

Pharmacist prescribing: a brave new world?

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Reflections on pharmaceutical care and pharmacist interventions

- How much have we achieved?
- Can we achieve more?
- How can we do it?

Does the extension of prescribing rights to pharmacists represent the ultimate in pharmaceutical care provision?

Outline of presentation

- **Background to extension of prescribing rights**
- **Research in the area**
- **On-going developments**
- **Some crystal-ball gazing**

The Review of Prescribing, Supply and Administration of Medicines

- **Crown Report 1998/1999**
 - **Care should still be co-ordinated by a single GP or specialist**
 - **Medicines should be prescribed and dispensed on an individual basis**
 - **Other professions should be able to prescribe in specified circumstances within the context of guidelines**
- **Extension of prescribing rights to nurses and pharmacists**

Motivation for policy

- **Improve patient care without compromising safety**
- **Easier for patients to get the medicines they need**
- **Increase patient choice in accessing medicines**
- **Make better use of skills of health professionals**
- **Contribute to introduction of more flexible team working across the National Health Service (UK)**

GPs' and pharmacists' views on community pharmacists as prescribers

- **Qualitative study involving GPs and community pharmacists in uniprofessional focus groups**
 - **22 GPs in 5 focus groups**
 - **31 community pharmacists in 6 focus groups**
 - **Discussed the role of the community pharmacist in primary care and future role as prescribers**

Perceived interprofessional barriers between community pharmacists and general practitioners: a qualitative assessment

Camel M Hughes and Siobhan McCann

SUMMARY

Background: There have been calls for greater collaboration between general practitioners (GPs) and community pharmacists in primary care.

Aim: To explore barriers between the two professions in relation to closer interprofessional working and the extension of prescribing rights to pharmacists.

Design of study: Qualitative study.

Setting: Three locality areas of a health and social services board in Northern Ireland.

Method: GPs and community pharmacists participated in unprofessional focus groups; data were analysed using interpretative phenomenology.

Results: Twenty-two GPs (distributed over five focus groups) and 31 pharmacists (distributed over six focus groups) participated in the study. The 'shopkeeper' image of community pharmacy emerged as the superordinate theme, with subthemes of access, hierarchy and awareness. The shopkeeper image and conflict between business and health care permeated the GPs' discussions and accounted for their concerns regarding the extension of prescribing rights to community pharmacists and involvement in extended services. Community pharmacists felt such views influenced their position in the hierarchy of health-care professionals. Although GPs had little problem in accessing pharmacists, they considered that patients experienced difficulties owing to the limited opening hours of pharmacies. Conversely, pharmacists reported great difficulty in accessing GPs, largely owing to the gatekeeper role of receptionists. GPs reported being unaware of the training and activities of community pharmacists and participating pharmacists also felt that GPs had no appreciation of their role in health care.

Conclusion: A number of important barriers between GPs and community pharmacists have been identified, which must be overcome if interprofessional liaison between the two professions is to be fully realised.

Keywords: general practitioner; community pharmacist; prescribing; barriers; qualitative research.

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Introduction

PHARMACISTS are being challenged to become key players in the prescribing process, as well as becoming advocates for patients through optimising and monitoring drug use.¹⁻³ Clearly, this requires more formal integration of pharmacists into health care and the development of partnerships, particularly with general practitioners (GPs).

This may be realised through the Crown report on prescribing, supply and administration of medicines.⁴ The report recommended extending prescribing rights to other professional groups, including pharmacists. It is envisaged that pharmacists will become dependent, or supplementary, prescribers (as opposed to independent prescribers, such as GPs and dentists, and to some extent, nurses), which will allow them to prescribe a wide range of drugs, after diagnosis by a doctor and within a clinical management plan. They will be responsible for continuing care for patients who have been assessed by an independent prescriber, e.g. in the management of asthma or hypertension. Access to medical notes would be granted to supplementary prescribers.⁴

Clearly, such recommendations will have major legislative, training, clinical and professional implications, notably in primary care. Hospital physicians are familiar with clinical pharmacists, who are often part of ward rounds and are active in the drug management of patients.⁵ GPs have become familiar with the role of prescribing advisers or practice pharmacists who provide advice on prescribing.^{6,7} Links between GPs and community pharmacists, however, are less formalised. One issue raised by previous research in relation to the development of the role of the pharmacist is the perceived professional barriers between GPs and community pharmacists.⁸ The Crown report recommendations implicitly demand greater collaboration between the two professions, and, if barriers exist, these must be overcome before comprehensive interprofessional working can be realised. Thus, the aim of this study was, through qualitative methodology, to identify and explore perceived (or otherwise) barriers between GPs and community pharmacists in relation to interprofessional working and the extension of prescribing rights to pharmacists.

Method

The study population included GPs and community pharmacists from three locality areas (A, B, and C) of a health and social services board in Northern Ireland. This board was selected, as there were a number of well-established

The pharmacist role in prescribing

- *“..the pharmacist can give too strong an opinion as to what we should prescribe. I think they should leave the prescribing up to us.” (GP7)*
- *“We have not got pharmacy prescribing yet....but that would be seen by some as an invasion of their territory....” (PH27)*

Supplementary prescribing

- **Partnership between the independent prescriber and the supplementary prescriber**
 - **Draw up and agree an individual Clinical Management Plan (CMP) for the patient's condition before supplementary prescribing begins**
- **CMP enables the supplementary prescriber to manage the treatment of individual patients within identified parameters**

Eligibility to be a supplementary prescriber

- **Registered with the Royal Pharmaceutical Society of GB for two years**
 - Pharm Society of N. Ireland
- **Evidence of support from a sponsoring organization**
- **Confirmation of appropriate supervised practice in a defined clinical area**
- **Support of a named medical practitioner to act as supervising mentor**

Training required

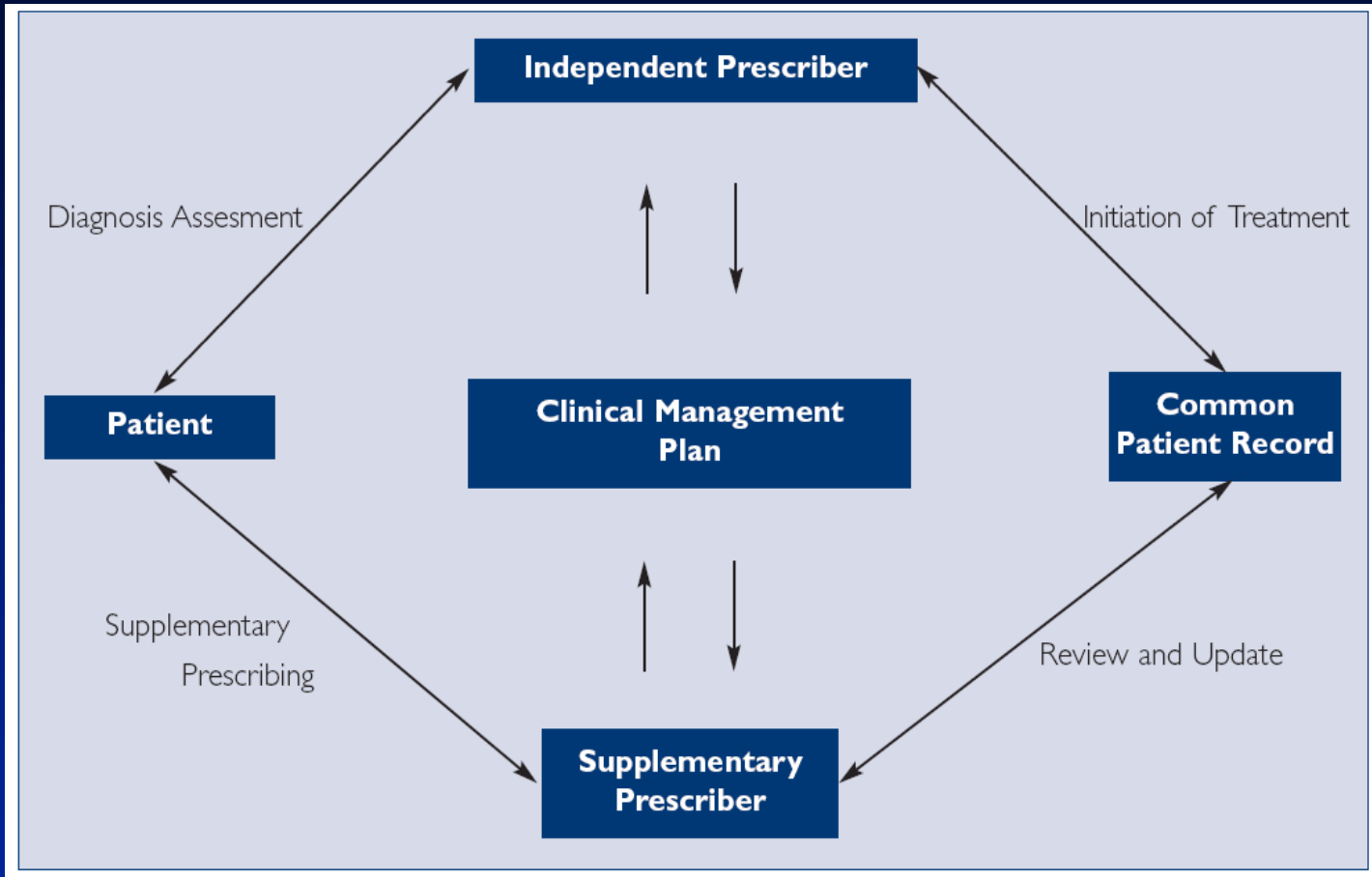
- **Must undertake a 25-day training course and complete 12 days in-practice training under the supervision of a designated medical practitioner (mentor)**
- **Curriculum includes consultation and decision-making, prescribing in a team context, physical examination skills**
 - **Aspects of the curriculum have now been introduced into undergraduate courses**

What can be prescribed?

- **No legal restrictions on what can be prescribed by pharmacists**
 - No restrictions on clinical conditions that can be treated supplementary prescribers
- **All supplementary prescribers may prescribe for full range of medical conditions**
 - Most pharmacists are restricting themselves to one/two clinical areas

Clinical Management Plan (CMP)

- **Cornerstone of supplementary prescribing**
- **Provides details on:**
 - **Who can be prescribed for**
 - **Who are the IP and SP**
 - **Condition being managed and medications to be used**
 - **Protocol/guidelines to be followed**
 - **Frequency for review/monitoring**



The Supplementary Prescribing Process

Northgate Practice – Clinical Management Plan

Name of Patient: ~[Title/Initial/Surname]				
Patient identification number, date of birth: ~[Patient Number] ~[Date Of Birth]				
Patient medication sensitivities/allergies: Nil known				
Independent Prescriber(s):			Supplementary Prescriber(s)	
Condition(s) to be treated Thromboprophylaxis			Aim of treatment Maintain INR between 2.0-3.0 (target 2.5)	
Medicines that may be prescribed by SP:				
Preparation Warfarin sodium tablets (all strengths)	Indication	Dose schedule frequency once a day.	Specific indications for referral back to the IP bleeding symptoms with or without high INR	
Guidelines or protocols supporting Clinical Management Plan: British Society for Haematology - Guidelines on oral anticoagulation				
Frequency of review and monitoring by:				
Supplementary prescriber as often as necessary for warfarin control			Supplementary prescriber and Independent prescriber 12 months from start date	
Process for reporting ADRs: Serious ADRs to be reported to CSM West Midlands directly via yellow card All ADRs to be recorded in patient electronic GP record Shared record to be used by IP and SP: Electronic GP record				
Agreed by Independent prescriber(s)	Date	Agreed by supplementary prescriber(s)	Date	Date agreed with patient/carer (START DATE)

Hypertension – Clinical Management Plan

Name of Patient:		Patient medication sensitivities/allergies:		
Patient identification e.g. ID number, date of birth:				
Independent Prescriber(s): Dr		Supplementary Prescriber(s) Chris Williams		
Condition(s) to be treated: Hypertension and associated risk factors		Aim of treatment: Control BP to target levels, reduce risk factors for MI and stroke.		
Medicines that may be prescribed by SP:				
Preparation	Indication	Dose schedule	Specific indications for referral back to the IP	
ACE Inhibitors (including AIT's) Beta Blockers Diuretics Calcium Channel Blockers Alpha blockers Aspirin Statins	Hypertension. Prophylaxis of cerebrovascular disease or MI. Hyperlipidaemia.	As per BNF and NICE hypertension guideline.	Significant increase in serum creatinine. Resistant to optimised statin or hypertensive therapy. Aspirin hypersensitivity. Malignant hypertension i.e. > 180 / 110mmHg Development of any new conditions, not previously listed. Angioedema or other serious side effects.	
Guidelines or protocols supporting Clinical Management Plan: Clinical Guideline 18 – NICE – Hypertension – Management of hypertension in adults in primary care – August 2004 The BHS Guidelines Working Party Guidelines for Management of Hypertension: Report of the Fourth Working Party of the British Hypertension Society, 2004 – BHS IV. Journal of Human Hypertension 2004; 18: 139-185				
Frequency of review and monitoring by:				
Supplementary prescriber At least 6 monthly, but more often if required.	Supplementary prescriber and independent prescriber If any problems/concerns – otherwise 12 monthly.			
Process for reporting ADRs: Supplementary prescriber to report to independent prescriber who takes full responsibility for reporting adverse drug reactions.				
Shared record to be used by IP and SP: Surgery computer system				
Agreed by independent prescriber(s)	Date	Agreed by supplementary prescriber(s)	Date	Date agreed with patient/carer

Evaluation of prescribing pharmacists' experiences

- **Study of pharmacists and physicians before and after supplementary prescribing training**
 - Northern Ireland setting
- **Have analysed all 'before' data; currently collecting 'after' data**
- **Currently collecting patient data**
 - Outcomes' information is limited

Pharmacists' and mentors' views on the introduction of pharmacist supplementary prescribing: a qualitative evaluation of views and context

Fran Lloyd and Carmel M Hughes

Abstract

Aims Supplementary prescribing has been a major policy initiative in the UK, which has seen pharmacists and nurses assume greater responsibility for prescribing in collaboration with doctors. This study explored the views and professional context of pharmacists and physicians (who acted as their training mentors), prior to the start of supplementary prescribing training.

Setting Primary and secondary healthcare settings in Northern Ireland.

Methods All pharmacists (n=63) from the first four cohorts enrolled for supplementary prescribing training in Northern Ireland were invited to participate in a series of focus groups, while mentors (n=54) were asked to participate in face-to-face semi-structured interviews; the research took place between September 2003 and April 2005. All discussions/interviews were audiotaped and transcribed, and analysed using constant comparison.

Key findings Nine pharmacist focus groups were convened (number per group ranging from 4-8; total n=47) and 35 semi-structured interviews with mentors were conducted. The four main themes that emerged were internal drivers, benefits and concerns, relationships, and beyond the current professional comfort zone. Supplementary prescribing was broadly welcomed by both professional groups and was anticipated to produce improvements in patient care and interprofessional relationships, but there were some concerns about loss of diversity, deskilling of junior doctors, safety and professional encroachment. Caution was expressed with regard to a further extension of prescribing rights, particularly in relation to the role of pharmacists in diagnosis and independent prescribing decision making.

Conclusion Although supplementary prescribing was viewed positively, these findings should be considered in the light of more recent developments in prescribing rights for other health professionals, including pharmacists.

Methodology

- **All pharmacists (n = 63) from the first four cohorts were invited to participate in a series of focus groups**
- **Mentors (n = 54) asked to participate in face-to-face semi-structured interviews**
 - **Between September 2003 and April 2005**
- **All discussions/interviews were audiotaped and transcribed, and analysed using constant comparison**

Participants in the 'before' phase

- **Nine pharmacist focus groups**
 - 32 hospital, 13 community and 2 primary care pharmacists
- **35 semi-structured interviews with doctors**
 - 21 hospital doctors, 14 GPs

Main themes

- **Internal drivers**
- **Benefits and costs**
- **Relationships**
- **Beyond the current professional comfort zone**

Internal drivers

- **Natural progression, professional development, fear of getting left behind**
 - *“For me it was the next step, em, I had been working quite closely with GP practice, em with medication reviews, medicines management and it was the next step, progression from that”.*
(Community pharmacist 14)

Benefits and costs

- **Promotion of multidisciplinary working, improved status**
 - *“It was good to have, you know, have her around as a pharmacist and as you know nowadays, the whole process is [a] multidisciplinary approach to treating patients”*. (Consultant 19)
- **Who will check pharmacists, deskilling of junior doctors, professional encroachment**
 - *“Who checks us? That’s what I think is a disadvantage”*. (Hospital pharmacist 14)

Relationships

- **The need to have a good working relationship**
 - *“It all depends on the bond of trust and close working relationship between the prescriber and the supplementary prescriber”* (Consultant 20)
- **Less well-established relationships between GPs and community pharmacists, but SP may improve this**
 - *“I have spoken to XXXX on the phone on two occasions and I have met him once here in the surgery. Prior to that I didn’t know him”*. (GP 1)

Beyond the professional comfort zone

- How far can prescribing go for pharmacists?
 - *“the way it stands, it is very restrictive.”* (HP25)
 - *“I think as long as it is clearly stated that the pharmacist is prescribing on behalf of the clinician who is overall in charge of the supervision of that prescribing..... We will remain in charge.”* (C5)

Can independent prescribing be a reality?

- **Some pharmacists saw it as a natural extension to SP**
 - *“There’s not a lot of point in going down the road of supplementary prescribing if you can’t eventually see that you will be able to prescribe independently.” (HP4)*
- **Doctors.....?**
 - *“Independent prescribing will still have to be protocol-driven (C10)*

Major concerns over diagnosis and pharmacists

Independent prescribing is a reality!



Improving Patients' Access to Medicines:

**A Guide to Implementing Nurse and Pharmacist
Independent Prescribing within the NHS in
England**

*Department of Health
Gateway reference: 6429*

**Consultation followed
by change in
regulations on May
1st 2006**

Independent prescribers

- **A practitioner responsible and accountable for the assessment of patients with diagnosed or undiagnosed conditions and for decisions about the clinical management required, including prescribing**

Training

- **Conversion courses**
 - **Allow supplementary prescribers to become independent prescribers**
 - **More in-practice training**
 - **Emphasis on independent working**
 - **Autonomous decision-making**
 - **Awareness of personal limitations and scope of professional competence**
 - **Must be signed off as competent in clinical assessment by mentor**
 - **Stand-alone independent prescribing courses**
 - **Currently being accredited**
 - **Belfast course accredited in January 2007**

Independent prescribing within a team context

- **Requires an initial patient assessment, interpretation of that assessment, a decision on safe and appropriate therapy and a process of on-going monitoring**
 - **Normally carried out within a multidisciplinary healthcare team, either in hospital or in a community setting and within the context of a single accessible healthcare record**

Differences between Supplementary Prescribing and Independent Prescribing

- **Independent Prescribing**
 - **No CMP**
 - **Can prescribe any drug apart from Controlled Drugs and those which are unlicensed**
 - **Likely to change with revised legislation**
 - **Recommended that the Independent Prescriber keeps his/her own documentation**

Diagnosing doctors and prescribing pharmacists?

- **Prescribing is the natural point of contact between pharmacy and medicine**
 - **Primary point of conflict**
- **Can our professional skills be exploited to improve prescribing?**

A prescription for better prescribing

Many medical students are unprepared for skilled prescribing

It's that time of year again. The new junior members of staff have arrived and the old anxiety emerges—are they well trained? In particular, are they properly trained in practical drug therapy and prescribing? We believe they may not be.

In July we drew attention, yet again, to what we and many others perceive to be a serious problem in British medicine—poor prescribing.¹⁻³ We emphasised that deficiencies are not confined to the United Kingdom, and three days later the Institute of Medicine in the United States independently expressed similar concerns.² The chairman of the medical academic staff committee of the British Medical Association later concurred,⁴ and the Healthcare Commission urged the NHS to improve prescribing.⁵

Evidence of poor prescribing in the UK is abundant. Effective treatments, such as angiotensin converting enzyme inhibitors for heart failure⁶ and statins for hyperlipidaemia,⁷ are often underprescribed. Prescription errors are common,⁸ especially when new doctors start work in hospitals.⁴ Approximately 6.5% of admissions to hospital are related to adverse drug reactions, with an associated mortality of 0.15%; this costs the NHS £466m (€692m, \$881m) annually.⁹

The reasons for these errors are manifold.¹⁰ Some relate to system failures. For example, why does every NHS hospital have its own inpatient prescribing sheet? There should be a single nationwide form.

Another fundamental problem is that medical students are not adequately instructed. In 1994, UK medical students received a median 61 hours of teaching related to pharmacology, clinical pharmacology, and therapeutics.⁷ Since then the numbers of pharma-

allowed to prescribe without providing evidence of competence. Students should not be allowed to compensate for poor performance in this high risk activity by good performances in other areas.

The box (see bmj.com) shows our practical prescription to improve prescribing.¹¹

Pharmacologists and clinical pharmacologists should be expected to lead the way in providing the necessary teaching and assessments. However, there are too few of them to handle the entire burden. Their clinical colleagues should be encouraged to devote specific sessions to practical drug treatment, not least because other specialists and general practitioners will draw on and provide extra practical experience. Partnerships with other prescribers, such as pharmacists and nurses, might also be useful.

Medical students have expressed their desire for more teaching in practical drug therapy and prescribing.¹²⁻¹⁴ They too can play their part by encouraging their medical schools to provide more tuition. Together with Simon Maxwell at the University of Edinburgh, Amy Heaton, a medical student, has prepared a short web based questionnaire that asks medical students how well their course prepares them for prescribing drugs (<http://s12.forisite.com/amyheaton/pharmacologytherapeutics/index.html>). We encourage all medical students and doctors in their first foundation year to take a couple of minutes to fill it in. We also challenge all those involved in teaching students and training doctors to implement these proposals. After all, we shall all benefit from better prescribing.

Jeffrey K Aronson, *president elect*

**Aronson et al., BMJ 2006;
333: 459-460**

“Prescribing is becoming increasingly difficult...Modern drugs are pharmacologically complex, the population is ageing and the use of polypharmacy is increasing”

Challenges in prescribing in older populations

- **Reduce** inappropriate **polypharmacy**
- **Promote** appropriate **polypharmacy**
 - **Evidence of under-treatment**

Polypharmacy

A New Paradigm for Quality Drug Therapy in the Elderly?

As older patients move through time, often from physician to physician, they are at increasing risk of accumulating layer upon layer of drug therapy, as a reef accumulates layer upon layer of coral.

Jerry Avorn, MD

THERE ONCE WAS A TIME WHEN POLYPHARMACY was considered to be a bad thing in older patients.¹ It is well known that use of larger numbers of drugs is associated with an increased likelihood of inappropriate prescribing² and adverse drug events.³ Drug-induced symptoms can also produce prescribing cascades that develop when an adverse effect is misinterpreted as a new medical problem, leading to the prescription of additional drugs.⁴ Yet, the number of medications prescribed to elderly patients and the complexity of their drug regimens have continued to increase over time.^{5,6} Therapeutic regimens that include the use of 2 or more different medications to treat a single condition are increasingly promoted for the optimal management of conditions that are particularly prevalent in the older patient population, including hypertension,⁷ heart failure,⁸ ischemic heart disease,⁹ diabetes mellitus,¹⁰ and Alzheimer disease.¹¹ Promotion of prescription drugs directly to consumers may also factor into the increased levels of medication prescribing to older persons,¹² with advertising focusing heavily on conditions such as osteoporosis, osteoarthritis, hyperlipidemia, and dementia. A national survey of the US noninstitutionalized adult population indicated that more than 40% of persons 65 years or older use 5 or more different medications per week, and 12% use 10 or more different medications.¹³ Levels of medication use are even higher among elderly persons residing in assisted-living and nursing home settings.¹⁴

See also page 2031

Although concerns regarding the excessive use of drugs in the US elderly population are widely held, conventional wisdom continues to swing toward a view that there is widespread underuse of beneficial therapies in this population. In this issue of the ARCHIVES, Sloane and colleagues¹⁵ report that there are substantial levels of undertreatment of older persons with "selected medications whose value in decreasing morbidity has been established in clinical trials." This study was conducted among residents of residential care and assisted-living facilities, 2 settings that are rapidly becoming a major component of the health care system for frail elderly persons. Such facilities provide room and board, 24-hour supervision, and assistance with activities of daily living but are not licensed at a nursing home level of care.¹⁶ How-

ever, residents of these facilities are similar to nursing home residents in many ways. Over half are aged 85 years or older, most are dependent in 1 or more activities of daily living, and many are cognitively impaired.¹⁷

Therapies studied by Sloane and colleagues¹⁵ included angiotensin-converting enzyme inhibitors in heart failure, antiplatelet agents and β -blockers among those with a diagnosis of myocardial infarction, antiplatelet agents and anticoagulants in patients with stroke, and osteoporosis treatments among those identified with that condition. In inferring underuse of beneficial therapies, the investigators acknowledge that there were limits regarding the adequacy of clinical information used to make these assessments. Diagnoses were based solely on information available in the medical records located in the residential care/assisted-living facilities; such records are often incomplete compromising the ability to validate the presence of a medical condition or to determine whether contraindications to therapy are present. Nonetheless, the absence of treatment in such high percentages of residents raises the specter of an important quality problem in the care of older patients.

There are many factors that contribute to the underuse of beneficial therapies in the geriatric patient population. Physicians may fail to prescribe potentially beneficial medications to elderly patients owing to the scarcity of data on which to base pharmacotherapeutic decisions or for fear of causing adverse drug events in patients who are already using multiple medications. While some may consider this practice to represent therapeutic nihilism, others may consider this to be prudent prescribing. A fair and balanced assessment of the issue of undertreatment of elderly patients must give consideration to 3 important areas: (1) the lack of high-quality evidence derived from clinical studies with relevance to treating the older patient with multiple chronic medical conditions; (2) the need for systems of care that improve drug safety and enhance adherence in elderly persons on complex medication regimens; and (3) the persistence of financial barriers to access to medications.

THE LACK OF HIGH-QUALITY EVIDENCE TO GUIDE PRESCRIBING

Available scientific evidence often does not provide a definitive answer concerning the benefits or risks of many drug therapies in our oldest patients. Historically, older

**Gurwitz. Arch Intern
Med 2004 164:
1957-1959**

What we need to think about, according to Jerry Gurwitz

- **The lack of high quality evidence for prescribing in older people**
 - **Relevance to older people with multiple co-morbidities**
- **Need for systems that improve drug safety and enhance adherence in older people on complex medication regimens**
 - **Multidisciplinary teams involving pharmacists**
- **Financial barriers to access to medications**

“As older people move through time, often from physician to physician, they are at increasing risk of accumulating layer upon layer of drug therapy, as a reef accumulates layer upon layer of coral.”

Jerry Avorn MD

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