McArtney was to thank for negotiating the learning accreditation with the Accreditation Council for Pharmacy Education in the US, while Professor Arnold Vulto involved the Journal in reporting the congress, and together with Mr Hans Harting and sponsorship from Mayne Pharma (now Hospira), started the idea of the congress CD. This reporting makes it possible for those who are not able to attend the congress to get an idea of the presentations. This idea has evolved into videoing the seminars, so the presentations are available on the EAHP website.

But if you could not make it this year,

you will definitely want to be part of it next time. The city chosen is a UNESCO World Heritage Site and in 2005 was ranked equal first with Vancouver out of 127 world cities for the quality of life by the Economist group. It is famous for its balls and other musical activities and while you are there, you simply must have some *Sachertorte* or *Apfelstrudel*. Yes, the city is Vienna, Austria, from 30 March to 1 April 2011 and the theme "Hospital Pharmacists in a changing world – opportunities and challenges".

Seamless pharmaceutical care in Europe – facts and comparisons
This keynote lecture presented the growing need for seamless care. With a lack of national systems, pharmacists are urged to take the initiative.



Professor Irene Krämer
PharmD, PhD

Professor Irene Krämer, University Medical Centre, Johannes Gutenberg University, Mainz, Germany, started by defining seamless care is "the desirable continuity of care delivered to a patient in the healthcare system across the spectrum of caregivers and their environments" [1]. Though this ideal is no doubt well known to pharmacists, the ideal medicines administration system has not yet been realised, and different sectors of healthcare systems operate in different ways, even within the same country. So the 'seams' fray where the patient is transferred between sectors and the desired smooth transition is rare. The more fragmented the healthcare system, the more difficult is it to ensure a smooth transition from one sector to another.

How can hospital pharmacists best help patients as they are admitted, transferred between wards, or discharged from hospital? FIP Basel statement 31 states "Hospital Pharmacists should provide continuity of care by transferring patient medicines information as patients move

between sectors of care" [2]. Professor Krämer said that from her perspective the provision of information is not sufficient, and that medicines reconciliation by hospital pharmacists is necessary at admission, during hospital stay and discharge of the patient. Patients are increasingly old and frail and leave hospital 'quicker and sicker' as pressure on beds rises. Once back home, there may be a shortage of primary healthcare physicians, social workers, family or even friends to help in our increasingly fragmented society. The level of medication errors at transfer is five times that of prescribing or administration.

Medicines reconciliation, a subset of seamless care, is one way of helping. This simply means checking the patient is transferring with the right drug therapy. For example, if the patient comes in with three different brands of paracetamol (not necessarily prescribed), generic paracetamol is requested, together with formulary versions of the other medicines taken at home, while flagging any interacting or inappropriate drugs that may be unhelpful or contributing to the problem at admission. Alternatively, at discharge, the patient and primary care team should be informed of any dose changes or medicines stopped during the admission, as well as new prescriptions.

The exact procedures used vary between countries. In UK, patients are advised to bring their own medicines into hospital and continue taking them in hospital. This solves several problems, such as the EU requirement to provide an information leaflet with all prescribed medicines. In Germany, so few pharmacists are employed that nurses perform most patient-centred work. Some countries have a policy of using generic medicines in hospital, in which case reconciliation has to bridge between these and the many brands prescribed by GPs. Few countries reimburse for hospital pharmacy care that continues outside the hospital.

Professor Krämer described the present situation in Europe as "poorly coordinated, with poor communication". There is

no panacea, each country will have to find the best way of improving its current situation. The Netherlands started 'transmural care' in the 1990s. Following a 'bottom-up' appraisal of Dutch practices, the discharge prescription is faxed to the local retail pharmacy. Ideally a patient in need of complex care would be in the hands of one person, but in practice, several care providers are involved. The system is currently under review and in 2010, the Royal Dutch Medical Association will publish a guideline 'Sharing responsibilities when cooperating in cure and care'. The Belgian Health Care Knowledge Centre is doing a seamless care study at the moment. Sweden has put a national register of dispensed medicines online and has hosted a conference on 'Seamless care — safe care' in Reykjavik, Iceland, 2–4 June 2010. Internationally, several studies have reported that a hospital discharge programme reduces the rate of rehospitalisation.

Professor Krämer's hospital has done a seamless care project with 20 liver transplant patients. Satisfaction was high, with on average 4.5 drug-related problems solved per patient. She advised the audience not to wait for the government or the latest technology, but to go ahead and develop their own models for seamless care. Start with a few patients with complex needs and when the scheme works well, extend it to other patient groups and hospitals.

In Canada, the work done on medication reconciliation and seamless care 'has resulted in these services transitioning from isolated pilot projects to the focus of national patient safety efforts in less than 10 years' [3]. Can Europe rise to the challenge?

References

1. Canadian Society of Hospital Pharmacists and Canadian Pharmacists Association Seamless Care Workshop 1998.
2. International Pharmaceutical Federation global conference on the future of hospital pharmacy, Basel 2008, consensus statements. *Am J Health-Syst Pharm.* 2009;66(5) Supp 3.
3. Canadian Institutes of Health Research www.cihr.ca/e/30676.html

Report from a pandemic, the 2009/10 flu

Continuous global surveillance of influenza is the key to the early detection of a virus with pandemic potential. The experience gained from previous pandemics will help to minimise serious illness and deaths.



Tove Rønne, MD

Seasonal influenza is an acute viral infection caused by an influenza virus, which, in temperate countries, occurs mainly in the autumn and winter. In the case of seasonal influenza there are minor virus changes between the years/seasons and population immunity builds up, subsequently with less susceptibility to the disease amongst the global population. However, pandemics occur when a new virus or a virus which has not circulated in the population for several generations appears. There is a lack of immunity to such a virus and subsequently the disease is extremely communicable. With, for example, the increase in global travel, epidemics due to a new influenza virus are likely to take hold around the world, and become a pandemic faster than before. Continuous global surveillance of influenza is the key to the early detection of a virus with pandemic potential.

WHO has been preparing the global community for a flu pandemic, particularly since the appearance of the avian flu in Asia in 2003 and in poultry farms in Europe in 2005/2006. Viruses which have caused pandemics in the past have all, at least partly, originated from animal influenza viruses. In June 2009, the WHO declared a pandemic of a new H1N1 influenza virus. Dr Tove Rønne, a consultant in communicable diseases from the National Board of Health in Denmark, asked in her keynote presentation, what were the lessons learned from this and how can we be better prepared for the next wave to come?

WHO has developed a global influenza preparedness plan that outlines the responsibilities of WHO and national authorities in the event of an influenza pandemic. Since 2005, there have been numerous planning activities for many (wealthy) countries according to WHO recommendations, which have included stockpiling of antiviral drugs and binding precursors agreements between vaccine producing companies and the governments based on a WHO declaration of a pandemic.

Dr Rønne described the phases and tasks for dealing with a pandemic according to WHO. In phases 1–3 there are predominantly animal infections, with few human infections. During each of these stages there is continuous monitoring and planning for an increase in infection numbers amongst humans. The next phase begins when there is sustained human to human transmission and in this phase 4 measures are taken to contain the virus. During phases 5–6 (pandemic), the goal of recommended actions is to mitigate the effects of the virus and reduce the impact of the pandemic on the individual (a special focus is on individuals with risk factors) and society.

Currently WHO and other authorities are assessing the response to the H1N1 2009 influenza pandemic and identifying lessons for the future. Unlike typical seasonal flu patterns, the new virus caused high levels of summer infections in the northern hemisphere, and then even higher levels of activity during cooler months in Europe. As Dr Rønne explained there were patterns of the illness not normally seen in seasonal influenza. Some of the characteristics particular to the H1N1 influenza included more gastrointestinal symptoms such as vomiting and diarrhoea. During the pandemic most of the deaths due to the illness occurred in younger people, including those who were otherwise healthy. Many of the severe cases have been due to viral pneumonia, which is harder to treat than the bacterial pneumonias usually associated with seasonal influenza; many of these

For personal use only. Not to be reproduced without permission of the publisher (copyright@ppme.eu).

patients require intensive care. Other high risk groups included pregnant women and severely obese people.

However, it was also found that there were fewer cases amongst people age 65 and older suggesting some immunity against the pandemic virus. Early treatment with antiviral drugs may also have a positive effect on serious cases.

Dr Rønne concluded by saying that the forthcoming seasonal influenza in 2010/2011 will probably not exactly be like the previous ones, however the experience gained from previous pandemics and how this pandemic will behave in the southern hemisphere will help to minimise serious illness and deaths with proper treatment.

HIV services by hospital pharmacists

Therapeutic drug monitoring (TDM) and patient education are two key elements in the care of HIV patients.



Julie Rouprêt-Serzec PharmD, MSc Associate Professor
David M Burger PharmD, PhD

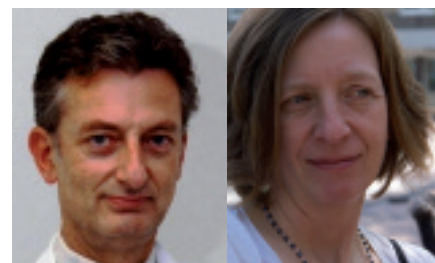
While AIDS is no longer looked upon as a rapidly fatal disease in Europe, many challenges remain for care providers and patients. From the pharmaceutical point of view it is a specialised, rapidly changing field, in which HIV therapy may be complicated by drug-drug interactions; suboptimal therapy may lead to resistance or lack of efficacy and patients' education may be variable: white gay men may be well informed, whereas an immigrant may be badly informed. From a patient's point of view, a lifetime of treatment awaits him/her coupled with the threat of side effects, social stigma, illness and poverty.

Dr David M Burger, Associate Professor of Clinical Pharmacology, Radboud University Nijmegen Medical Center, The Netherlands, described how TDM is an important part of patient care in The Netherlands. Much thought has been put into providing a service patients like, so in the dispensing area there is no indication that HIV is a speciality and great care is taken to ensure stocks of drugs are maintained. TDM is available for the management of patients in whom optimal treatment cannot be guaranteed, and where it may help in reducing the risk of treatment failure. An HIV expert is on call five days a week, and receives an average of five calls per day, usually about complicated treatment matters. They find that patients greatly appreciate personalised treatment and care. HIV care problems fuel the research portfolio; research results improve HIV care. An integrated approach (logistics, TDM, expert advice, research) maximises HIV services.

Dr Julie Rouprêt-Serzec of Antoine Béclère Hospital, Clamart, France, presented different steps in a therapeutic patient education programme (TPE). The TPE approach is to partner patients in accepting their position and becoming adherent experts in their condition and treatment. After all, less than 95% adherence to treatment results in lack of treatment efficacy, emergence of resistance, necessity to change treatment and decrease in the choice of antiretroviral therapy. These supportive activities contribute to decreasing the overall health costs. A pharmacist may act as project manager in planning, designing and setting up a patient education programme, or acquire psychology, sociology and teaching skills and work on the scheme with the patient.

Infectious diseases – antibiotic stewardship

The hospital pharmacist can promote the appropriate use of antimicrobials; the correct selection, duration, dose and route of administration.



Professor Dr Winfried Kern, MD Stephanie Natsch PhD

What is antibiotic stewardship? The answer to this question was provided by Professor Dr Winfried Kern from the University Hospital Freiburg, Germany, who explained that it was the effort by a hospital to optimise antimicrobial use among patients in order to improve outcomes, ensure cost-effective therapy and reduce the adverse sequelae of antimicrobial use. A number of surveys have shown that a large percentage of hospitals do not have an antibiotic stewardship programme in place. This may be partly due to the time required to develop such an institutional programme. Therefore, several German and Austrian associations and societies are working together on consensus guidelines for hospital antibiotic stewardship. This has involved a review of the literature by experts and finding agreement on the most convincing recommendations based on a variety of criteria. At the moment it seems that one of the main prerequisites will be an antimicrobial management team which should be multidisciplinary, with at least one expert employed full-time per 500 beds. The core activity of such a team will be to provide an antimicrobial formulary with local guidelines, with audits and targeted evaluation, and the development and setting of goals.

Antimicrobial stewardship programmes offer great opportunities for hospital pharmacists to become involved in clinical activities was the message from Dr Stephanie Natsch, Radboud University Nijmegen Medical Center, The Netherlands. However, the hospital pharmacist must be prepared for the task. They are in the unique position of being able to promote the appropriate

use of antimicrobials; the correct selection, duration, dose and route of administration. The hospital pharmacist can actively participate in stewardship programmes and the development of local guidelines, clinical rules and formulary decisions. Dr Natsch highlighted the Dutch approach of an electronic antibiotic guide, visit customid.duhs.duke.edu/NL/Main/Start.asp, where treatment advice is based on national evidence-based guidelines. Every hospital antibiotic formulary committee in The Netherlands has the opportunity to edit the national version for local use. But, emphasised Dr Natsch, it is also important that tools are developed which can be used to assess changes in clinical practice after intervention and improvement strategies for the prescribing of antimicrobials have been put in place.

Genetic information in the treatment of disease

The translation of genomic science into the clinical setting is not keeping pace with growing interest in personalised medicine – more research is needed!



Annette Gross
PhD

Petra van
Rijn-Bikker, PharmD

Dr Annette Gross, University of Sydney, Australia (Director of Ethnopharmacology, GlaxoSmithKline, Australia) gave an overview of the contribution of genetics to variability in drug response, as it is understood at present. As our study of the human genome continues, we find that DNA comprises approximately 3.16 billion nucleotide base pairs, there are 20,000–25,000 protein-coding genes and on average each gene encodes three protein isoforms. But protein coding genes account for < 2% of the total DNA sequence in humans, with the rest of the DNA performing other

functions, such as regulating the expression of genes. So there is a lot still to be learned, while remembering genes are only one of many factors to affect the response to drugs.

The contribution of genetic factors to variation in drug response is mainly being studied in the areas of pharmacokinetics and pharmacodynamics (efficacy and safety) and some examples were given. Genetic variation in metabolism can influence pharmacokinetics. So if treatment relies on a prodrug being metabolised to an active agent, as it does with tamoxifen, poor metabolisers will respond less well. Gefitinib efficacy is associated with mutated epidermal growth factor receptor in some cancers, an example from pharmacodynamics. This mutation is much more prevalent in East Asians; hence the response rate to the drug is also higher in this population. Hypersensitivity reactions to abacavir have been tracked to the *HLA-B*5701* allele. For safety, abacavir should be avoided when possible in patients known to carry the variant gene.

Genetic testing is increasingly considered before a drug is used. One example being actively studied is warfarin, in which two genes, age and weight may be taken into account to individualise the initial dose prescribed. Dr Gross concluded that pharmacists can play a unique role in the development, evaluation and implementation of pharmacogenetics.

In the second part of the seminar, Ms Petra van Rijn-Bikker, a Dutch hospital pharmacist from Academic Medical Center, Amsterdam, The Netherlands, discussed in detail the pharmacogenetics of antihypertensive drug therapy. This is an area in which 70% of those treated in Europe do not achieve the desired effect from treatment. As high blood pressure causes 50% of 17.5 million cardiovascular disease deaths and there are about one billion hypertensives worldwide there is great interest in investigating the genetics. High blood pressure is a complex trait

affected by combinations of genetic and environmental factors, thought to have a 30–50% genetic component.

Hypertension pharmacogenetics seeks to find genetic predictors of response to drugs that lower blood pressure and to translate this knowledge into clinical practice. However, no conclusive evidence has thus far emerged due to conflicting results. The single gene effects on antihypertensive drug responses are small. Factors possibly leading to these inconsistent findings could be small sample sizes (insufficient statistical power), multiple comparisons, population admixture, differences in phenotype definition, unknown environmental factors within a population and variation of the effects of polymorphisms in candidate genes due to interactions with such environmental factors. Finding novel genes and variants as well as new methodologies are cause for continued optimism. To translate pharmacogenetics into daily practice new research paradigms may be needed.

Pharmacotherapy and biomarkers of rheumatoid arthritis

Biomarkers and other prognostic factors can lead to an individually optimised treatment strategy for rheumatoid arthritis patients.



Professor Michael
Seitz

Judith Wessels
PharmD, PhD

An early diagnosis of rheumatoid arthritis (RA) is crucial for a good prognosis, since as a chronic systemic disease it is not just characterised by joint problems but also by extra-articular manifestations and disease and treatment-related co-morbidities as well. Differences in the incidence of RA in different ethnic populations have shown the importance

For personal use only. Not to be reproduced without permission of the publisher (copyright@ppme.eu).

of genetic predisposition in susceptibility to the disease. Genotypes such as *HLA-DR* alleles and other genes (e.g. *PTPN22*, *STAT4*, *CTLA4* and *PADI2*, 4) associated with important changes in immune cell activation pathways in RA were highlighted by Professor Michael Seitz, from the University Hospital, Berne, Switzerland. Early aggressive disease, extra-articular manifestations and increased cardiovascular mortality are more frequent in patients with double gene dose of *HLA DRβ1*0401* or *HLA DRβ1*0404* than in those with corresponding *HLA-DR* heterozygosity. However, the *HLA* alleles are quite common in the normal population. Therefore, the predictive value of these and other genetic markers are too low for diagnosis or population screening. On the other hand, antibodies against cyclic citrullinated peptide are useful in the early diagnosis of RA, particularly if rheumatoid factor is negative, and are predictive of erosive disease. Professor Seitz emphasised the need for further pharmacogenomic studies since the heterogeneity of therapeutic response amongst patients means that more data on biomarkers as predictors of treatment response are required before we have an appropriate pharmacogenomic screening tool.

Once RA is diagnosed it is important to initiate an individually optimised treatment strategy. As Dr Judith Wessels from Leiden University Medical Centre, The Netherlands, explained combination therapy is superior to monotherapy. But she also pointed out that there are 170 possible combinations of drugs! So what is the best treatment strategy? Disease duration and activity together with other prognostic factors determine to a large extent treatment outcome. These influence the choice of drugs. Dr Wessels explained the approach for both the disease modifying anti-rheumatic drugs, such as sulphasalazine and methotrexate, and biological drugs like etanercept and rituximab. Reducing the dose or even withdrawing biologicals is an option for RA patients with sustained disease remission if there is regular tight

control evaluation. However, uncertainties still exist with biological therapy, in particular after long term use. Dr Wessels advised each hospital to develop a treatment policy on RA therapy when special situations occur with a patient like surgery, vaccination and pregnancy.

Advances in oncology – how far have we gone towards curing cancer?

Monoclonal antibodies and small molecules that attack specific targets will continue to be the subject of research, but have yet to prove added value for money.



Professor Jos Beijnen, PhD
(see photo)

Antonio Lourenço, MD

Professor Jos Beijnen of the Netherlands Cancer Institute, Amsterdam, started by reminding us that the new molecularly-targeted drugs work differently from classical chemotherapeutics and there is hope that a carefully selected combination of drugs will in the future turn cancer into a chronic disease. Trastuzumab is a good example of this type of drug. Identification of appropriate target proteins (HER2 for trastuzumab) in the individual patient is required for successful treatment.

Looking ahead, he suggested pertuzumab (first in class ‘HER dimerisation inhibitor’) and tremelimumab as examples of monoclonal antibodies in development. A second group, in contrast known as ‘small molecules’, also interacts with specific targets. For example, most basal cell tumours and medulloblastomas have mutations in ‘hedgehog’, a cell growth regulator, so blocking it may be useful. Novel targeted (personalised) therapies with single agent small molecules are particularly successful in single-defect cancers, e.g.

chronic myeloid leukaemia. Most cancers, however, may require multi-targeted agents or combinations of drugs, but personalised medicine will remain the mainstay of further treatment development in oncology.

Dr Antonio Lourenço, Clinical Pharmacologist, National Authority of Medicines and Health Products in Portugal, then discussed the challenge of comparative effectiveness in personalised medicine. Does a new medicine always give increased therapeutic value? Head-to-head comparisons are seldom performed as randomised clinical trials, although there is increasing call for this evidence base. Suitable outcome measures would be overall survival, progression-free survival, adverse reactions and quality of life. Overall survival should be the preferred primary endpoint. Data from several recent studies in metastatic disease of solid tumours were given, but in general, superiority of the new drugs was not convincing. Dr Lourenço concluded that earlier diagnosis, surgical removal of tumours and a multidisciplinary approach (including radiotherapy and pharmacotherapy) are our best weapons against cancer.

Planning and running nutritional care in hospitals

Nutritional support requires that not only the correct nutrition is in place but also continuous screening and monitoring.



Professor Jens Kondrup

Jean-Baptiste Rey PharmD, PhD

It is a real concern that even with the advent of standardised pharmaceutical total parenteral nutrition (PN), hospital nutrition guidelines and programmes, it is estimated that 40–60% (even 80% in some situations such as cancer) of

For personal use only. Not to be reproduced without permission of the publisher (copyright@ppme.eu).

patients still present with malnutrition in hospitals. A patient's nutritional requirements depend on their basal metabolic rate, with other factors such as their illness, consciousness, temperature and physical activity taken into account. Dr Jean-Baptiste Rey, Institut Jean Godinot, Reims, France, emphasised that the hospital pharmacist has an essential role to play in ensuring patients receive the most suitable nutrition to help their recovery. PN is only indicated when enteral and oral nutrition are inefficient, inadequate, impossible or contraindicated. Although the indications for PN are quite limited, it is widely prescribed and used. Or as Dr Rey said perhaps misused! The hospital pharmacist is therefore in a position to ensure that the reason for PN is valid and the correct admixture, route of administration, and duration of treatment have been prescribed. They must also make certain, for example, that the nutritional requirements have been correctly calculated, there is consistency between requirements and intakes, and factors such as liver and renal failure have been taken into account.

Proper nutritional care improves the clinical outcome for all patients. Professor Jens Kondrup, Clinical Nutrition Unit, Rigshospitalet, Copenhagen, Denmark, highlighted several key points. First of all, a variety of food choices, appropriate for the patient's nutritional status and consistent with their clinical care should be available. Patients should also be screened for nutritional status and referred for further assessment and treatment when necessary. It has been shown that screening of patients using the ESPEN Guidelines for Nutrition Screening 2002, with subsequent individual nutrition care, resulted in a decrease in the number of complications for patients and hospital readmissions within six months. However, as Professor Kondrup emphasised, nutritional support requires a structured process with not only the correct nutrition in place but continuous screening and monitoring so that the most appropriate nutrition for the patient can be achieved.

New developments and modern treatments in psychiatry

Education, support and informed choice are part of the optimisation of care for patients.



Professor Stephen Bazire, FRPharmS

Walter Broekema MSc, PharmD

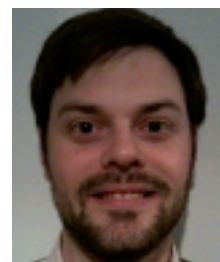
Psychiatric treatments have changed over the last decades, for example, there are now less long-term hospitalisations, with the majority of people treated on an outpatient basis. Nevertheless, as Dr Walter Broekema, Symfora Group, The Netherlands, showed, antipsychotic polypharmacy is still very common. Symptomatic reasons are given by healthcare professionals as by far the most common rationale, with behavioural problems and adverse reactions amounting to only a small part of the explanation. Drs Broekema highlighted the combinations of classical and atypical combinations of antipsychotics and asked if we accepted more adverse drug reactions within combinations. Websites are freely available which focus on the information required in the choice and switching of psychiatric medications, e.g. switchwiki.eu. These can be used as part of the optimisation of care for patients. In specialised fields, like dentistry in psychiatry, good advice is important. This can have positive somatic and social effects for patients. Future innovations in treatment could include dosage adjustments using results from CYP2D6 genetic testing and predicting pharmacotherapy by neuroimaging.

Professor Stephen Bazire, Chief Pharmacist, Norfolk & Waveney Mental Health NHS Trust, UK, described the approach taken with patients with enduring mental health problems; mainly education, support and informed choice. First of all he discussed the Delphi con-

sensus process; a framework which can be used to enhance the development, content and effectiveness of patient decision-making aids. The hospital pharmacist can use these guidelines, for instance, in the development of a discharge package which can include 'bespoke' leaflets, specialist cards and bookmarks, telephone helplines and websites. Professor Bazire then went on to examine the role of cannabis in schizophrenia. He explained that patients should be educated about addiction and tolerance not only for their medicines but also drugs such as cannabis. Cannabis releases dopamine, of which an excess can cause psychotic symptoms, but cannabis alone does not cause schizophrenia. The causes of schizophrenia may be genetic, a family history, early brain changes, environmental and can be triggered by stress, drugs and cannabis. Those who are vulnerable should be discouraged from using cannabis, since it will make psychotic symptoms worse. Professor Bazire ended by warning that too much uninformed choice can also lead to errors.

Counterfeit drugs – issues for hospital pharmacists

Counterfeit drugs can often only be distinguished by laboratory analysis with techniques such as Near Infrared Spectroscopy.



Thomas Storme PharmD, PhD

Counterfeit drugs are not only a risk to public health and safety, their distribution in the legitimate supply chain could erode public confidence in the healthcare system.

Market globalisation and the Internet have led to highly sophisticated distribution networks for counterfeit drugs. Mr Pierre Souverain, Pfizer, France, opened this seminar with photographs of counterfeit Viagra and Lipitor tablets beside the actual product. After a quick show of hands the audience of hospital pharmacists was shocked to discover the majority thought the coun-

For personal use only. Not to be reproduced without permission of the publisher (copyright@ppme.eu).

terfeit was the real deal! Mr Souverain had very quickly proved his point. Counterfeit drugs can often only be distinguished by laboratory analysis and then they may contain little or no active pharmaceutical ingredient (API). All classes of drugs are affected, for example, counterfeit Norvasc was found to contain only talcum powder. Sophisticated distribution networks through free trade zones such as Dubai mean that the links in the supply chain can easily be lost. The very high profit margins combined with low risk also means there is a trend towards counterfeiting drugs, usually found on the Internet and illegal markets, for the legitimate supply chain. However, despite counterfeits having been found on community pharmacy shelves in Europe none have been found in hospital pharmacies so far! It should also be remembered that it is not just medicines but medical devices which can be the target of counterfeiting.

Dr Thomas Storme, Hôpital Mère-Enfant Robert Debré, Paris, France, emphasised that pharmaceutical companies and the regulatory agencies were working to make medicines harder to imitate and to secure the legitimate supply chain. However, for the compounding pharmacist there is also the risk of counterfeits of APIs and excipients used in the hospital manufacturing process. Most of these are produced in China and/or India with a supply chain consisting of several partners. Therefore, pharmaceutical identification of raw materials is mandatory. Dr Storme described how the technique of near infrared spectroscopy can be used not only to identify raw materials such as APIs, amino acids, sugars and excipients but can be used to detect counterfeits. As with medicines it is important for the compounding pharmacist to buy APIs and excipients from a secure supply chain, to examine carefully packaging, documentation, etc.; and to keep in mind that unanticipated side effects, often reported by the patients themselves, may be due to counterfeit products.

Better medicines for children – formulation practice and international initiatives

A short report cannot do justice to the enthusiasm of the speakers or the ground covered.



Professor Malgorzata Sznitowska, PhD Professor Tony Nunn BPharm, FRPharmS

Both presentations were overviews of the advances in, but also continuing problems with, developing and making available paediatric medicines in appropriate formulations.

Professor Malgorzata Sznitowska, Department of Pharmaceutical Technology, Medical University of Gdansk, Poland, criticised the industry and indirectly the marketing authorities, for unhelpful instructions for paediatric dosages, while acknowledging that a wide variety of dosage forms and strengths is not economically possible. Extemporaneous drug preparation is forced on pharmacists, in Belgium, France and Poland, for example, an adult tablet is crushed, the correct dose put in a capsule, and it is the carer's job to ensure the child consumes the powder by whatever means is palatable. Sweden, UK and US often prepare oral medicines using a universal suspending medium for the crushed tablets. Professor Sznitowska called on the industry to provide clear instructions about the method of preparation of oral liquids from solid dosage forms in the SPC. She then surveyed R & D, reminding the audience that poor patient acceptability equals poor compliance and invited us to improve our knowledge, skills and commitment.

Professor Tony Nunn, Associate Director, Medicines for Children Research Net-

work (MCRN), University of Liverpool, UK, started by outlining the current unsatisfactory state of affairs, with 25% of drugs licensed for children having no appropriate children's form in Australia for example. Turning from problems to solutions, he surveyed recent international legislation and initiatives, including the work of the MCRN, giving many useful contacts and other information. Professor Nunn urged hospital pharmacists to set up or join a local paediatric pharmacists' group and join a clinical trial or spread information. Singled out for special praise was the 'Rwanda tablet' a fixed-dose combination of zidovudine 300 mg + lamivudine 160 mg that can be divided accurately into up to eight squares for administration to young children.

This subject attracted leaders in the field and a capacity audience. Professor Nunn has a particularly engaging style and invited anyone with a useful contribution to make to contact him at tony.nunn@alderhey.nhs.uk

Pharmaceutical education in Europe – a challenge to all pharmacists

The most passionate seminar of this year's congress, demonstrating that the key to progress in hospital pharmacy is international agreement.



Professor Bart Rombaut, PharmD Jacqueline Surugue

PHARMacy education IN Europe, or PHARMINE, is a project partially funded by the European Commission (EC). Its aims and objectives are to survey the present state of pharmacy education and training in Europe, and

based on this; formulate recommendations for new competence curricula for pharmacy education and training in the EU. A model for applicant Member States and others will be proposed. Finally, a quality assurance and accreditation scheme for EU pharmacy courses will be set up. PHARMINE will consider EU directive 2005/36/EC on the recognition of professional qualifications and the Bologna declaration.

Professor Bart Rombaut, President of the European Association of Faculties of Pharmacy, Belgium, took the podium first, noting there is at present a wide variation in university pharmacy courses and outlining the work of the project.

However, the star speaker was Mrs Jacqueline Surugue, who described in vivid terms her conviction that specialist hospital pharmacists do make a difference and her many efforts since 2003 to set EU legislation on the right course. The vote of EU Parliament for the specialisation in hospital pharmacy at its first hearing – rested on only her efforts! She herself sent more than 600 emails and letters to the Members of Parliament prior to the Parliament hearing. Work on this level convinced her of the EAHP's need to employ professionals, to establish an office in Brussels, Belgium, and to generate the income to pay for this. The result is the successful congress of today, whose profits are kept for the Association because the organisation of the congress is now 'in-house', and the successful lobbying presence with the EU. Victories and setbacks followed one another, and at the moment 'specific provisions for the recognition of qualifications on the basis of coordination of minimum training conditions' are requested by the EC, putting pharmacy in line with other professions, hence PHARMINE.

In the lively debate that followed the presentations, it became apparent that many countries have small numbers of pharmacists and it is difficult to fund postgraduate courses. A common solution is to go to the UK for a postgraduate degree, or follow a distance learning course offered in Belfast. The merits of university-based or practical training were discussed, likewise the possibility of different countries offering one module each of a joint course. Whatever is finally decided by the EU will become law, so clear thinking is required!