



- 7 Kelly AM, Kerr D, Middleton P. Validation of venous pCO<sub>2</sub> to screen for arterial hypercarbia in patients with chronic obstructive airways disease. *J Emerg Med* 2005; **28**: 377–79.
- 8 Ak A, Ogun CE, Bayir A, Kayis SA, Koylu R. Prediction of arterial blood gas values from venous blood gas values in patients with acute exacerbation of chronic obstructive pulmonary disease. *Tohoku J Exp Med* 2006; **210**: 285–90.
- 9 Malatesha G, Singh NK, Bharija A, Rehani B, Goel A. Comparison of arterial and venous pH, bicarbonate, PCO<sub>2</sub> and PO<sub>2</sub> in initial emergency department assessment. *Emerg Med J* 2007; **24**: 569–71.

## e-Health: a step forward but not without risk

One of the many e-Health advantages mentioned in the recent article by Osborn *et al.*<sup>1</sup> is the availability of clinical support systems. For example, they allow the majority of general practitioners (GP) to easily generate referral letters incorporating comprehensive patient information, including past medical history, allergies as well as current medications. The value of a current medication list to a physician is critical given the progressive increase in polypharmacy in our patient population and the risk of adverse drug interactions. In a sample of elderly patients evaluated almost a decade ago, 53% were regularly taking four or more medications.<sup>2</sup> This figure is most likely to be much higher now.

Despite the obvious benefit of such software a GP's referral letter is frequently unreliable with a recent review of GP referral letters to a Nephrology/Hypertension clinic showing an overall current medication accuracy of only 58%.<sup>3</sup> This observation was also replicated in a department of emergency medicine.<sup>4</sup> It is likely that little has changed over the past few years as exemplified by the following example.

A 75-year-old nursing home patient was referred for an opinion and management of chronic kidney disease. The referral listed 45 medications including:

- 4 creams
- 5 eye drops/ointments
- 6 analgesics\*
- 5 antibiotics
- 3 bronchodilators/preventative aerosols\*
- 6 alimentary system medications\*
- 8 cardiovascular medications
- 7 endocrine/metabolic medications
- 1 nutritional medication
- 1 sedative

On four occasions, medications were listed twice because of the use of different brand names (\*). The nursing home medication chart listed 14 of the 45 medications from the referral letter as well as two further medications not included in the referral letter. It is of interest that the referral letter headings of History and Allergy stated 'non recorded' while Smoking and Alcohol stated 'unknown'.

While this GP referral letter is clearly exceptional and would easily be identified as being inaccurate, it is another reminder to all physicians to validate all information on referral letters, particularly the current medication list. However, it is easy to be critical of others. It will be very interesting to see how able specialist physicians are to maintain accurate medication records when they embrace electronic prescribing as GPs have.

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S. L. Carney

Department of Nephrology, John Hunter Hospital, New Lambton, New South Wales, Australia

## References

- 1 Osborn M, Day R, Westbrook J. Are specialist physicians missing out on the e-health boat? *Intern Med J* 2009; **39**: 655–61.
- 2 Heinze R, Nair B, Parkinson L. Medication use among older Australian veterans and war widows. *Intern Med J* 2003; **33**: 388–91.
- 3 Carney SL. Medication accuracy and general practitioner referral letters. *Intern Med J* 2006; **36**: 132–4.
- 4 Tolman J, Barras M. General practitioner referral letters. Are we getting the full picture? *Intern Med J* 2007; **37**: 510–11.

## End-of-life decision-making in patients with Locked-in syndrome

In a recent issue of *Internal Medicine Journal*, Anderson *et al.* discussed end-of-life decision-making in patients with a Locked-in syndrome (LIS) after catastrophic pontine stroke.<sup>1</sup> They stated that as prognosis may vary over time and early complications can reduce the patient's access to early intensive rehabilitation, judgements about end-of-life decision-making are more difficult for patients with LIS than other types of stroke patients. Furthermore, they mention that it may be difficult to establish decision-making competency in