

residential care. In our first study, in 1994, we approached a random one-in-two sample of the non-nursing-home population of a Sydney retirement village ($n=1466$). We excluded residents who were under 65 years, had severe dementia, were away from the village at the time of the survey, or were too deaf or ill to participate. Of 610 eligible residents, 513 participated (response rate, 84%). Of these, 42.1% lived in hostels and 57.9% in independent living units. In a second, similar study, in 2000–2001, we surveyed residents of three Sydney aged-care hostels ($n=205$). Of 159 eligible residents, 148 (93%) participated.

In both studies, residents were asked how often over the previous six months they had experienced recurring pain and asked to rate the severity of pain at its worst (see Box). Using the Geriatric Depression Scale (GDS),³ Study 1 found that residents reporting frequent/constant pain were significantly more likely to be depressed (ie, to have a GDS score ≥ 11) than people reporting rare/occasional pain; similarly, people who felt rare/occasional pain were more likely to be depressed than those with no pain (odds ratio, 1.44; 95% CI, 1.13–1.83). In Study 2, there was a non-significant association between frequent pain and depression (odds ratio, 1.47; 95% CI, 0.96–2.24).

We implemented pain management programs at each facility. In Study 1, the program was part of a multifaceted intervention for depression,⁴ but residents could attend whether depressed or not. Based on general practitioner referral, the program provided interdisciplinary assessments by a visiting rehabilitation specialist together with a physiotherapist, occupational therapist and registered nurse from the facility. Consultative psychiatric input was also available. Neuropathic and musculoskeletal pain were the most common reasons for referral. Recommended interventions included drug treatment, exercise and preventive measures. Our impression was that they were well received by residents and GPs.

In Study 2, residents with chronic pain were referred to a physiotherapist specialising in pain management and reported that this was beneficial. A clinical psychologist also offered to assist, but residents were reluctant to accept this form of help. Our impression was that psychological assistance would have been better received as part of an interdisciplinary pain management program.

Older people in residential care may find it difficult to travel to hospital-based pain management programs. Our experience indicates that it is feasible to conduct pain

management programs in residential care. However, improving pain management is not only a matter of pharmacological interventions. If we are serious about achieving adequate standards of pain management in residential-care facilities in Australia, resources should also be devoted to providing accessible interdisciplinary pain management programs and to changing the attitude that pain is an inevitable part of old age.

1. Melding PS. Can we improve pain management in nursing homes [editorial]? *Med J Aust* 2002; 177: 5-6.
2. McClean WJ, Higginbotham NH. Prevalence of pain among nursing home residents in rural New South Wales. *Med J Aust* 2002; 177: 17-20.
3. Yesavage JA, Brink TL, Rose TL, et al. Development and validation of a geriatric depression screening scale: a preliminary report. *J Psychiatr Res* 1983; 17: 37-49.
4. Llewellyn-Jones RH, Baikie KA, Castell S, et al. How to help depressed older people living in residential care: a multifaceted shared care intervention for late life depression. *Int Psychogeriatr* 2001; 13: 477-492. □

Halting the growth in diagnostic testing

Michael J Murray

Group Manager, Aged Care, St Vincent's Health, St George's Hospital, 283 Cotham Road, Kew, VIC 3101
michael.murray@stgeorges.org.au

TO THE EDITOR: As a geriatrician in the subacute sector with hospital medical officers (HMOs) rotating from a major teaching hospital, I am acutely aware of the cost to all concerned of inappropriate diagnostic testing. Discussion stimulated by Stuart et al¹ and the editorial by Hammett and Harris² may help elevate this issue into its rightful arena — quality care and clinical accountability.

Donabedian,³ in looking at the assessment of quality care, describes “elements in the performance of practitioners”, with technical performance defined as “knowledge and judgement used in arriving at the appropriate strategies of care”. I believe that both these quality elements are deficient and that it is the responsibility of the senior clinicians to provide the necessary leadership in ensuring their acquisition.

While I agree with Hammett and Harris that there are systems failures and that, as an example, improved feedback of results (particularly given changing HMO work practices and shorter length of patient stays) will provide some of the answers, there appears little doubt that a significant knowledge deficit exists among junior doctors regarding the use and interpretation of common tests and how often they should be ordered. The unfortunate fact is that we have known about these issues for many years and have yet to develop a sustained response. At our hospital we have

attempted to modify the use of diagnostic tests by HMOs during their geriatrics rotation, with tutorials from biochemists and haematologists which are reinforced during consultant ward rounds and meetings. This is, however, doomed to failure unless the process is continued by all other clinicians who supervise HMOs.

Emanuel and Emanuel⁴ define accountability in a number of domains. The least controversial of these, I suggest, is professional competence. It is incumbent on us as senior clinicians to “invoke, affirm and enforce professional standards”,⁴ being accountable for the practices of those HMOs under our supervision. Appropriate use and understanding of diagnostic testing will reduce unnecessary patient discomfort while also reducing costs. As any geriatrician will tell you, additional years without insight simply provide grey hair, not improved clinical practice.

1. Stuart P, Crooks S, Porton M. An interventional program for diagnostic testing in the emergency department. *Med J Aust* 2002; 177: 131-134.
2. Hammett R, Harris R. Halting the growth in diagnostic testing [editorial]. *Med J Aust* 2002; 177: 124-125.
3. Donabedian A. The quality of care: how can it be assessed? *JAMA* 1988; 260: 1743-1748.
4. Emanuel E, Emanuel L. What is accountability in health care? *Ann Intern Med* 1996; 124: 229-239. □

Warwick J Carter

General practitioner, The Jamboree Centre, 50 Sumners Road, Sumner Park, QLD 4074
wjcarter@ozemail.com.au

TO THE EDITOR: In their editorial,¹ Hammett and Harris have overlooked one of the most important contributory factors to the increased use of diagnostic tests by community-based practitioners (ie, GPs) — patient demand.

It is not unusual for a GP to be faced with a request by a patient to be “tested for everything”, or for a specific test that may be quite inappropriate (“I just want my hormones checked”).

It takes far longer to explain to the patient that the tests are inappropriate than to give in and sign the appropriate pathology form. And then, if the patient a year later does come down with some obscure syndrome, he or she can come back in the courts and say, “If only the doctor had listened to my request for tests I would be okay now”.

The frontline GP is in a lose-lose situation, stuck between the Health Insurance Commission and its demands for reasonable levels of testing, the expectations of patients that everything can be detected by a blood test, and the excessively perfectionist ideals of the legal system.

1. Hammett RJH, Harris, RD. Halting the growth in diagnostic testing [editorial]. *Med J Aust* 2002; 177: 124-125. □

Rohan J H Hammett,* Roger D Harris†

*Director, Clinical Practice Improvement Unit,
†Emergency Physician, Royal North Shore Hospital,
Level 2, Vindin House, St Leonards, NSW 2065
rhammett@med.usyd.edu.au

IN REPLY: As Murray notes, appropriate test ordering belongs firmly in the domain of quality care and clinical accountability. In his seminal article on clinical leadership of healthcare system improvement, Berwick lists appropriate use of testing and therapy as the first challenge facing people who wish to improve healthcare systems in the developed world.¹

Murray also identifies the paucity of structured educational programs aimed at providing junior medical staff with the skills to exercise “knowledge and judgement” in test ordering. The Royal Australasian College of Pathologists is seeking to address this deficiency through the development of educational modules on test ordering.

It is unlikely, however, that education alone will curb the increase in test ordering in Australia. Educational programs for junior medical staff are notoriously resource-intensive and difficult to sustain. In addition, they rarely provide the point-of-care guidance that seems to be more effective in sustainably modifying behaviour. Such guidance may require test-ordering software that provides guidelines for ordering and feedback of individual performance, or the use of structured test-stratification programs such as that described by Stuart et al.²

Improved education, supervision and point-of-care guidance will prove ineffective if fears of litigation continue to drive the behaviour of clinicians. As Carter points out, concerns about litigation must be considered in any program aimed at improving practice. However, although litigation related to missed diagnosis is a recurring theme, this may relate more to time pressures rather than a failure to perform investigations. Indeed, many mal-practice suits result from failure to adequately check and act upon the results of the barrage of tests ordered. Attempts to reduce medicolegal risk by ordering all conceivable tests may increase practitioners' risk unless they have extremely well-designed follow-up systems.

It is important that clinicians not sacrifice high-quality, evidence-based investigation and treatment in an attempt to minimise perceived litigation risks. By testing inappropriately, clinicians may in fact expose themselves to greater risks of litigation, as their patients are exposed to the risks of the tests themselves, the chance

of false-positive results and inappropriate treatment, and the failure to follow up on investigation results.

It is unfortunate, and an indictment of our current reimbursement system, that the financial realities of community practice make it difficult for clinicians to take sufficient time to communicate with patients about the appropriateness of an investigation or treatment. If we continue to allow this to become the way we practise, we will continue to see a diminution of our professional role as we become merely booking agents for tests.

As Berwick says, “Efforts to reform the health system from the outside can help motivate and set the stage for improvement. Yet, if clinicians do not wish to make specific changes in their own work to better meet society's need for better outcomes and lower cost, no-one outside the health system can be clever enough or powerful enough to make them do it.”¹

1. Berwick DM. Eleven worthy aims for clinical leadership of health system reform. *JAMA* 1994; 272: 797-802.

2. Stuart PJ, Crooks S, Porton M. An interventional program for diagnostic testing in the emergency department. *Med J Aust* 2002; 177: 131-134. □

An interventional program for diagnostic testing in the emergency department

Iain B Gosbell,* Peter J Collignon,†
John D Turnidge,‡ Christopher H Heath,§
Joan L Faoagali¶

*Infectious diseases physician, South Western Area Pathology Service, Locked Bag 7090, Liverpool BC, NSW 1871; †Infectious diseases physician, Canberra Hospital, Garran, ACT; ‡Infectious diseases physician, Women's and Children's Hospital, Adelaide, SA; §Infectious diseases physician, Royal Perth Hospital, Perth, WA; ¶Director of Microbiology and Adjunct Professor, Royal Brisbane Hospital Campus, Queensland Health Pathology Service, Brisbane, QLD. i.gosbell@unsw.edu.au

TO THE EDITOR: While agreeing that sensible utilisation of pathology tests in emergency departments (EDs) is important, we are concerned that the article by Stuart et al¹ might be misinterpreted to justify wholesale reductions in important diagnostic microbiological tests, particularly blood cultures. Stuart and colleagues imply they could safely reduce the number of blood cultures by 80%.¹ Other local data have suggested a minority of blood cultures in the ED influence patient management.²

Confirmation of aetiology will be denied for patients by “rationalisation” of blood cultures in EDs. Although most pathogens are susceptible to broad-spectrum antimicrobial agents, widespread empiric pre-

scribing of such agents in an era of increasing antimicrobial resistance is unwise.

A recent Australian study evaluating blood cultures found that a third of patients with positive blood culture results were not clinically suspected to be bacteraemic.³ Furthermore, the Journal recently reported the emergence of community-acquired methicillin-resistant *Staphylococcus aureus* (MRSA),⁴ and increasing resistance in *Streptococcus pneumoniae*.⁵ Missing MRSA or multidrug-resistant pneumococcal bacteraemia will result in adverse patient outcomes. What about missed cases of meningococcal disease, or typhoid fever, with their associated public health costs? Paradoxically, amid emerging antimicrobial resistance, we may become less aware of the problem. Furthermore, what about the infection control costs required to control the resultant outbreaks of multidrug-resistant organisms?

Empiric broad-spectrum antibiotic prescribing, driven by failure to undertake important microbiological investigations, is bad medicine:

- It teaches everyone to guess the microbiological diagnosis, and, if you do not test, who can prove you wrong? Perhaps only when the patient presents to the tertiary referral hospital with therapeutic failure and evolving multisystem organ failure.
- It logically extrapolates to all patients getting vancomycin plus meropenem to ensure covering MRSA and resistant gram-negative bacilli.
- It inevitably drives resistance, which is increasing rapidly.
- It has never been subject to rigorous scientific scrutiny with cost-effectiveness studies.

Moreover, the study by Stuart et al¹ provides no data on readmission rates, lengths of stay, adverse events and rates of missed or incorrect diagnoses; the ED setting studied has limited generalisability; and United States guidelines, which may be inappropriate in the Australian healthcare context, were used to develop the diagnostic testing protocol.

Might not reducing the ordering of some microbiological tests cause “spiralling therapeutic empiricism”? Might not the overall healthcare budget growth accelerate because of increased prescribing of expensive broad-spectrum antimicrobials?

1. Stuart PJ, Crooks S, Porton M. An interventional program for diagnostic testing in the emergency department. *Med J Aust* 2002; 177: 131-134.

2. Kelly AM. Clinical impact of blood cultures taken in the emergency department. *J Accident Emerg Med* 1998; 15: 254-256.