Farmacia
HOSPITALARIA
Órgano oficial de expresión científica de la Sociedad Española de Farmacia Hospitalaria

EDITORIAL
Bilingual edition English/Spanish

Pharmaceutical benefits in nursing homes: Falling between two stools

La prestación farmacéutica en los centros sociosanitarios: navegando entre dos aguas

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Received 20 March 2019;
Accepted 27 March 2019.
DOI: 10.7399/fh.11247

How to cite this paper
Peiró S. Pharmaceutical benefits in nursing homes: Falling between two stools. Farm Hosp. 2019;43(3):79-81.

The profile of nursing home residents: fragile and polymedicated with chronic disease

Spain has just over 5,400 public and private nursing homes with around 400,000 beds[1-3] serving 4% to 5% of the population aged more than 65 years. These figures represent some 140 million annual stays, which is almost five times more than the estimated number of acute stays in Spanish hospitals. In total, 77% of residents in Spanish nursing homes are 80 years or more[2]. Of these residents, a significant proportion have dependency issues, cognitive impairment, malnutrition, a risk of bed sores and falls, and many chronic diseases[4], often leading to multimorbidity.

Most of these chronic diseases involve exacerbations and recurrences, progressive deterioration, functional disability, and loss of autonomy which, in the medium to long term, lead to death. The route from nursing homes to emergency rooms, general hospitals, or to medium- to long-term hospital stays is typically two-way. On average, health status is worse among individuals in nursing homes than that of peers of the same age and sex living in the community. The former group need complex health services designed for long-term care that has to be integrated and coordinated over the continuum of care while providing access to different professionals, levels of care, and resources. In relation to this need, the Spanish autonomous communities have gained much pertinent experience; nevertheless, health and social health systems have a long way to go.

Pharmaceutical provision in nursing homes: two models, one objective

Most of these patients take more than five drugs daily, whereas others take much more than 10. These drugs include benzodiazepines, hypnotics, antipsychotics, analgesics (including opioids), anti-inflammatories, oral antiplatelets and anticoagulants, and insulin. Polypharmacy is typically needed in patients with multimorbidity. However, adverse effects are one of the main causes of hospitalization in elderly people[5-7]. In addition, the fact of such large numbers of individuals taking so many daily medications over extended periods means that pharmaceutical costs are substantial (although costs for some are income for others). Given that the average pharmaceutical cost per pensioner in Spain is estimated to be €1,000/y, these 400,000 residents would expend €400 million in community pharmacies without including co-payments. However, their prescribed drug consumption is probably more than the average amount, to which must be added the elevated use of supplements and medications for minor symptoms not reimbursed by the health care system, as well as medical products such as incontinence pads, bed pads, and so on. Thus, nursing homes are relevant markets for the autonomous regional governments that support them and for the suppliers that receive revenues for the goods and services they provide.

The Spanish autonomous communities have addressed pharmaceutical provision to nursing homes using two well-differentiated models: hospital pharmacy services (HPS) and community pharmacy. These two models have been used in combination by all the autonomous communities, but different emphasis has been placed on their content and relative proportion to each other[8]. Some communities have implemented the HPS model for the management of medicine stores in nursing homes, whereas others have implemented full provision via the HPS of public hospitals or have created a specific HPS for each nursing home. It has been shown that HPSs can manage all areas of pharmaceutical provision, including drug selection and acquisition, individual distribution, aspects related to information, safety, quality, and pharmaceutical care, as well as research and training[9,10]. Additionally, specific selection mechanisms, centralized purchasing, and the elimination of distribution margins entail significant savings in acquisition costs[10,11].

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In the other model, community pharmacies manage the medicine stores of private nursing homes. Spanish community pharmacies are typically small retail businesses owned by a pharmacist. The weakness of this model lies in its inability to create the economies of scale needed for the provision of pharmaceutical services to nursing homes. In addition, the underlying incentives are not appropriate for the management of pharmaceutical provision[12] (e.g. profits are associated with distribution margins and the Spanish National Health System provides the final reimbursements with no financial liability on the part of nursing homes). Such incentives do not encourage the control of expenditures, and discourage some valuable interventions, such as the use of therapeutic drug guidelines, medication reconciliation, deprescription, and the prevention of medication-related issues. Although there are an insufficient number of HPSs to adequately deal with the 140 million stays per year in nursing homes, the use of community pharmacies is the predominant model for pharmaceutical provision to nursing homes in Spain.

Like a bull in a china shop

The combination of so many fragile patients with complex health issues needing complex medication, the huge volume of business activity, and the scarcity of public resources demands an intelligent and timely strategy that would lead to substantial improvements in the quality of pharmaceutical care to nursing homes. However, a setting in which there is an urgent need to reduce the public debt has not been conducive to well-thought out policies. For example, Royal Decree-Law (RDL) 16/2012 was passed in 2012 to regulate the management of pharmaceutical provision in nursing homes. However, rather than presenting a medium-term plan that included resources, objectives, and operational management, it created regulations in a vacuum. Spanish regulatory bodies have tended to legislate without providing the budget and operational support needed to transform laws into reality. This tendency is particularly marked when the Spanish central government issues regulations but leaves the autonomous communities to provide the resources. Two non-clinical criteria informed RDL 16/2012: 1) the size of the centre (nursing homes with more than 99 residents were required to have their own HPS or a medicine store managed by a public HPS in the area); and 2) the public or private ownership of the centres (nursing homes with less than 100 places were required to have a medicine store linked to the HPS of the area, whereas private centres could establish links to community pharmacies).

Most of the autonomous communities took a parsimonious approach to RDL 16/2012 due to: 1) the need to update previous regulations; 2) the austerity measures applied to the health sector (these measures targeted human resources and pharmaceutical provision, thereby overwhelming the managerial capacity of the regional health administrations); 3) resistance among community pharmacies to changes that entailed them losing yet another share of their market; and 4) the need to reconfigure and expand the HPSs in order to fulfil the new regulation. According to the Spanish Society of Hospital Pharmacy, almost 1,200 new hospital pharmacy posts would have been needed, without including support staff, to manage nursing homes with more than 99 residents[10]. This increase was impossible to achieve because the Spanish government imposed budget restrictions on the autonomous communities with fiscal deficit, including the reduction of public servant and healthcare staffing levels.

This issue of *Farmacia Hospitalaria* describes one such restructuring experience in Andalusia. This experience began in 2016 (three years after the emission of RDL 16/2012) and included 13 public nursing homes with more than 50 beds[13]. The authors report striking variations between these nursing homes in structural resources and processes. The article does not describe the impact of these variations on clinical outcomes; in fact, no studies exist on the comparative effectiveness of different models or on the impact of implementing or failing to implement specific pharmaceutical care interventions. Although as yet we cannot quantify potential benefits, these variations in resources and processes are a cause for concern.

Where next?

In the next few years, the Spanish autonomous community administrations will try to extend the HPS model to nursing homes with more than 99 beds and to public nursing homes with easy access to HPSs. The regulations will guide the pending reform to completion. The autonomous administrations could also include nursing homes with patients with a greater need for this type of care, regardless of the size of these homes or the type of ownership. However, they should also simultaneously develop other strategies. Community pharmacies will continue to provide their services to many nursing homes for a long time, and the content and quality of this service should not be abandoned.

It also crucial to design incentives to encourage nursing homes to manage pharmaceutical provision according to efficiency and quality criteria. For example, it could be quite helpful to replace the current model of drug expenditure reimbursement for per capita drug financing (adjusted according to the complexity of the residents). In fact, other models could probably be explored. For example, the management of pharmaceutical provision by companies could enable economies of scale that community pharmacies cannot achieve. These types of solutions have worked in other countries, but the current situation in Spain may be less than ideal for running experiments in this area.

Pharmaceutical provision is not the main or only problem faced by nursing homes. We are far from providing the type of integrated, coordinated, and longitudinal care needed by these homes, and their management is only a part of the needed reforms. Regarding pharmaceutical care, it seems unreasonable to strive to deprescribe antipsychotics prescribed in the setting of medical care without asking ourselves when, how, and where we could break this circle. Finally, the almost complete absence of data on the effectiveness, efficiency, quality, and safety of the organizational models and pharmaceutical care interventions in Spain is striking. The lack of research in these areas negatively impacts the quality of decision-making in health policy and management. The fact is that the decision makers in charge of health policy and management have never demanded much scientific evidence in order to take important decisions[14]. This could be another aspect that should change.

Conflict of interests

No conflict of interests.

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