



## PGEU Statement

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# COMMUNITY PHARMACISTS' CONTRIBUTION TO ENSURING RATIONAL AND SAFE USE OF MEDICINES BY OLDER PEOPLE

**Approved by the PGEU General Assembly on 10 March 2009**

## Community Pharmacists committed to helping older people better manage their medication

It has been recognized and widely debated in the past few years that Europe is getting older.

Europe's population aged 65 and over is estimated to rise by 58 million (77% approximately) between year 2004 and 2050. The older population – especially the very old aged 80 and above – is projected to sharply increase. The number of very old people is expected to almost triple, reaching 50 million in 2050.<sup>1</sup>

Increased life expectancy has led to higher demand for long-term therapies. Ensuring effective therapies to older people has become an important issue for local, national and European policy makers. This has also led EU policy makers to strongly encourage the development of Healthy Ageing strategies.<sup>2</sup>

Because community pharmacies are widely accessible, from urban to rural areas, in prosperous or poor regions, pharmacists can more easily be reached by older patients than any other healthcare professional.

The **Pharmaceutical Group of the European Union (PGEU)**<sup>3</sup> has already drawn attention to specific issues concerning medication and older people in its policy statement on Targeting Adherence<sup>4</sup>, and the topic continues to be a priority for PGEU members. This statement further details how community pharmacists are committed to helping older people better manage their medication and is supplemented by another statement on therapeutic education<sup>5</sup>.

Pharmacists can certainly play an important role in promoting healthy ageing and encouraging older people to adhere to healthy lifestyles by reinforcing healthy eating and adequate physical exercise, aspects also relevant to mental health and wellbeing. It is also worth noting that older people often see pharmacists simply as someone to talk to helping them to fight the feeling of loneliness and isolation.

However, the area where pharmacists' interventions have proven to be most effective in relation to older people's care is adherence to medication.

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<sup>1</sup> European Commission. The 2005 projections of age-related expenditure (2004-2050) for the EU25 Member States: underlying assumptions and projection methodologies. European Economy Special Report No. 4. Brussels: European Commission, Directorate General for Economic and Financial Affairs, 2005.

<sup>2</sup> European Commission. Joint report by the Commission and Council on supporting national strategies for the future of health care and care for the elderly. Brussels: Council of the European Union, 2003.  
[http://ec.europa.eu/employment\\_social/socprot/healthcare/elderly\\_en.pdf](http://ec.europa.eu/employment_social/socprot/healthcare/elderly_en.pdf)

<sup>3</sup> PGEU represents around 400,000 community pharmacists from 30 European Countries, including EU Member States, EU candidate countries and EFTA members. The members of PGEU are national associations and professional bodies of community pharmacists. PGEU's objective is to promote the role of the pharmacists as key actors in public health. Furthermore, PGEU aims to ensure that the views of the pharmacy profession are taken into account in the EU decision-making process. PGEU provides to its members an ideal platform to exchange information, and collect and disseminate best practices. Additionally, it also encourages its members to further develop new projects aiming at anticipating and responding to society's needs, in the broader context of Public Health.

<sup>4</sup> Targeting Adherence: improving patient outcomes in Europe through Community Pharmacists' intervention, PGEU, May 2008 <http://www.pgeu.eu/Portals/6/documents/2008/Publications/08.05.13E%20Targeting%20adherence.pdf>

<sup>5</sup> [http://www.pgeu.eu/Portals/6/documents/2008/Position%20Papers/08.11.18E%20008%20PGEU%20Statement%20on%20Therapeutic%20Education\\_FINAL.pdf](http://www.pgeu.eu/Portals/6/documents/2008/Position%20Papers/08.11.18E%20008%20PGEU%20Statement%20on%20Therapeutic%20Education_FINAL.pdf)

Failure to adhere to medication among older people is a widespread and costly problem. Evidence shows<sup>6</sup> that 65% of people who are 60 and more years of age have two or more chronic conditions, but also that frequent adherence rates in this age group are 60% or less. In addition, up to 50% of cardiovascular disease admissions may be due to poor adherence. This suggests that, although an intensive pharmacist-led approach could imply a higher cost, the end result when solving the problem of adherence will be a total lower healthcare cost.

Older patients are subject to specific risk factors for non-adherence. Because they often suffer from more than one chronic condition and have a higher prevalence of certain diseases such as Alzheimer, Parkinson, glaucoma, osteoarthritis, and congestive heart failure they tend to take more medicines than their younger counterparts. It is not unusual to see an older patient taking four or more medicines concurrently (polymedication), with complex regimens and therefore with a higher probability for interactions to happen. Research in Portugal, conducted by the Centre for Health Evaluation & Research of the National Association of Pharmacies (CEFAR) showed that polymedication is highly prevalent amongst Portuguese older population – the prevalence for utilization of cardiovascular medicines is 94,8%, followed by Central Nervous System medicines (77,6%). The results of this study also showed that 20,7% patients were using at least one potentially inappropriate medicine (PIM) according to the Beers criteria. Most of these medicines were medically prescribed and in two cases were self-medication. Concerning medicine costs, the study main finding show that the average daily cost of medicines per patient is 3,20 euros and associated direct daily medicine costs in these patients were found to be three times higher when compared to the general population.

Moreover, older patients are more likely to face problems of memory and of understanding regimens and instructions. Finally, problems with visual acuity (e.g., reading the information leaflet or the mode of use on the label) and dexterity (e.g., opening the vial of a bottle or pushing a pill out of a blister) may hinder their ability to take their medication properly.<sup>7,8,9</sup>

Furthermore, older patients are very sensitive to adverse effects of psychotropic medicines, e.g. cardiac toxicity, confusion and unwanted sedation.<sup>10</sup> The emergence of side effects and the delayed onset of action of medicines lead to high rates of nonadherence to medication.<sup>11, 12</sup> Medication counselling and treatment monitoring conducted by pharmacists can improve medication adherence among people commencing therapy with psychotropic medicines.

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<sup>6</sup> Lee JK, Grace KA, Taylor AJ. Effect of a Pharmacy Care Program on Medication Adherence and Persistence, Blood Pressure, and Low-Density Lipoprotein Cholesterol. A Randomized Controlled Trial. *JAMA*. 2006;296:2563-2571. Published online November 13, 2006 (doi:10.1001/jama.296.21.joc60162). <http://jama.ama-assn.org/cgi/reprint/296/21/2563>

<sup>7</sup> Coons S, Sheahan S, Martin S, et al. Predictors of medication noncompliance in a sample of older adults. *Clin Ther*. 1994;16:110-7.

<sup>8</sup> Larrat E, Taubman A, Willey C. Compliance-related problems in the ambulatory population. *Am Pharm*. 1990;NS30:82-7.

<sup>9</sup> Murray M, Darnell J, Weinberger M, Martz B. Factors contributing to medication noncompliance in elderly public housing tenants. *DICP*. 1986;20:146-52.

<sup>10</sup> Drug use in the elderly. Prescribing practice review. Sydney, National Prescribing Service Ltd; 2004.

<sup>11</sup> Lambert M, Conus P, Eide P, Mass R, Karow A, Moritz S, Golks D, Naber D: Impact of present and past antipsychotic side effects on attitude toward typical antipsychotic treatment and adherence. *European Psychiatry* 2004, 19:415-422.

<sup>12</sup> Rettenbacher MA, Hofer A, Eder U, Hummer M, Kemmler G, Weiss EM, Fleischhacker WW: Compliance in schizophrenia: psychopathology, side effects, and patients' attitudes toward the illness and medication. *Journal of Clinical Psychiatry* 2004,

Pharmacist-conducted medication reviews targeting older people reduce and prevent drug-related problems as well as enable to reduce the number of medicines taken as well as the number of daily doses. These reviews are helpful to encourage good prescribing practices as they allow to identify misuse or abuse of certain medicines, particularly sleeping pills and tranquilisers. Results from research in Sweden pointed out that medication reviews performed for older people reduced the average number of medicines used by the patient from 12.4 to 10.7. In addition, the average patients' medication costs was also reduced of 1488 SEK per patient per year (approx. €160 per patient per year)<sup>13</sup>. In Denmark, other research showed that systematic medication reviews for older people would result in savings of €50 million per annum<sup>14</sup>.

Within the older population, it is common for community pharmacists to encounter a patient with Alzheimer's disease and/or a relative/caregiver of the patient. It is often the case that these patients are prescribed with anxiolytics, antipsychotics, and antidepressants. It can also be the case that patients take alternative/complementary medications. Pharmacists can be a vital resource for both patients and their caregivers, as they can assist patients through monitoring medication regimens for potential drug interactions as well as possible contraindications. During counselling, pharmacists can also provide patients and their caregivers with various suggestions for techniques that may aid in the management of Alzheimer's disease, such as the use of memory aids or schedules. In addition, pharmacists can make recommendations for creating a safe environment and establishing an exercise routine, if appropriate.<sup>15, 16</sup>

Overall, pharmacists can keep patients and caregivers informed about new developments in the fight against specific mental conditions, such as Alzheimer's disease, and suggesting resources of information for them. They can as well, encourage caregivers to join a local support group and to take care of themselves and seek assistance when warranted.

Community pharmacists also collaborate with nursing homes where they can perform medicine use reviews and encourage the rational use of medicines, particularly sedatives.

In addition, community pharmacists in collaboration with other members of the healthcare team are developing specific interventions for older patients living in the community<sup>17</sup>. This includes homecare programmes which facilitate care of patients in a more familiar and comfortable environment and tackling as well problems of poor or lack of mobility, ensuring that this is not a reason for poor adherence to therapies.

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<sup>13</sup> Jonsson J, Renberg-Lindholm E, Ohlen K, Hjertsen E. Drug utilization reviews by a pharmacist of elderly people living at home – an open trial in two Primary Health Care Centres in Sweden. Presented at the World Congress of Pharmacy and Pharmaceutical Sciences. September 2007. Beijing.

<sup>14</sup> Brug medicinen bedre – Perspektiver I klinisk farmaci (better use of medicines – perspectives in clinical pharmacy). Danish Medicines Agency. 2004

<sup>15</sup> Terrie YC., The Pharmacist's Role in the Management of Alzheimer's Disease, Pharmacy Times, Jan 2007

<sup>16</sup> Dreux C, Les pharmaciens ont-ils un rôle à jouer dans le Plan Alzheimer 2008-2012 ?, Bulletin de l'Ordre des Pharmaciens de France, Jun 2008, 399: 191-196

<sup>17</sup> Lenander C, Elfsson B, Hallberg H, Danielsson B, Hasselstrom J. Will physicians and patients accept a pharmacist-led structured medication review? – report from an ongoing randomized controlled trial. Presented at the World Congress of Pharmacy and Pharmaceutical Sciences. September 2007. Beijing.

## **Concrete examples**

In **Finland**, a pharmacist-conducted medication review was introduced in community pharmacies in 2005 targeting older patients. The medication review model is very comprehensive, starting with an interview with the patient, preferably in the patient's home, assessing the medication through discussion with the patient, the physician and homecare nurse and researching laboratory results. Finally a report is created as a tool for the physician's decision making process.

In addition an automated dose dispensing service provided by the community pharmacy was introduced to patients in 2001. The pharmacy serves the customers in two ways; the prescription/ medication management and the actual dose dispensing. The patient's medication is reviewed by the pharmacist and the physician and hereafter the medicines are provided for the patient in two weeks rations, packed and labelled in plastic bags. Each bag is labelled with necessary information such as the patient's name and time of day, when that specific dose is to be taken. The patient is also provided with a medication review leaflet, containing all the medicines in use and the dose of the medicines. The automated dose dispensing saves the patient's money and improves drug adherence as well as patient safety.

In **Denmark**, for example, the Danish research program 'Improving drug therapy for older people' developed and tested a generic pharmaceutical care model for a specific patient group, older polymedicated patients. The project demonstrated positive impact on health related quality of life and lead to health care cost savings. It was conducted in collaboration with seven European countries. This project has been the basis for the development of community pharmacy services to older people and nursing homes, and these models have been tested in demonstration research projects. These services are now offered by several pharmacies to the municipal health administrations.

In Sweden, dose dispensing in multi-dose packages is also a service with the aim to get a good adherence and optimal outcome of the medication. In Sweden there are 170.000 people, most older people, enrolled in this service all over the country. But it can also be people with psychiatric diseases or people with some form of handicap. This service is often combined with medication use review (MUR). The Government has directed money for MUR in order to optimise patient outcomes of medicine use. In these cases the pharmacist is working very closely with doctors and nurses. The pharmacist motivates and gives recommendations to change the medication for one reason or another. Medication reviews have been performed in Swedish nursing homes for a long time. They have also been introduced in hospital wards during the past few years, as well as in some health care centres, where the pharmacist meets with the patient before or after the visit to the doctor to review all of the patient's drugs in order to detect and resolve drug-related problems (DRPs).

In **the Netherlands**, research (the HARMstudy) shows that each year 19.000 patients end up in Dutch Hospitals as a result of potentially avoidable medication related problems. Older patients using multiple medications were especially vulnerable. Pharmaceutical Home Counselling and Clinical Medication review are new approaches that are in a developing and researching phase in the Netherlands. Pharmacists together with doctors review the medication of a patient and discuss therapy plan with a patient later on. In addition, one Community Pharmacy has been contracted by a health insurer to perform medication reviews of older patients in the city of The Hague in 2008. The pharmacist is paid 150 euros per consultation. It includes exploring medication related problems and exploring medication taking skills based on the patient's actual use and experiences. The Royal Dutch Pharmacists Association (KNMP) is developing a project

to support similar service to the patients nationwide by their community pharmacies. Furthermore, Dutch pharmacies offer various services to ease medication management of the patient. That includes weekly medication dose dispensing with exact dates and time of medicines use schedule on the labels. As well pharmacies offer synchronised delivery meaning that pharmacy delivers monthly or quarterly supply of medication to patients home on regular bases.

In **Portugal** it is estimated that in the near future, about 70 000 patients will have Alzheimer. Though its incidence seems to increase with age, affecting mainly patients over 60, it may also affect younger people. Pharmacies intervention near patients, mainly in a first stage of the disease, and near families and care givers of Alzheimer's patients, assumes a relevant importance. These are the main reasons why Alzheimer's disease was elected one of the themes approached by iSaúde®, an information service provided to patients by CEDIME (Medicines Information Centre) of the National Association of Pharmacies (ANF). Portuguese pharmacies have now a leaflet – “Betrayed by Memory” – that focus on the early recognition of the first main signs of Alzheimer's - and a brochure – “The Challenge of Overcoming Barriers” – dedicated to families and care givers of Alzheimer's patients, with practical advices and useful information related with caring issues.

ANF has also developed a model and tools for a national pharmacy-based brown bag campaign targeted to patients aged 65 and higher, in response to the health problems around a growing aged population, which was launched in March 2007. Pharmacists conducted the therapeutic review and documented intervention provided. 1.487 pharmacies (55,4% Portuguese pharmacies) participated in the campaign and 507 (33,6%) sent data to ANF. Data from those 597 pharmacies showed that the average number of medicines per patient was 7,3; 23,4% of patients were on four to five medicines; 51,6% patients were on six to nine medicines and 25% of patients on ten or more medicines. Pharmacists referred 933 patients (21,3%) to the prescriber for further evaluation. These data shows that community pharmacists are well positioned, within the healthcare system, to identify medication related problems through the provision of medication review or similar advanced services and report them to the physician, so that he/she may, in turn, adjust medication therapy at an early stage, contributing, in the long run, to optimize patient outcomes in the geriatric population. In May 2009 this campaign will be re-launched in Portuguese community pharmacies.

In **Ireland**, the Irish Pharmacy Union (IPU) and the Irish Pharmaceutical Healthcare Association (IPHA), supported by Age Action, ran a campaign in September 2008 focusing on older people, encouraging them to *Master Your Medicines*. A booklet was produced giving tips for taking medicines and advice about adherence, medicine use reviews, and falls. A Medicine Reminder Chart was made available as a pdf on the IPU and IPHA websites. The campaign was supported by a radio advertisement which was heard at least once by 37% of the population and was heard three times by 17% of the population. A survey carried out by the IPU at an exhibition in October 2008 indicated that 40% of those who visited the IPU stand were aware of the campaign. In February 2009, the IPU also submitted a proposal to the National Economic Social Forum on implementation of home care packages.

In the **Czech Republic**, the project ‘SENIOR’, supported by the Czech Chamber of Pharmacists, covers the rational use of medicines by older people. This project was started in 2008 and aimed at increasing pharmacists' knowledge on the specific manifestations of disease in senior age and on modern pharmacotherapy approaches in older people. The project included the development of targeted training activities aimed

at promoting and developing pharmaceutical care for older people through cooperation between doctors, pharmacists and older patients in 8 big cities of the Czech Republic. The training sessions were opened to pharmacists and other health professionals and covered aspects of diagnosis, treatment and communication as well as economic aspects of treatments available to older people and information on older citizens' organisations. After the training, community pharmacists were prepared to provide nationwide educational sessions (evening discussions) at the older citizens' organisations and pensioners associations on common mistakes in the use of medicines by older people and how to avoid them and on how to use rationally medicines to treat memory and sleep disorders. Another goal of the project is the creation of a specific centre for pharmaceutical care for older people to offer regular educational session on rational use of medicines by older people and a consultation center for where older people can turn to for questions and additional health information.

In **Spain**, the General Council of Pharmacists is carrying on an initiative on homecare for dependent people, aimed at improving treatment (avoid adverse effects of medicines, improve therapeutic adherence, promote health education) to dependent patients, where the vast majority are older people. There is an ongoing pilot to test the adequacy of the methodology proposed within the framework document on Pharmaceutical Care to dependent patients elaborated by the Spanish General Council of Pharmacists.

Also in Spain, the Spanish health ministry is pushing for a joint effort across primary and secondary care and pharmacies to improve medicine provision services in order to reduce avoidable drug adverse events related with the use of polymedication. One major aspect of the strategy is to encourage better monitoring of medicines by reviewing the effectiveness of patients' treatments and collaborating with healthcare professionals.

In **Germany**, the Nordrhein Apothekerkammer has developed an advanced education programme of two full time years to train pharmacists on geriatric pharmacy, which has received the support of the local government. Geriatric pharmacy covers pharmaceutical consultation and medicines supply specifically for older patients. Geriatric pharmacy also covers pharmaceutical care of chronic older patients, advising family members and nursing staff in the context of medicines dispensation and pharmacovigilance. Geriatric pharmacy additionally comprehends information and guidance to the physicians treating geriatric patients. The training covers the following aspects: prevention of potential risks of medicines through observation, notification and structured guidance about medicines related risks; pharmaceutical, social and economic impact of acute and chronic diseases in the older population; patient orientated care; co-operation with physicians, nursing staff, members of geriatric networks, palliative medicine, clinical-pharmaceutical practice; compilation, collection, management and evaluation of medicines information; and planning and enforcement of initial and advanced training of nursing staff, caring family members and patients. After this training, pharmacists feel prepared to engage on a dialogue with other health professionals and patients in community pharmacies, hospitals and nursing homes in all aspects of medication use by older people. They are well prepared to document the medication history, to do the medication-/patient profile, to check interactions and/or contraindications, to identify medication associated problems, to evaluate pharmacotherapy, to detect specific nursing home medication errors and to train and advice other members of the geriatric team. Model calculations have shown, that pharmacists' intervention in geriatric pharmacy could reduce costs of 80 Euros per patient per month to 60 Euros per patient per month.

## **Conclusion**

Community pharmacists in Europe, through PGEU members, are committed to making a major contribution in improving public health by seeking to ensure that people derive maximum therapeutic benefit from prescribed medication dispensed in pharmacies; providing high quality advice to ensure safe and responsible self-care including, where appropriate, self-medication; encouraging healthy lifestyles through effective health promotion and health education strategies.

Community pharmacies are widely distributed in the heart of communities including deprived communities, and offer an informal environment where an objective advice from a knowledgeable health professional is available without the need to make an appointment.<sup>18</sup> Pharmacies are effective community centres for health promotion and many have developed consultation areas where counselling can be provided respecting the patient's privacy.

Overall, community pharmacists' practice is about managing patient care and ensuring that appropriate therapeutic outcomes are achieved when medicines are dispensed (an activity that has become known as "pharmaceutical care"<sup>19,20</sup>). This is done by providing opportunities for patient education and information, monitoring parameters such as e.g. blood pressure, managing medication, assessing medication adherence and identifying the situations when referral to other specialists is needed.

**Therefore,**

- ***PGEU is committed to continuously promoting the pharmacists' contribution to public health and respond to specific needs of population groups, such as older people;***
- ***PGEU believes that community pharmacists, through the broad network of pharmacies throughout all EU Member States, are a useful and highly accessible resource that should be used to its full potential in the development and implementation of governmental policies and strategies to support healthy ageing and independent leaving of older people;***
- ***PGEU considers that community pharmacists have an important role to play in improving the health capital of the population by preventing illness and disease, promoting health information and education, and reducing drug-related damage;***
- ***The expertise of pharmacists and the existing network of pharmacies throughout national territories are ready available and should be fully utilised.***

**END**

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<sup>18</sup> Several European wide and national surveys show that pharmacists are highly trusted for their professional services (i.e. Reader Digest "Most trusted Professional services, 2005"). Moreover, the Council of Europe Resolution ResAP(2001)2 concerning the pharmacist's role in the framework of health security recognizes that pharmacists provide

added value to the healthcare system both through their scientific and pharmaceutical expertise and in term of ethics.

<sup>19</sup> Hepler C, Strand L. Opportunities and responsibilities in pharmaceutical care. Am J Hosp Pharm. 1990;47:533-43.

<sup>20</sup> van Mil F, Schulz M. A Review of Pharmaceutical Care in Community Pharmacy in Europe. Health highlights. Harvard Health Policy Review. Spring 2006.Vol. 7, No. 1: 155-68