

## Tested teaching tips

### *Tips for teaching in tough times*

PATIENTS, FAMILIES, CARERS AND OUR COMMUNITIES expect high-quality, safe, efficient, acceptable health services in which advice and interventions are based on evidence. The quality of undergraduate, postgraduate and continuing education is a key determinant of the capacity of clinicians to work with patients, administrators and other health professionals to fulfil such expectations. Successful teaching programs recognise and address the needs of students and teachers within particular educational settings. They use techniques that are likely to be effective, efficient and acceptable.

This issue of the Journal features the beginning of a series called “Teaching on the run tips”. The first article, “Doctors as teachers”<sup>1</sup> (*page 415*), outlines barriers to quality medical education and offers practical solutions. The title of the new series is particularly apt, as it highlights two causes of anguish among teachers: lack of time, because of expanding clinical and administrative workload, and lack of knowledge of teaching techniques. Teachers’ anguish is increased by changes that have occurred within hospitals, such as reductions in junior-doctor working hours and shortened

lengths of stay. These changes have resulted in fewer learning opportunities with inpatients and hence an even greater need for comprehensive and efficient teaching. To compound the problem, increasing specialisation means that a smaller pool of clinicians is both available and willing to teach across the breadth of clinical areas. Furthermore, clinician-teachers feel unsupported — a recent survey across US teaching hospitals reported that only a minority offer faculty development in teaching skills.<sup>2</sup>

Thirty years of research in medical education has provided some valuable insights.<sup>3</sup> Much is now known about the attributes of effective clinical teachers,<sup>4</sup> but knowledge of these advances is limited to a relatively small number of clinical teachers. The “Teaching on the run tips” series aims to improve dissemination of knowledge by providing practical tips on undergraduate and postgraduate clinical teaching.

One barrier to the uptake of advice about teaching is the fact that some teachers are sceptical about the effectiveness of recommendations for changing teaching techniques. This is especially relevant for clinicians supporting evi-

dence-based practice, who may seek the same standards for recommendations about teaching that they have learned to expect for recommendations about treatment and diagnosis. Unrealistic expectations for high “levels of evidence” may lead to disappointment, as there are fewer randomised trials and systematic reviews of educational interventions than there are of clinical interventions. Clinician teachers may also be concerned about the applicability of teaching recommendations derived from other settings to their own situation.

The essential problem is that we have not yet developed “best practice” for assessing recommendations about teaching. The ultimate “outcomes” should be clinical and should reflect the needs of patients. These largely relate to the quality, safety, acceptability, appropriateness and accessibility of healthcare services. The problem is that such outcomes are all difficult to measure, and changes in them often reflect factors other than the uptake of teaching recommendations. Furthermore, the protracted time between uptake of educational initiatives and clinical outcomes makes it difficult to establish associations and causal relationships.

Three developments might serve to reduce such scepticism. Firstly, in teaching, as in clinical areas, where *outcomes* prove too difficult to assess it may be possible to develop surrogate markers of *process* that reliably predict clinical outcomes of educational interventions. Secondly, pleas for more evidence in medical education<sup>5,6</sup> are being heard. In recent years, several guides to “best evidence medical education” (BEME) have been published in *Medical Teacher*,<sup>7</sup> BEME has become an established international collaboration of medical educationalists,<sup>8</sup> research directions in medical education have been defined,<sup>3</sup> and an educational section has been established in the *BMJ*.<sup>9</sup>

The third development offers great promise. The recognition of the limitations of randomised controlled trials in many educational areas<sup>10</sup> is an incentive to switch the focus towards scientific evaluations of educational initiatives using studies specifically designed for this purpose.<sup>11,12</sup> Although “level-of-evidence” hierarchies are essential for assessing research quality, in themselves they are insufficient. They should be considered along with other dimensions of scientific quality, including the magnitude of the effect; applicability in different settings; and the extent to which bias, confounding and statistical error are minimised. Scientific rationality, educational reasonableness, resource implications and ethics<sup>13</sup> should also be taken into account, and evidence across a range of research strategies must be sought.<sup>12</sup>

Good clinical teaching improves student performance.<sup>14</sup> It clearly has the potential to improve clinical outcomes and to help satisfy the community’s expectations of a high-quality healthcare system. The recent recommendation for medical graduates in the United Kingdom to “understand the principles of education as they are applied to medicine”<sup>15</sup> may help to enhance teaching skills in the United Kingdom and elsewhere. Along with other recently published resources for teachers, such as the *BMJ*’s “ABC of

learning and teaching medicine” section, this *MJA* series is enthusiastically welcomed.

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