

Pharmaceutical care research — the next generation

The Pharmaceutical Care Network Europe 3rd working conference took place in Hillerød, Denmark, from 12–16 February and was attended by 95 participants from 18 countries. Sonia Sanghani reports

Our journey is as important as our destination

Professor CHARLES D. HEPLER, University of Florida, United States, reminded participants that the road to pharmaceutical care has already been travelled for 10 years by thousands of pharmacists worldwide. They are all taking this journey because of their commitment to reducing waste and preventing harm to patients, and because of their need for recognition in making the world of medicine-taking a better one.

He said: “The journey is as important as our destination: we know we are on the right track. We do not only have evidence, we have the best evidence.” He urged participants to “think of pharmaceutical care as an incomplete practice research project and take joy in the journey”. Pharmacy systems have been inherited from the 19th century and many pharmacists are still trying hard to make these function, detracting them from the task of adding real value by encouraging changes in health care systems and promoting expansion of pharmacists’ roles.

US data position preventable drug related morbidity/mortality (PDRM) second only to cancers. This translates into a major, costly public health issue and Professor Hepler suggested that it is possible to improve quality in this area without placing an additional cost-burden on the health care system. There is a difference between secondary and primary care with regard to where pharmacists should concentrate their efforts. In secondary care, the major focus should be in the areas of prescribing (tran-

scription, etc) and drug distribution, whereas in primary care, improved follow-up and monitoring rather than emphasis on prescribing will positively impact on PDRM prevalence. He stated: “We have to get the whole system right — it is not just about dispensing or just about prescribing.” He challenged partisans who promote either one or the other to think about the system in its entirety.

SUPPLY VS DEMAND OUT OF BALANCE

Professor Hepler said that despite 10 years of evidence promoting pharmaceutical care, uptake in practice has been slow. Sustained adoption of pharmaceutical care principles in practice requires a change in the market of current pharmaceutical services. The supply versus demand equation is out of balance at present because we have not yet addressed the question of developing or creating demand and meeting the unmet medication needs of society. This can only be achieved if pharmaceutical care is envisaged as the “sharp end” of a quality improvement system directed at medication use outcomes. For this, performance indicators have to be developed that take both process and outcome into account, ie, an “outcome-linked process indicator”. Not all process indicators are good at facilitating the prediction of an outcome and the aim of pharmaceutical care research should be to provide evidence of performance improvement that will then form the basis of payment by third parties.

Professor Hepler said techniques that can be used to predict patient outcomes include computer simulation, mathematical modelling and decision tree analysis. When comparing costs of drug therapy with effectiveness of patient outcomes these costs should not be compared against a value of zero; there will always be a cost attributed to not treating a condition or correcting a drug-related problem (opportunity cost) which will always have a high value (eg, death).

Professor Hepler urged pharmaceutical and professional bodies to pursue the promotion of quality standards in the field of pharmaceutical care, concluding that in the US they do not have standards that enable a pharmacist to be a pharmacist, however, they have got standards that allow them to be dispensing technicians.

Professor JAMES McELNAY, Northern Ireland, suggested that one barrier to implementing pharmaceutical care in practice was the reluctance of community pharmacists to invest time, money, etc, in this concept.

Professor HEPLER replied that one way around this may be the introduction of a quality tax (similar to an environmental tax paid by industries that fail to comply with emission rates). Pharmacists would not wish to pay high taxes for not performing their duties to the required standards and it is the role of the whole profession — not just the job of a few enthusiasts and disciples of pharmaceutical care — to set, monitor and raise performance standards via their professional bodies.

Health technology assessment of pharmaceutical care

Dr JANINE MORGALL TRAUlsen, Department of Social Pharmacy, Danish University of Pharmaceutical Sciences, informed participants that the concept of technology assessment originated in the US due to more and more sophisticated weapons being produced during the Vietnam war, which government ministers had to make decisions about. In order to make informed, unbiased choices, multidisciplinary teams were brought together under the Office of Technology Assessment umbrella to assess all aspects of the technologies and provide ministers with the appropriate decision-making platform.

Since then, the use of Health and Medical Technology Assessment (HTA/MTA)

for unbiased evaluation has spread globally. Changes in decision-making focus can be observed over time, eg, efficacy and safety (1970s), cost and cost-effectiveness (1980s), social and ethical issues (1990s) and patient satisfaction and acceptance (2000).

SOCIETAL AND POLITICAL ASPECTS

Dr Morgall Traulsen warned against confusing technology assessment (TA) with quality assurance (QA). QA was developed by industry in an effort to improve products and services whereas TA was developed by politicians and its aim is to reach decision makers and policy makers at a societal level. HTA developed out of need

to ensure more appropriate use of health care resources, although use of obsolete technologies continues because people refuse to let them go.

Where pharmaceutical care is concerned, the process of assessment using the health technology model could benefit pharmacists by forcing them to think more broadly about pharmaceutical services — what are the political, societal and economic costs associated with pharmaceutical care? This is not the same as just considering the costs of a particular drug versus another, and undertaking research within the HTA framework may provide evidence for the benefits of pharmaceutical care written in a language that politicians understand. Dr

Pharmaceutical care research is not an exact science

Morgall Traulsen concluded by urging pharmacists to get more involved in the organisations that perform these assessments in their own countries because many of them have funding for such research.

Professor JAMES McELNAY, Northern Ireland, stated that pharmaceutical care research is currently organised using the economic, clinical and humanistic outcomes model, so when comparing this model with HTA, the missing links are the societal and political aspects.

Dr MORGALL TRAULSEN agreed and suggested that by changing the fit of the model, it might get pharmaceutical care on to the agenda "through the back door".

Mrs HANNE HERBORG, Denmark, warned that part of the HTA process was to look at alternatives and this would put pressure on researchers to compare — is pharmaceutical care the appropriate technology, is pharmacy the right place to do it? There may be settings that are better suited to improving patient outcomes and we have to be in a position to study these settings and admit that they may be more efficient or superior. This puts a lot of pressure on researchers when designing quality pharmaceutical care studies and it is an expensive process to undertake.

Professor CHARLES D. HEPLER, United States, urged pharmacists and researchers to lead the way in adapting the HTA/pharmaceutical care model to enable assessment by decision-makers and payers.

Professor JAMES McELNAY, Northern Ireland, and Dr FOPPE VAN MIL, the Netherlands, led a debate on the quality of pharmaceutical care research in the community. Issues raised centred around the fact that pharmaceutical care is not an exact science and often not repeatable since conditions can not be controlled with the same rigour as in pure sciences, eg, chemistry. Too many publications do not show significant results and this makes interpreting this type of research more challenging.

Dealing with the real environment, with the pressures that pharmacists are under, makes it difficult for them to participate in studies, but controlling the environment too much makes the situation unrealistic — results cannot be implemented in general community practice.

Tensions and gaps between research and practice are necessary to enable development of the profession and the challenge that researchers

now face is to develop projects that incorporate a stepwise approach to implementing pharmaceutical care in practice with more research on the implementation process itself. Mixed methodologies incorporating quantitative, qualitative and participatory methods were recommended. The biggest challenges ahead are still securing funding for projects themselves and obtaining payment for the services once they

are implemented as a result of the research. It was suggested that although we had come a long way in 10 years, it would take at least another 20 years to reach the final destination.



Dr Van Mil: Pharmacists in practice will not give research a high priority

Compliance or self-efficacy as indicators in pharmaceutical care research?

Mrs HANNE HERBORG, director of MR&D, Pharmakon, Denmark, explored the tension between the concepts of compliance, self-efficacy and concordance in relation to the implications for pharmaceutical care research and practice. Experience with interventions in this area has highlighted that many are too weak to bring about behaviour change, or are too complex (and therefore time-consuming), which act as a barrier to implementation in the practice setting. The question that researchers are now facing is: "Can we construct brief but complex interventions?" Mrs Herborg suggested that psychosocial models concentrating purely on patient factors may not be enough and a systems approach may be required that takes into account issues such as health system, treatment, disease, support networks, professionals involved and the patient's social context.

Pharmaceutical care uses a systems-based approach — it looks at system factors and is outcomes driven but appropriate tools to address the "patient factor" are lacking. Compliance has often been criticised as an authoritarian approach that does little to explain patients' medicines-taking behaviour. There is often poor reliability, lack of detail and overestimation. Strategies to measure compliance have improved, although there is still a problem in accessing good, relevant data. Electronic monitoring

devices are seen as the gold standard whereas researchers are often required to adopt a pragmatic, triangulation technique involving a mixture of questionnaires and interviews alongside incomplete patient medication record data. Concordance, on the other hand, may not necessarily be a stronger model since it is not outcomes based — its main impact is usually on patient satisfaction. In certain situations, concordance may also not be appropriate, eg, patients in intensive care are often not in a position to make decisions. This has led to consideration of self-efficacy, which was defined by Bandura in 1995 as "beliefs in one's capabilities to organise and execute courses of action required to manage prospective situations".

Using this concept, the focus moves away from measuring the patient's actions to measuring their thoughts. Behavioural change should occur when the patient's balance of beliefs about their ability to deal with their situation shifts from negative expectations to positive expectations. Self-efficacy is proving to be a strong predictor of adherence, coping with disease and health outcomes. Issues being debated centre around the use of generic scales or disease specific scales.

Within the pharmaceutical care intervention process, if the patient's beliefs are not positive towards taking their medica-

tion, it indicates that other models may be necessary to influence behavioural change. Examples of other models include technical (compliance, biomedical), communication (concordance) and cognitive (stage of change, health belief model, patient's knowledge level). This has implications for pharmacy practice since the models must be feasible to use and multi-intervention strategies require access to a total patient IT platform to support patient self-management and feedback.

Mrs Herborg concluded by suggesting that self-management rather than self-efficacy should be the ultimate goal for pharmaceutical care research.

Workshop sessions

Alongside the plenary sessions, participants concentrated on five workshop areas: advanced study design; implementation of research findings into routine practice; psychosocial aspects of patient adherence; economic aspects of pharmaceutical care provision; and measuring outcomes — the contribution of health technology assessment. Reports from these sessions can be obtained from www.pcne.org.