

# CARE OF THE ELDERLY

— *how pharmaceutical care has developed*

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*Health systems throughout the western world face a major challenge as the elderly population grows in numbers.*

*Currently, around half of NHS funding is spent on delivering care to the elderly. This article reviews the history of the speciality of care of the elderly, and how pharmacy services developed in this field*



Advice on medication is provided to an elderly patient by a pharmacist

**G**eriatrics was first used by Nascher in 1909 as a term to describe the medical specialty care of older people, when European research into ageing began. In the UK, it was Marjorie Warren in 1935 who encouraged the development of this area. She was practicing as a doctor at Isleworth Infirmary in London and was given responsibility for large workhouse wards, caring for hundreds of patients. It was in these wards from 1936, that she began reviewing patients, many of whom were older people, and she initiated a programme of rehabilitation. She encouraged the use of appropriate equipment to promote patient independence and improved the ward environment, for the benefit of patients and staff. She published her work, suggesting that geriatrics should become a medical specialty with specialist units in general hospitals and that medical students should be taught about the care of older people. The British Geriatrics Society was founded in 1947 and the first consultant

geriatricians were appointed soon after the inception of the NHS in 1948.

However, the speciality did not develop within the NHS in the way that the government had hoped. Geriatricians were appointed to workhouses and municipal hospitals and this was seen as undesirable by the medical establishment. Doctors at that time assumed that, as before the NHS, their main income would be from private patients, of whom there were none in these hospitals. The government tackled this issue by investing heavily in geriatrics in the 1970s, with good results.<sup>1</sup>

Developments for older people within pharmacy did not parallel the emergence of geriatrics as a speciality. Pharmacists were recognised for their key role in a hospital team as early as 1771, when the New York Hospital Charter included an apothecary as one of the four salaried essential positions. However, pharmacy involvement with patients subsided in the early twentieth century. There were attempts in the USA to improve formal clinical training for pharmacists in the 1930s but universities did not begin to adapt their courses until the 1960s.<sup>2</sup> In the UK, the Linstead report (1955) was written to address the issues of poor recruitment and retention of hospital pharmacy staff, who were badly paid and demotivated at the time. Linstead

recommended that pharmacy should be its own speciality, pharmacists should advise on pharmaceutical matters and the service should be unified. However, these recommendations were mostly ignored and the situation remained unchanged until the development of ward pharmacy in the late 1960s. This coincided with the Noel Hall report, which, in 1970, provided a grading structure for pharmacists. The report was published with a white paper, ensuring that the recommended improvements to the hospital pharmacy service were implemented.<sup>3</sup>

## WARD PHARMACY

**I**n 1967 Baker published a paper on the development of a pharmaceutical service at Westminster Hospital, London.<sup>4</sup> It was clear that pharmacists had lost ward-based contact with patients. This paper outlined the dangers of supply of medicines from handwritten prescriptions and nursing lists of patient medication requirements. The introduction of the medicine chart as a result of this work was a great improvement for the safety of patients. Technicians were recruited to prepare and distribute drugs while pharmacist effort was redirected to the wards. With the rapidly increasing number of drugs

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available through the 1960s Baker recognised that prescribing was becoming increasingly complex, increasing the risk of interactions and drug administration errors. Pharmacists were required to check all new treatments, including therapeutic incompatibilities and to provide information to nursing and medical staff regarding drug treatment. This marked a change in the way hospital pharmacists worked and laid the foundation for today's clinical pharmacy and medication management services, including those for older people, by promoting greater care and better supervision of prescribing. Pharmacists were increasingly to be found on the wards during the 1970s and involvement with medicine related care of patients became standard practice. Pharmacy services for older people began to develop in the early 1980s once clinical pharmacy services had become established.

Progress in the speciality of geriatrics accelerated in the 1970s. Marjorie Warren's model of care, known as the traditional model, centred around improving conditions for patients and rehabilitation. Patients requiring long-stay care were referred to geriatric wards by other doctors, rather than being accepted as direct admissions. In Sunderland, another model of care was developed where services for patients were provided on the basis of age in parallel units (age-defined model). In Newcastle upon Tyne, physicians treated both general medical and geriatric patients on the same wards for acute treatment, and rehabilitation facilities were retained separately (integrated model). The key development affecting pharmacy was the emergence of the multidisciplinary work setting, as well as setting functional goals for patients to aid rehabilitation. This work developed alongside the establishment of an academic base for geriatrics, which appeared in most medical schools around the same time. Research from the US supported the type of practical work occurring in the UK, however multidisciplinary units did not fit in with the US funding systems in hospitals.<sup>1</sup>

In the US, drug information centres were established as early as the 1960s but other specialities took longer to develop. By 1976, psychiatry, pharmacokinetics, paediatrics, parenteral nutrition, adverse drug reactions and cardiopulmonary resuscitation pharmacists were established in various hospitals in the US.<sup>2</sup>

Pharmacists were also to be found in outpatient clinics by 1981. A randomised controlled trial of a clinical pharmacist counselling 133 patients (81 controls) in an outpatient setting showed that documentation of prescribed medicines and patient compliance improved with the presence of the pharmacists. Fewer prescriptions were

duplicated which benefited cost and risk reduction.<sup>5</sup>

## — SPECIALIST PHARMACISTS

In 1984 the Royal College of Physicians (RCP) published its first report on medication and the elderly. Pharmacists were established as professionals working with older people, including pharmacists participating in geriatric outpatient clinics. This involved medication history-taking, counselling patients and carers and advising physicians on cost effective, rational drug therapy.<sup>6</sup> The RCP report<sup>7</sup> highlighted the issue of high prescribing rates for older people stating that, in 1980, older people had twice as many prescriptions dispensed as the national average. This was linked with the rise in adverse drug reactions rates with increasing age, quoting the figure of one in 10 admissions being due to adverse reactions in older people. This was the first widely accepted recognition that medicine use was becoming an increasingly problematic issue for older people. The causes of adverse effects in this patient group are discussed and the term therapeutic enthusiasm is used to describe the willingness of physicians to add new therapy for the patient's multiple pathologies, without medication review. Inadequate supervision of long-term medication is also cited as a key factor in poor medicine management for older people.

This document was important in the development of pharmacy for older people as it recognised the role of the pharmacist in improving medicines management for this group. A ward prescribing policy was recommended and the role of the ward pharmacist was discussed in detail. The RCP stated that the ward pharmacist could be of considerable value to doctors and nurses caring for older people. They recommended that pharmacists should provide advice to medical and nursing staff, become involved in discharge arrangements and patient counselling. Advice on adverse reactions, as well as pharmaceutical formulations, drug labelling, container suitability and assistance with patient compliance, were all mentioned. The report recommended that medical students should be taught about medicines and older people.

In 1997 the Royal College of Physicians published its second report<sup>8</sup> into medication for older people. This report had a considerably larger focus on medicines and made six key recommendations to health care professionals, which are worthy of mention due to their continuing relevance. The RCP report stated:

- Think carefully before prescribing — establish an accurate diagnosis and review the need for repeat prescriptions at regular intervals

- Prescribe with maximum knowledge about the patient — take a thorough drug history, including prescribed and over-the-counter medicines, previous adverse drug reactions and social support to monitor compliance
- Prescribe with maximum knowledge about therapeutics — base therapeutic decisions on the best available evidence
- Monitor the patient for the efficacy and side effects of medicines — have a clear plan for introducing therapy, reviewing efficacy and monitoring for adverse effects. Medication should be reviewed at every opportunity, including over-75 screening programmes
- Help the patient make better use of their medicines — give clear, user-friendly information, identify and address potential compliance problems
- Agree responsibility for prescribing across the primary/secondary interface.

This report also highlighted the increasing numbers of older people being referred for treatment in the secondary care sector. Since the publication of the first report, there had been a substantial increase in the number of older people being admitted for elective surgical procedures, such as joint replacement, and in the number being admitted for many medical conditions, such as myocardial infarction. These, having previously been managed in primary care, were now creating a multi-referral system to different hospital consultants, increasing the complexity of the interface between primary and secondary care. The report acknowledged this problem and highlighted the need for improved communication and prescribing policies across the interface. From the perspective of the pharmacist, the second report acknowledged the valuable role of the pharmacist in advising health professionals and older patients, management of hospital formularies and the development of specific guidelines for prescribing medication in older people.

In retrospect, it is clear that the second report of the RCP provided excellent guidance for the development of the role of the pharmacist working with older people. However, it was a guidance document without the force of government policy. As with the Linstead report, many of its recommendations, though laudable, were not put into practice immediately. In September 2000, "Pharmacy in the future — implementing the NHS plan"<sup>9</sup> was published by the Department of Health. This document stated that hospital pharmacists had a duty to ensure that inpatient medication was optimised early in the patient's stay and that patients received the medicines they needed in a timely way at discharge. However, it was the publication of the

National Service Framework (NSF) for Older People in March 2001<sup>10</sup> that pushed forward the development of pharmaceutical services for older people. This Department of Health ten-year plan recognises, in a medicines management document published as part of the NSF, the key role of medicines management in optimising the care of older people.

## — MEDICINES MANAGEMENT

The Medicines and Older People document describes in detail the potential problems caused by poor medicines management. The key theme of this part of the NSF is the need for regular review of medicines and the use of risk assessment tools as a method of identifying and prioritising pharmaceutical input. This process of identifying patients at greater need of pharmaceutical input is integral to the single assessment process. The NSF for Older People describes the process of single assessment across health and social care for older people, the main benefit of which is a more standardised assessment process across all areas and agencies. Pharmacists have become involved in multidisciplinary outreach/discharge support teams providing a service to elderly patients referred on discharge from hospital or directly from primary care.<sup>11,12</sup> Pharmacists have used initiative to develop screening criteria within teams and although some have not yet been validated, they have resulted in the detection of a number of pharmaceutical care issues.

The NSF builds upon the six key recommendations of the second RCP report to highlight five effective interventions that ensure better management of medicines in older people:

- Prescribing advice/support
- Active monitoring of treatment
- Review of repeat prescribing systems
- Medication review
- Education and training.

The NSF also highlights special therapeutic areas that are of particular interest, eg, stroke, falls, mental health and pain control. This has encouraged pharmacists to become established members of specialist multidisciplinary teams, eg, stroke or falls teams. The benefits of this are already apparent. The involvement of a pharmacist in one falls prevention programme led to a 14 per cent reduction in the number of falls.<sup>13</sup>

The NSF supports the aims of “Pharmacy in the future” regarding hospital pharmacy services recommending re-engineering of services to provide improvements for older people including:

- Medication review on admission to identify medicine-related problems

- Systems to enhance older peoples use of medicines while in hospital, eg, one-stop dispensing schemes, self-administration and copying the discharge prescription to community pharmacists
- Review of medication for discharge
- Provide full information to GPs and patients on medication at discharge
- Promote concordance in medicines use.

The Audit Commission’s report entitled “A spoonful of sugar”, published in November 2001,<sup>14</sup> also supported this re-engineering process. It stated that there should be joint working arrangements between primary and secondary care in four key inter-related areas including patient’s own medication, medication review on admission, self-administration and original pack dispensing. The role of the pharmacy technician has developed within this process to enable them to assume control of the medicines supply function, thereby releasing pharmacists’ time to be more actively involved in decision making about medicines use and prescription monitoring.

New models of pharmaceutical care have developed as a result of guidance produced in the last ten years. Many examples of good practice now exist. One such example is operational in a hospital setting<sup>15</sup> where a team of a senior pharmacist, a junior pharmacist and a clinical technician are attached to a consultant-led medical team. The senior pharmacist attends the consultant’s ward round and the post-take round. The purpose of these visits includes medication review, initiation of the pharmaceutical care plan, drug history-taking, monitoring progress, providing advice and liaison with primary care. The junior pharmacist attends the wards on a daily basis to formulate and solve problems on the care plan, identify pharmaceutical needs, monitor treatments and outcomes and plan for discharge. The technicians provide a twice-daily pick up service and identify pharmaceutical problems.

In the Grampian region, community and practice-based pharmacists have developed a standard medicines management assessment tool for use in the over 75s.<sup>16</sup> Ten areas of medicines management in the home were included in this tool:

- Accuracy of the repeat prescribing record
- Medicines being taken or give as prescribed
- Ability to access medicine container
- Ability to read labels
- Perception of problems taking medicines
- Use of inhalers, eye drops and compliance aids

- Medication storage conditions
- Quantity of medicines held and repeat medication requests
- Safe disposal of all discontinued medicines
- Use of over-the-counter medicines.

This standardised tool was used, after suitable training, by general practitioners, community and practice nurses, health visitors and health assistants. The results of these assessments are then referred to the general practitioner and/or community pharmacist for a more formal medication review. There are many other examples describing the impact of pharmacists on services for older people that clearly demonstrate the benefits of this multidisciplinary-based care for patients.

## — FUTURE DEVELOPMENTS

Pharmacists continue to be at the forefront of developments in medicines management. From September 2003, pharmacists began training as supplementary prescribers. The potential benefit for older people is great. These pharmacists are now able to prescribe, using a clinical management plan written in partnership with a doctor, and agreed by the patient. This enables pharmacists to run medication review clinics, prescribing for patients with whom they will build a long-term relationship and support medication use. There are many opportunities for the development of pharmacist-led medication management services in intermediate care settings and nursing homes.

What does the future hold? The NSF for Older People, “Pharmacy in the future” and “A spoonful of sugar” have all advocated a more patient-focused, integrated pharmaceutical care model for older people. Pharmaceutical referrals through the single assessment process and the wider availability of electronic patient records will ensure the traditional divisions between primary and secondary care become less significant. Pharmacists will continue to take their place as key members of multidisciplinary teams, optimising the health care of older people.

## REFERENCES

1. Grimley Evans J. Geriatric medicine: a brief history. *BMJ*;1997;315:1075–7.
2. McLeod DC. Clinical pharmacy: the past, present and future. *American Journal of Hospital Pharmacy* 1976;33:29–38.
3. Anderson SC, Berridge VS. Historical analysis of hospital pharmacy policy: Why Noel Hall succeeded where Linstead failed. Health Services Research and Pharmacy Practice Conference 2000 (presentation).

4. Baker JA. Recent developments in the pharmaceutical service at Westminster hospital. *Journal of Hospital Pharmacy* 1967;400–6.
5. Monson R, Bond CA, Schuna A. Role of the clinical pharmacist in improving drug therapy. *Clinical pharmacists in outpatient therapy. Archives of Internal Medicine* 1981;141:1441–4.
6. Hackett K, Moss-Barclay C. Pharmacist participation in a geriatric out-patient clinic. *British Journal of Pharmacy Practice* 1984;6:375–6.
7. Black D, Denham MJ, Acheson RM, Drury VWM, Grimley Evans J, Exton-Smith An, et al. Medication for the Elderly. A report of the Royal College of Physicians. *Journal of the Royal College of Physicians (London)* 1984;18;1–17.
8. Working party of the Royal College of Physicians. Medication for older people. *Journal of the Royal College of Physicians (London)* 1997;31:254–7.
9. Department of Health. Pharmacy in the future — implementing the NHS Plan. London:Department of Health;2000.
10. Department of Health. National Service Framework for Older People. London:Department of Health;2001.
11. Wood K. The development of screening criteria for use by pharmacists as part of a geriatric outreach service. *Pharmacy World and Science* 2002;24:A7–A8.
12. Stirton J, McGlynn S. Improving the pharmaceutical care of elderly patients: the joint elderly discharge support team pharmacist. *Pharmacy World and Science* 2000;22:B18–B19.
13. Ellerton J. The role of a pharmacist in a falls prevention program. Society of Hospital Pharmacists of Australia, 25th federal conference, Hobart, Tasmania. 2001, Nov, 8–11 (Conference Paper).
14. Audit Commission. A spoonful of sugar — medicines management in NHS hospitals. London: Audit Commission;2001.
15. Burns N, Still E. Pharmaceutical Care — A model for elderly patients. *Hospital Pharmacist* 2003;10:266–8.
16. Cromarty E, Downie G, Munro K, Ellis G. Improving medicines management in the over-75's in Grampian. *Pharmaceutical Journal* 2001;267:718–20.

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