

# Closing the innovation loop



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Innovations are considered to be the markers of advancing medical practice. Many will be familiar with Everett Rogers' five categories of "adopters" of innovation — the innovators themselves, the early adopters, the early and late majorities and the laggards. However, Rogers, a United States sociologist, also considered there were both positive and negative outcomes of innovation. In his 1962 classic *Diffusion of innovations*, he listed three categories for consequences: desirable versus undesirable, direct versus indirect, and anticipated versus unanticipated. In this issue, several contributions run the gamut of responses to, and consequences of, innovation.



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Although vision loss from diabetic retinopathy can be prevented in up to 70% of cases through timely detection and intervention, many patients are not screened. Two articles in this issue show the potential role of fundus photography in expanding the screened population. In a pilot study, Larizza and colleagues found that patients with diabetes were willing to be assessed by pathology collection staff trained in non-mydratric retinal photography when they attended for routine blood collection (*page 97*). Follow-up after screening, however, was suboptimal. Ku and colleagues showed that, in remote central Australia, single-field fundus photography by a qualified or trainee ophthalmologist was an acceptable screening tool when compared with the clinical gold standard of slit-lamp fundus examination (*page 93*). In an editorial commenting on these innovative approaches, Ng and Morlet say that, regardless of the technology and the model used, the challenge is to deliver the best possible care to every patient (*page 69*). They propose that, in urban settings, a better approach would be for general practitioners to take responsibility for ordering the screening tests and following up the results, while in remote settings, again under direction from the GP, fundus photography could be used to identify those in need of specialist assessment before rather than during remote clinics.

These innovations in service delivery have shown promise in improving patient care, but others that make intuitive sense may have had less beneficial consequences. When

plasma D-dimer testing was introduced as part of a diagnostic algorithm for venous thromboembolism (VTE) in Western Australian hospitals, Segard and Macdonald expected a reduction in the number of patients referred for VTE imaging (*page 100*). Instead, in a study conducted over 9 years, there was a marked increase in imaging referrals and an increase in hospitalisations for pulmonary embolism (PE), but no accompanying decrease in deaths from PE. The authors raise concerns that "overdiagnosis" of VTE may lead to unnecessary complications from anticoagulant therapy.

True innovation involves renewing, changing or creating more effective ways of doing things. Based on this definition, a recently published study by Elshaug and colleagues which identified currently funded health practices that were potentially harmful or ineffective (*MJA 2012; 197: 556-560*) is truly innovative. In *Matters Arising*, Elshaug responds to letters commenting on the study (*page 83*). Context and clinical judgement are everything, with authors writing in support of surgery for obstructive sleep apnoea and the use of prophylactic implantable cardioverter defibrillators; and to advise of research into chlamydia screening of young adults. Elshaug points to the great challenge of accepting new evidence contrary to conventional wisdom, and calls for readers to nominate areas of low-value health care for formal review. Right on cue, in *Letters*, Murch and colleagues question whether it is time to review echocardiography monitoring for clozapine-associated cardiac toxicity (*page 86*).

Elshaug says evaluation of established practices is all too rare, yet it's something that we need to be courageous enough to do. In the words of Nathaniel Wyeth, US chemist:

...the best solutions are often the ones that are counterintuitive — that challenge conventional thinking — and end in breakthroughs. It is always easier to do things the same old way... why change? To fight this, keep your dissatisfaction index high and break with tradition. Don't be too quick to accept the way things are being done. Question whether there's a better way. That's innovation!

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## Moving up

Few medical students enter the profession thinking they will take a leadership role during their career. Professor Michael Kidd, the President-elect of the World Organization of Family Doctors, certainly didn't envisage that he would head up a global entity. Karen Burge speaks with Professor Kidd and Professor Stephen Leeder, director of the Menzies Centre for Health Policy, in this issue's *Careers* section (*page C1*). Our Medical Mentor (*page C5*),

traumatologist Professor Zsolt Balogh, talks about the ultimate trust of his patients and rewarding nature of his work. In *Road Less Travelled* (*page C6*), palliative care nurse Bruno Cordier tells of his bicycle ride from Sydney to Perth — some 4097 kilometres — to raise money for Hamlin Fistula Ethiopia, a charitable organisation running six hospitals. Finally, *Money and Practice* (*page C7*) details some simple steps to streamline your financial affairs.