

International Series: Adherence

Adherence policy, education and practice – an international perspective

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ABSTRACT*

Nonadherence to chronic therapy has become a large burden on the healthcare system of many countries. Community pharmacists are well positioned to address nonadherence as part of their overall patient care activities, and contribute to patients' quality use of medicines. Between 2008 and 2010, a series of narrative, peer-reviewed articles were published in *Pharmacy Practice* which focused on community pharmacists' activities in medication adherence, specifically in the areas of the education they receive, their practice, the research conducted and national or local policies. This editorial aims to summarise the key findings presented in the series, and highlight the pertinent issues and gaps in the literature. There is a need to implement global and long-term objectives focussing on enhancing the quality of education and competencies of community pharmacists and the research conducted in medication adherence, to develop guidelines for pharmacists and enhance the uptake of adherence promoting services in routine care.

Keywords: Medication Adherence. Pharmacists. Education, Pharmacy.

POLÍTICA, EDUCACIÓN Y PRÁCTICA DEL CUMPLIMIENTO TERAPÉUTICO – PERSPECTIVA INTERNACIONAL

RESUMEN

El incumplimiento a los tratamientos crónicos se ha convertido en un gran problema en el sistema sanitario de muchos países. Los farmacéuticos comunitarios están bien posicionados para afrontar el incumplimiento como parte de sus actividades globales sobre los pacientes y contribuir a la calidad del uso de medicamentos por los pacientes. Entre 2008 y 2010, se publicó en *Pharmacy Practice* una serie de artículos de revisiones narrativas revisadas por pares, que se centró en las actividades de los farmacéuticos comunitarios en cumplimiento terapéutico, específicamente en aspectos de la educación que reciben, su práctica, la investigación realizada y las políticas nacionales y locales. Este editorial trata de resumir los hallazgos clave presentados en la serie y remarcar los problemas y carencias pertinentes de la literatura. Existe la necesidad de implantar objetivos globales y a largo plazo que se centren en aumentar la calidad de la educación y las competencias de los farmacéuticos comunitarios y la investigación realizada sobre cumplimiento de la medicación, desarrollar guías para farmacéuticos y aumentar la implantación de servicios de promoción del cumplimiento en los cuidados de rutina.

Palabras clave: Adherencia a la medicación. Farmacéuticos. Educación farmacéutica.

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INTRODUCTION

Nonadherence is a complex human behaviour, and a major risk factor in chronic conditions. The magnitude of the problem is escalating with increasing prevalence of chronic diseases worldwide.¹ Both patients and healthcare providers share the responsibility for nonadherence. However, nonadherence, perceived as a taboo, is often not specifically addressed by healthcare professionals. It is important that healthcare professionals approach nonadherence with a positive attitude and address the issue within a multi-disciplinary healthcare system.^{2,3}

Community pharmacists, as an integral part of the healthcare system, are well positioned to address nonadherence as part of their overall patient care

activities. To be effective in monitoring and promoting adherence and persistence to therapy, pharmacists need to have the appropriate skills and knowledge, and be supported by the healthcare system at a policy and practice level.

Whilst there are many similarities in the core course content of professional pharmacy degrees internationally, the extent to which adherence is taught is not clear. Moreover, anecdotally, there are differences in the practice of community pharmacy with respect to adherence services delivered within a country as well as between different countries. Thus, between 2008 and 2010, a series of narrative, peer-reviewed articles were published which focused on community pharmacists' activities in medication adherence, specifically in the areas of the education they receive, their practice, the research conducted and national or local policies.⁴⁻¹¹

Several researchers, experts in the field of medication adherence, were invited to describe the education, research, practice and policy in the area of medication adherence in their respective countries. These were Australia, Denmark, England, Finland, Spain, Sweden, Switzerland and USA. The idea for the series was formulated during the scientific meeting of the Global Research Institute in Pharmacy Practice (GRIPP) in 2007 in Switzerland.

This editorial aims to summarise the key findings presented in the series, highlight the pertinent issues and gaps in the literature, and provide guidance on potential future research.

POLICIES AND PRACTICE

The articles described the policies on the appropriate use of medicines which had been implemented at a national level, e.g. quality use of medicine policies in Australia, Medicare and Medicaid policies in the US, and Pharmaceutical Policy 2010 in Finland. However, only a few described specific policies or national guidelines which emphasised the need to focus on medication adherence (e.g. NICE medicines adherence guideline in the UK). It is also noteworthy to mention that very few governments had started reimbursing pharmacists for the provision of cognitive pharmaceutical services to support medication adherence (Switzerland and England).

In routine care or in intervention studies, monitoring and supporting medication adherence was often not an activity per se, but part of comprehensive programs. Identification of nonadherence was reported to be part of the following programs: medication review (Australia, Spain, Denmark and Finland); identification of drug related problems (Sweden); and medication checks (Denmark). Medication adherence support was also described as a component of numerous generic or disease-specific programs, such as dose administration aids or dose dispensing services (Australia, Denmark, Finland, Switzerland, Spain and US); patient medication profiles (Australia and Sweden); medication therapy management services (US); medicines use review services (England); interviews conducted with patients on polypharmacy (Denmark

and Switzerland); diabetes medication assistance service (Australia); and medication counselling programs on asthma, diabetes and cardiovascular system (Finland).

A few programs were described which focused on medication adherence as the main outcome: motivation for medicines adherence service (England); medication adherence consultation (Switzerland); and a program where pharmacists at an off-site location made outbound calls to patients on how to improve adherence (US).

The articles have also described multiprofessional programs, some involving the physician; however the majority of programs or services described are still delivered by a single profession, namely pharmacists, with little or no involvement of other healthcare professionals. The programs presented have also utilised tools to either identify nonadherence or to support adherence, such as computerised medication history (Australia, Spain and Switzerland); computerised prescription profiles with reminders sent to patients (US); a text message reminder service (Denmark and Switzerland); pill-organisers (Spain, Switzerland and US); using a confidential interview area (Switzerland); and a national prescription server (Denmark).

Overall, the primary barriers to the implementation of specific medication adherence programs and other comprehensive programs which include a medication adherence component, were cited as lack of staff, lack of financial reimbursements (also from insurance companies) and lack of accreditation for the service delivered.

Interestingly, very few of the programs described in the articles in the series have been published in international scientific journals. Furthermore, the quality and uptake of the research intervention studies into practice have been poorly described. The methods for identifying nonadherence and for promoting a change in behaviour and consequently adherence to therapy vary widely between the programs described; preventing a detailed comparison between the various programs and studies.

EDUCATION

The articles in the series demonstrated that pre and postgraduate education in medication adherence varies widely across countries and universities. In the majority of cases, medication adherence was not taught specifically as a standalone subject, but as part of other subjects, and where relevant as part of a therapeutic area. However, the details of the course content on medication adherence were not included and it is not possible to compare and contrast courses in the series. However, several gaps are highlighted which should be addressed. For example, it is apparent from the available evidence on the practice of medication adherence services, that the level of education of pharmacists in medication adherence should be increased globally. Medication adherence should be emphasized more and additional classes should be

dedicated to this subject, demonstrating the significance of the problem across all acute, but primarily chronic conditions. Teaching should focus on the definition of adherence and the related terms; prevalence of the problem; determinants of nonadherence; clinical and economic impacts of nonadherence; theoretical frameworks underpinning patient medication taking behaviour; identifying nonadherence; strategies to monitor and support adherence in daily practice within a holistic and interdisciplinary approach; and skills and knowledge that are required in order to be able to deliver the services, e.g. communication skills and motivational interviewing. Didactic teaching should be supplemented with workshops where students can discuss and resolve clinical cases which highlight nonadherence.

RESEARCH

A wide range of research studies have been reported in the series, ranging from descriptive studies to quasi-experimental and randomised controlled trials. The variability in study designs and evaluation instruments used prevent a meta-analysis of the studies reported in all eight reviews. In reviewing the types of medication adherence research conducted in the community pharmacy setting, it is important to determine whether there is evidence that the pharmacists delivering the services have an impact on patients' adherence to therapy, the quality of the evidence, and the limitations of the studies and whether these may have impacted the findings.

There was a greater tendency to conduct randomised-controlled trials to determine the impact of interventions as this design provides the highest level of evidence. However, there were also a large number of quasi-experimental studies, reflecting the nature of research in community pharmacy practice. All randomised controlled trials and quasi experimental studies had at least one intervention and control arm. The chronic conditions investigated ranged from asthma to hypertension and diabetes, as well as depression and Acquired Immunodeficiency Syndrome (AIDS). Pharmacy and consumer or patient numbers varied from as low as one pharmacy to nearly 60 pharmacies; and 25 patients to approximately 900 patients per study group. This presents issues in terms of the power of the study and ability to show statistically significant differences as well as the generalisability of the data and potential for sample bias.

The interventions evaluated ranged from informational or behavioural alone to a combination of both. Whilst information interventions included the provision of general or tailored information, behavioural interventions ranged from reminders, use of dose administration aids, to more complex programs. A variety of adherence measures were used to evaluate the impact of the interventions, such as dispensing records, medication possession ratios, Morisky Scale, Medication Adherence Reporting Scale (MARS) and Medication Event Monitoring System (MEMS). However, the measures of adherence have been short term. All

studies also evaluated outcomes other than adherence, but, very few looked at cost effectiveness of delivering interventions to promote adherence.

In the majority of cases the interventions showed no change, or improvements in medication adherence, and improvements in other outcomes measured. However, it can be argued that the evidence is not strong enough for researchers to recommend a single intervention program that would monitor and support medication adherence, in particular, long term.

A number of other gaps exist in the current literature. There is a lack of consensus on the definition of medication nonadherence and a variety of adherence measures have been used without triangulation of data.¹² Studies have often been limited by the two staged recruitment process: recruitment of pharmacists who then recruit patients. This has led to bias in the study sample, not to mention low responses rates, which may have led to higher pharmacy / pharmacist drop-outs. Despite evaluating the impact of interventions on medication adherence rates and clinical outcomes, few studies have looked at humanistic and economic outcomes. Additionally, the majority of studies are pharmacist orientated with limited interdisciplinary programs aimed to promote adherence.

It is important that future research addresses these gaps when designing medication adherence intervention studies.

CONCLUSION

Internationally, as reported in the eight reviews, pharmacists are being educated on the topic of medication adherence, and the skills and knowledge required to identify, monitor and support patient adherence to therapy. However, there is scope to increase the course content on medication adherence and highlight the global and significant impact of nonadherence, with the overall aim of equipping future pharmacists to deliver these services regularly and to all patients.

There are national policies which support medication adherence specifically, and as part of an overall complex service. The development and implementation of these policies is a sign that medication adherence is more and more becoming an important issue. However, there is still a long way to go, not only to ensure that there are specific national policies guiding the delivery of adherence promoting services, but that community pharmacists are delivering a service to their patients regularly within the overall context of the healthcare system.

Finally, there are an increasing number of research studies evaluating the impact of intervention programs on adherence to therapy. As discussed above, they have a number of limitations, which must be addressed. Global and long-term objectives are to strengthen quality in research in medication adherence, to enhance uptake in routine care, to develop guidelines for pharmacists and enhance the

quality of education and competencies of community pharmacists.

We hope that pharmacists will take the opportunity to act as 'real key-players' to promote medication adherence and take part in enhancing continuity of care among healthcare professionals in the community.

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CONFLICT OF INTEREST

None declared.

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