

Precision medicine

This year's EAHP congress drew a record number of attendees. Sunny Barcelona hosted more than 2,600 delegates and not only from Europe. Countries like Venezuela and Brazil were represented, but also United Arab Emirates (2), Saudi Arabia (12), Thailand (22), Israel (11), China (9). I talked to some of these delegates and they liked the meeting's compact format and practical educational content. This issue's cover story contains brief summaries of most presentations and a few more extensive reports. Get a feeling for what is on offer, then watch online on the EAHP website (www.eahp.eu). Good though the attendance was, it was less than 10% of the EAHP membership. Even if you went you can look back at details you might have forgotten. After three days of conference I at least suffer from information overload.

Seven European countries, in addition to the US, provided speakers. Spain and The Netherlands led with seven each, followed by the UK with five speakers. But, with 214 delegates from Belgium, 215 from France, 227 from Italy and 105 from Portugal, a wider representation of European hospital pharmacy should be possible. I find the differences between countries interesting. Take for instance the wide variation in the penetration of CPOE, possibly one of the major contributors to safer prescribing and drug use. In Germany, The Netherlands and Spain it is almost common practice, but we heard that UK doctors (and pharmacists) mostly stick to pencil and paper. The knowledge base required for safe prescribing in hospital is larger than the ready knowledge of the average busy doctor. This was demonstrated in several seminars. Only rich countries like the UK can afford to compensate for this with large numbers of hospital pharmacists. In July 2008, *New England Journal of Medicine* editor, Robert Steinbrook, rightly wrote [1] that the prescription pad is on its way to becoming a historical curiosity. Over and over studies show that this practice is highly prone to error and the US Institute of Medicine recommends that "by 2010, all prescribers should write, and all pharmacies should be able to receive, prescriptions electronically" [2].

A highlight for me was the keynote lecture from FDA Professor Lawrence Lesko who let us peek at the US Food and Drug Administration office for Clinical Pharmacology's translation of research findings into prescription recommendations. Professor Lesko is helping take the well known concept of personalised medicine one step further to what is called **precision medicine**. The choice of the right drug begins with a precise diagnosis, which is mostly lacking. Professor Lesko demonstrated a direct relationship between the extent to which we understand a disease, i.e. can diagnose it precisely and the extent of treatment efficacy. The concept of precision medicine was introduced by Professor Clayton Christensen. Classical diagnosis is intuitive (examples are Alzheimer's, obesity, depression, migraine) or empirical (asthma, prostate cancer, osteoporosis, osteoarthritis, based on pattern recognition). As a result, treatment results are on average disappointing. Diagnosing HIV/AIDS, however, is done with unprecedented precision, as is Her-Neu-2 positive breast cancer, leading to a precise choice of medicines, which are then highly efficacious. After returning home I immediately ordered Christensen's book [3] and it makes fascinating and inspiring reading.

This issue of EJHP contains of course a wide variety of topics, such as a beautiful country focus from Finland. In the *Pharmacoeconomics* series we can read how governments and third party payers are struggling to keep medical care affordable. Design of reimbursement schemes is creative, while the industry maintains a more or less uniform European price level officially, which in reality varies widely.

An example of precision medicine is the new treatment for chronic immune thrombocytopenia. Based on understanding of the disease, a customised drug (romiplostim) has been designed. However, due to all sorts of practicalities, the drug requires close supervision by the pharmacist.

So enjoy all the presentations on the website thanks to today's technology and take up the challenge to improve our care for patients. The Barcelona meeting had a lot to offer, and you can witness it all thanks to the great blessings of IT.



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1. Steinbrook, R. The (slowly) vanishing prescription pad. *New Engl J Med*. 2008;359:115-7.
2. Institute of Medicine. Preventing medication errors. Washington, DC; National Academies Press, 2007.
3. Christensen CM, Grossman JH, Hwang, J. *The Innovator's Prescription*. New York: McGraw-Hill; 2009.
<http://www.claytonchristensen.com>