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Effect of community consultation on recruitment of Indigenous women to a human papillomavirus prevalence study

Christine M Read, Deborah J Bateson and Christine J Ohrin

To the Editor: We describe our experience of using community consultative strategies at a family planning clinic in Dubbo, central-west New South Wales, to increase recruitment of Indigenous women to a human papillomavirus (HPV) prevalence study — WHINURS (Women, Human papillomavirus, Indigenous, Non-Indigenous, Urban, Rural Study).[1] The strategies also resulted in a sustained increase in the number of Indigenous women attending the clinic for cervical screening.

The Family Planning NSW research team committed to recruit 50 Indigenous and 100 non-Indigenous women from January 2006 to WHINURS. The researchers worked collaboratively with, among others, the National Indigenous Immunisation Coordinator of the National Centre for Immunisation Research and Surveillance and the Dubbo Aboriginal Women's Advisory Group. The study was approved by the Aboriginal Health and Medical Research Council of NSW Ethics Committee. Non-Indigenous women were recruited within a few months but, despite the clinic team's efforts, only one Indigenous woman was recruited over 12 months.

Strategies to increase recruitment were then developed with input from one of us (CJO, a Wiradjuri Health Promotion Officer). Key strategies included street walks with a family planning nurse in Dubbo's main street, attendance at community forums (including mothers' groups and playgroups), and provision of drop-in clinics and transport assistance. As a result, an additional 42 Indigenous women aged 18–40 years were recruited between January and April 2007 for HPV and Pap tests.

There are many barriers to Indigenous women participating in cervical screening programs.[2,3] An added benefit of our recruitment approach was that the number of Indigenous women attending the clinic for Pap tests increased from 29 in 2006 to 81 in 2007, suggesting that the strategies had a sustained effect on cervical screening rates.

The involvement of a respected and trusted Wiradjuri woman (CJO), known in the region as an advocate for Indigenous women's health, appeared critical to the success of the recruitment intervention. The street walks and community visits with family planning nurses were a strategy to ensure that Indigenous women who are "very skilled at observing people and reading the unspoken word" felt safe and comfortable about undergoing the sensitive examination (CJO). The women were able to discuss their fear of finding an abnormality and balance this against their desire to do the right thing by their children by having a health check.

Given that the age-standardised mortality rate for cervical cancer from 2001 to 2004 was 4.7 times higher for Indigenous women than for non-Indigenous women,[4] we suggest that lessons learned from our study could help facilitate continued participation of Indigenous women in the national cervical screening program.

Acknowledgements: The WHINURS study was funded by grants from the Cooperative Research Centre for Aboriginal Health, GlaxoSmithKline and CSL Limited. The funding bodies had no role in the writing or publication of this letter. We thank the WHINURS team, Professor Suzanne Garland (chief investigator), Dr Julia Brotherton and Telphia Joseph (National Centre for Immunisation Research and Surveillance), Jane Estoesta (Family Planning NSW), and Karen Wallace and Emma Webster (Dubbo Family Planning NSW Centre).

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Colorectal cancer screening: ensuring benefits outweigh the risks

Suzanne Kosmider, Kathryn M Field, Finlay A Macrae and Peter Gibbs

To the Editor: We read with interest the article by Rosenfeld and Duggan,[1] who speculate on the possible psychological downsides of colorectal cancer (CRC) screening with faecal occult blood testing, and possible barriers preventing women accessing screening. We are concerned that the article has multiple limitations, and would like to report prospective data on CRC screening in Australia.

While not mentioning three studies showing no long-term psychological harm from CRC screening,[2] the authors have chosen to quote anecdotes from breast cancer screening, and a study of diagnostic testing for hepatitis C in a high-risk population, which is not a population screening test. Further, in the quoted study by Mant et al,[3] an example they give of anxiety after a screening test, they neglected to mention that 98% of participants with false positive results felt the test worthwhile, and almost 40% were more likely to take part in other screening.

The quoted reduction of 16% in CRC mortality is from one trial only, and potentially misleading as, overall, the studies have shown a 15%–33% reduction in mortality.[2] Benefit also goes well beyond reduced mortality, as the 20% reduction in incidence[2] with early detection averts some of the physical and financial costs of surgery, radiation therapy and chemotherapy. Further, there are the definite negative impacts of dealing with the consequences of surgical management of a more advanced-stage symptomatic cancer (such as colostomy bags), compared with a screen-detected cancer managed by simple polypectomy. The additional negative effects of diagnosis of a potentially terminal illness are also relevant.

Data on participation in CRC screening are available from two sources. The National Bowel Cancer Screening Program evaluations to date have shown that significantly more women participate in the screening offer than men.[4] Data from a multicentre Australian prospective CRC database[5] reveal 56 of 619 cases in women (9.0%) and 65 of 759 cases in men (8.6%) were detected by screening.

Australia has been slow to adopt CRC screening despite the almost 5000 deaths annually, and the major potential benefits. Unlike Rosenfeld and Duggan, we argue that studies specific to CRC screening show no

clear negative impact, and that the negative impacts of not screening are undisputed. Also, the available data indicate that women are participating in CRC screening to a greater extent than men.

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Comparison of crystalline methamphetamine ("ice") users and other patients with toxicology-related problems presenting to a hospital emergency department

Paul I Dargan and David M Wood

To the Editor: We read the article by Bunting and colleagues[1] with interest, as it attempted to address the important question of whether agitation and aggression are more commonly seen with methamphetamine toxicity. However, we have several concerns about the results presented in this study and the conclusions drawn by the authors.

First, while they have shown that methamphetamine users were more likely to be agitated and aggressive than patients in other "toxicology-related presentations", this is not surprising. The most common "toxicology-related presentations" to emergency departments are deliberate self-poisonings with drugs like paracetamol, non-steroidal anti-inflammatory drugs, and benzodiazepines,[2] and these agents do not cause significant agitation. The control group in the study by Bunting and colleagues should have been patients presenting with toxicity associated with other recreational drugs.

Second, the real issue is whether agitation and aggression are more common with methamphetamine than with other sympathomimetic agents, such as cocaine, amphetamine and methylenedioxy-methamphetamine, as well as ketamine. The authors should therefore have compared patients in methamphetamine-related presentations with those presenting with toxicological symptoms related to this group of drugs, which have also been shown to be associated with significant aggression.[3,4]

Third, the authors have not stated how they determined whether the presentation was related to methamphetamine or other drugs. It must be assumed that this was on the basis of patients' self-report. Patients could potentially have been miscategorised without appropriate confirmatory toxicological screening.

Fourth, the authors made no comment on the effect of ethanol co-ingestion and the risk that this can precipitate violence and aggression, which could be a considerable confounding factor. Previous authors have reported that violence and aggression are more commonly associated with ethanol ingestion than with use of other recreational drugs.[4]

Finally, we are concerned that the conclusion of their abstract is not backed up by the results of their study, as there are no data presented to support their statement that "methamphetamine appeared to be used consistently, rather than as an episodic 'party drug'". We therefore urge that clinicians interpret the results of this study with caution.

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Medical school selection criteria and the prediction of academic performance

David W Harding and Ian G Wilson

To the Editor: The decision by Wilkinson and colleagues at the University of Queensland to abandon interview selection methodology represents a regressive step in medical student selection.[1] In particular, the problems with accepting past academic performance as an infallible "gold standard" criterion for student selection become evident when considering the less tangible but no less important issues of social equity, "fitness-to-task", community expectations and corporate responsibility.

While prior academic achievement is the best predictor of early medical student examination performance,[2] non-cognitive variables appear to become more predictive as training progresses.[3] The use of academic achievement as the main or sole criterion diminishes social equity by discriminating against students from under-resourced areas.[2] Fitness-to-task is relevant because mistakes in medicine cause serious consequences, as in other occupations such as military personnel, air traffic controllers, and pilots. These "restricted" occupations require specialised training preceded by mandatory selection processes typically involving physical, psychological and skills assessments. Consider also the community's

high expectations for the personal integrity of doctors, and the issue of how medical schools meet community, professional and stakeholder expectations — their corporate social responsibility. Medical schools clearly have a "duty of care" to both students and the community at large in their selection of future doctors.

Consequently, it is disappointing that Australia's largest medical school at the University of Queensland has discontinued interviews, the study authors describing them as "inherently unreliable".[1] Unfortunately, this also reflects widespread imprecision when discussing the different interview methodologies of individual, panel or Multiple Mini-Interview formats. The Multiple Mini-Interview in particular has demonstrated promising reliability and validity.[3,4]

Stated bluntly, Wilkinson and colleagues' conclusions are confusing. Despite their results suggesting the GAMSAT (Graduate Australian Medical School Admissions Test) has no predictive validity, it has been retained, while their interview procedure that demonstrated modest increasing predictive validity was dropped! In addition, their use of cognitive outcome measures to assess the predictive validity of non-cognitive variables is conceptually flawed.

Finally, an emerging body of evidence is leading to more sophisticated medical student selection methods. Community confidence in neither doctors nor the medical profession itself is endeared or strengthened by the use of selection methods that do not encourage this process. World's best practice requires the use of evidence-based methods — this is the work ahead, so let's not throw the baby out with the bathwater.

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David Wilkinson, Jianzhen Zhang, Gerard J Byrne, Malcolm H Parker and Raymond F Peterson

IN REPLY: Harding and Wilson offer no new data or insights to the challenge of medical student selection. They also say they are confused. We will try to help.

The GAMSAT (Graduate Australian Medical School Admissions Test) provided no additional predictive value in our study[1] — effectively, it measures what grade point average (GPA) does, which is academic ability. We are continuing to use it because it is highly reliable, whereas GPA, being derived from multiple courses marked by a wide range of individuals in different universities, is less so. Simply put, the GAMSAT offers a highly reliable method of ranking students.

Harding and Wilson acknowledge our finding that the interview score adds very little predictive value, but this value increases in the later years of the program. The problem is that, in our judgement, the absolute increase is so small as to be useless.

Let us be clear here. We fully agree that good doctors need to be much more than smart. Our point is simply that there is no evidence that these additional characteristics can be selected for. Having dropped the interview, we can now focus even more on the quality of our teaching and professional development programs.

Until Harding and Wilson, or others, can demonstrate a selection process that clearly works — in terms of delivering even more effective doctors to society — we will focus more on teaching, training and development. As noted in our article,[1] we will carefully monitor and report on the impact of the changes we have instituted to our admissions process.

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Selecting medical students

Nicholas Jefferson-Lenskyj

TO THE EDITOR: The University of Queensland (UQ) study of medical student selection criteria and academic performance reported by Wilkinson and colleagues[1] has shortcomings beyond those pointed out by Powis.[2]

The outcome measure of "academic performance" was assessed by student performance in exams. These exams vary in content from year to year and are, in Years 1 and 2 of the program, mostly multiple-choice and short-answer written exams. A finding that grade point average (GPA) in a previous degree correlates with academic performance in medical school may simply mean that the exams are written and marked in a way that rewards the competencies one acquires in getting a high GPA, and ignores the skills and personal qualities that generate a high interview score.

There is thus a danger that the researchers have themselves created the phenomenon they are now discovering — that you can set exams in such a way that people who do well at sitting exams will do well. Those study authors who identify themselves as holding leadership and teaching positions in the UQ School of Medicine do not state whether they held those positions during the years in which they analysed student performance. If they did, then the researchers are also participants in the study by virtue of the fact that they set and marked exams. Even if they did not, their academic positions expose them to at least the risk of partiality, and potentially to the appearance of a conflict of interest — there are logistical and personal pressures on administrators to reduce the time, energy and expense of evaluating students, especially in a school with so many students. It is not clear from the article what, if any, measures were taken to control for these things, nor what, if any, caution this led the authors to exercise in drawing the policy conclusion that interviews should be abandoned.

The proper research question is not "How do we select students who will do well on the sort of examinations we set?", but "How do we select students who will create an atmosphere of excellence in the school, and who will carry that with them into the health system and into society as a whole?" The UQ study does not address the broader questions of the social purpose of schools of medicine in general, or the philosophy and ideals of the UQ School of Medicine in particular. Yet the action UQ has taken — to abandon assess-

ment of the personal qualities of its students — risks a profound impact on the realisation of those ideals.

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Peter C Arnold

TO THE EDITOR: The article by Wilkinson and colleagues[1] and the accompanying editorial by Powis[2] remind me of the medieval debate about the number of angels who could dance on the head of a pin.

While there is obvious merit in selecting students able to actually pass medical school examinations,[3] preferably at their first attempt, where is the evidence that this correlates with their later performance as medical chemists, physicists, researchers, puzzle-solvers, mechanics, artists, analysts or "jacks of all trades"?

What is the point of trying to select students on the basis that they would make good "doctors", when medicine, perhaps the broadest of all churches, offers professional scope to people of almost every imaginable natural bent and talent?

Selecting for interpersonal relationship skills is fine if selecting general practitioners and psychiatrists. How relevant is it, however, for someone whose talents and skills are intellectual curiosity or manual dexterity?[4]

Powis wants us to produce doctors who have "the required skills". Is this not the role of postgraduate educational bodies, helping the undifferentiated graduate pursue a course relevant to their abilities and interests?

If, faced with an almost infinite variety of doctoring, we cannot define "doctor" other than by possession of a medical degree, how can we possibly define the attributes needed to be one?

There are many more important issues in health care that could benefit from the time and money being wasted on chasing this particular chimera.

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David A Powis

IN REPLY: I am sorry Arnold considers that, in the context of selecting medical students based on their suitability to be a doctor, interpersonal relationship skills are qualities necessary only for general practitioners and psychiatrists. He is presumably unaware that the most frequent complaints made by patients about doctors of all kinds concern the very absence of such skills.

I agree with his statement that medicine is a broad church, with many professional pathways to suit individual preferences and skills, but that doesn't mean that anybody is suitable to fill the positions, or indeed fit to be any sort of doctor.[1,2]

In any country, medical boards and medical indemnity insurers could give many examples of inadequate practitioners. We should remember that all of these practitioners were admitted to medical school, passed their exams and graduated as fit to practise medicine. If there is any chance of identifying such individuals before they start their medical training, then it would be unethical not to do so.[1] This means we have to select students based on more than their academic achievements at school, and a suitably structured interview has been shown to be a reasonably effective tool in this context.[3,4]

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Encouraging general practitioners to train medical students

Andrew A Beveridge

TO THE EDITOR: There is a significant shortage of general practitioners in Australia, and many of those in practice are nearing retirement. The government has belatedly realised the need to train more GPs and in the past few years has dramatically increased university places for medical students. Coupled with this increase in numbers is the need for medical students to gain more of their education in general practice, where patients with many of the common medical problems are now managed. This has increased the pressure on universities to place medical students in general practice, and they are having difficulty finding enough willing and capable GPs to train their students.

Paying GPs more to teach medical students might help. However, students' experience of general practice needs to be positive if they are to be persuaded to become GPs themselves in the future, and a positive experience is more likely when the supervising GP is not rushed and can provide students with hands-on practice. Therefore, apart from increasing financial incentives, it is important to reduce "red tape" for training medical students and to free GPs' time for teaching.

A positive step would be to provide an extra payment to the GP on top of the consultation fee for each patient seen by a student under the GP's supervision, similar to the extra payment for a consultation with a pensioner. This would contrast with the current situation, where a GP who supervises students must fill out forms and wait for a PIP (practice incentive payment) many months later.

Another step would be to make accreditation less onerous for GPs who regularly provide clinical experience for students. Adequate continuing medical education (CME) points should be given for providing quality training without the GP needing to "jump through hoops".

If the medical student training crisis is to be resolved, then these issues need urgent attention.

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Preventing primary liver cancer: how well are we faring towards a national hepatitis B strategy?

Niyi Awofeso

To the Editor: The recent call by Robotin and colleagues for a national strategy to respond to the increasing incidence of hepatitis B and hepatocellular carcinoma (HCC) in Australia[1] is timely. I would like to add the following comments.

First, a comprehensive Australian hepatitis B strategy should include prisoners and Indigenous Australians. Among Australian prisoners, hepatitis B carrier prevalence is 3%–5% — more than three times the national average — and prevalence of hepatitis C, which independently and synergistically increases the risk of severe liver disease, exceeds 30%.[2] In addition, of 526 acute hepatitis B notifications in Australia in 2000–2002, 57 were in Indigenous Australians, a notification rate more than four times that in non-Indigenous Australians. Indigenous people are 12 times more likely to die of liver cancer than the general Australian population.[3]

Second, in New South Wales, the median age of diagnosis of HCC was found to vary significantly by country of birth;[4] it was 5 years younger in the Asian-born group than the Australian-born group overall (64 v 69 years), and 9 years younger in those who were hepatitis B carriers (57 v 66 years) ($P < 0.001$ for both differences). Early onset of HCC among Asian-born Australians may be a result of hepatitis B infection in the perinatal and early childhood period. However, other factors that promote progression to HCC, such as diabetes, alcoholism, and inadequate health care access, are amenable to targeted public health interventions.

Third, hepatitis B e antigen (HbeAg) positivity is strongly associated with high hepatitis B virus DNA counts (≥ 100 000 copies/mL), which are in turn highly predictive of cirrhosis and HCC risk. It is thus counterintuitive that — as implied by Robotin et al — hepatitis B carriers who are positive for HbeAg are less likely to progress to cirrhosis and HCC than those who have undergone seroconversion and are positive for hepatitis B e antibody. In fact, HBeAg positivity is associated with increased risk of HCC and liver-related mortality.[5,6]

Finally, the omission of hepatitis B vaccine — the world's first anticancer vaccine — from Robotin et al's list of elements of a public health response to hepatitis B and liver cancer is unfortunate. Hepatitis B vaccination is essential to any credible medium- and long-term strategy to prevent hepatitis B infection and, by extension, HCC, both in Australia and globally.

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1 Robotin MC, George J, Supramaniam R, et al. Preventing primary liver cancer: how well are we faring towards a national hepatitis B strategy? *Med J Aust* 2008; 188: 363-365.
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Monica C Robotin, Jacob George, Rajah Supramaniam, Freddy Sitas and Andrew G Penman

In reply: We agree with Awofeso that prisoners and Indigenous people have an increased risk of developing chronic hepatitis B. However, as no large-scale population-based studies of hepatitis B prevalence have been published in Australia, estimates of the risk vary widely.[1] A national hepatitis B strategy may provide additional impetus for obtaining high-quality data. We also concur that modifiable behavioural factors may play a role in the age of hepatocellular carcinoma diagnosis, but differences in clinical course between Asian and white Australians,[2] and the specific viral genotypes prevalent in Asia,[3] are likely to be more important.

Although white populations who undergo hepatitis B e antigen (HbeAg) seroconversion and develop hepatitis B e antibodies have a good prognosis, this is not so for Asian populations,[2] or for other populations who are mostly infected in childhood, such as Indigenous Australians and Māori in New Zealand. The median age of HBeAg seroconversion in Asian patients with chronic hepatitis B is 34.5 years,[4] while the median age at diagnosis of hepatocellular carcinoma of Asian patients quoted by Awofeso is 57 years, by which age most would have seroconverted.

Australia has been successful in primary prevention of hepatitis B through vaccination (albeit less so in migrants, some Indigenous communities and catch-up vaccination), and hence the omission of vaccination from our "wish list" for a public health response. However, Australia has been less successful in secondary and tertiary prevention. We hope that a national strategy would be a catalyst for these interventions to be given the priority they deserve.

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Teenage smoking in pregnancy and birthweight: a population study, 2001–2004

Elizabeth M Peadon, Carol I Bower and Elizabeth J Elliott

To the Editor: We concur with Chan and Sullivan regarding the importance of targeting modifiable risk factors, such as smoking during pregnancy, to improve perinatal outcomes.[1] Alcohol consumption during pregnancy is another important modifiable risk factor. Alcohol exposure in utero is associated with growth retardation, birth defects, and impaired development and neurological function. Individuals exposed to alcohol in utero may have lifelong medical and psychosocial problems.[2]

In our national survey of 1103 Australian women aged 18–45 years conducted in 2006, 34.2% of women reported that they had

consumed alcohol during their most recent pregnancy and 16.2% had smoked. When asked whether they would consume alcohol or smoke if they were to become pregnant in the future, 23.7% said they would consume alcohol and 4.0% said they would smoke. Intention to smoke during a future pregnancy was significantly associated with intention to consume alcohol (odds ratio, 5.1 [95% CI, 2.7–9.4]; $P<0.001$).[3] This strong association suggests that strategies aimed at reducing smoking and alcohol consumption during pregnancy should target both behaviours.

Chan and Sullivan also note the need for uniform national data on smoking during pregnancy. Although alcohol consumption is more common than smoking during pregnancy, fewer data have been collected and reported on alcohol consumption during pregnancy than on smoking. Five Australian states and territories collect data on maternal smoking status,[1] and the data are published by the Australian Institute of Health and Welfare in their annual *Australia's mothers and babies* report.[4] In contrast, data on alcohol consumption during pregnancy are routinely collected by only three states and territories (Tasmania, the Australian Capital Territory and the Northern Territory). These data are minimal and inadequate for monitoring trends or evaluating the effectiveness of public health interventions.

Smoking and alcohol can both cause preventable harm to the unborn child. Public health strategies, national uniform data collection and community education are required to address these issues in order to promote healthy pregnancies and healthy babies.

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Health services under siege: the case for clinical process redesign

Stephen F Wilson and Nicholas Collins

To the Editor: The authors of the recent supplement on clinical process redesign have shown that improvement can occur in the efficiency and quality of hospital care.[1] They acknowledged that this process was accompanied by an investment in external consultants and a boost to the system of 1800 beds. These interventions were necessary, and have been successful in the short term. However, these measures alone may not be sustainable for hospitals in the long term with the projected needs for the health care of an ageing population.[2]

The table in the appendix to the supplement showed most hospitals continuing to perform poorly in their response to increasing demands on emergency departments (EDs), with corresponding increases in admissions to hospital.[3] It was interesting to note that, of all the hospitals listed, Campbelltown Hospital, with the largest increase in demand (27%), also had the lowest increase in admissions through its ED (6%). A similar phenomenon was noted at Bankstown Hospital, which had a 27% increase in demand and a 13% increase in admissions. Could these have been the result of the community and ambulatory redesign that occurred in these hospitals from 2000 to 2004?[4] The common feature of these two hospitals is the linkages developed between ED community nurses and general practitioners, creating a situation whereby increasing demand does not have to rely entirely on hospital beds as a solution.[5]

The case of an older woman with diabetes, sepsis and heart failure described in one of the supplement articles[6] implicates a failure in community chronic disease management, as well as hospital care. Older people will continue coming to EDs, and will continue to be admitted to hospital in increasing numbers. To avert future crises in health care, the success of hospital redesign needs to be matched by an equally well resourced redesign of primary health and community care.

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George Larcos

To the Editor: The recent supplement to the Journal on clinical process redesign[1] is a tepid attempt by NSW Health and their colleagues in South Australia to disguise their own shortcomings.

Astute readers need more than fancy jargon, acronyms and pretty diagrams to be convinced that reform of the sort suggested by NSW Health cuts the mustard. Indeed, some of the language ("The process will proceed with or without you"[2]) provides disturbing insight into the mindset of those at the helm. Also, the ideas exemplified in another section are at clear odds with what I experience daily as a senior clinician. To illustrate, McGrath and colleagues write of "engaging clinical leaders" and that "solutions need to be evidence-based".[3] Regrettably, the opposite is the reality. Senior medical clinicians are sidelined and the decision-making process becomes the domain of a few select individuals, thus making it sclerotic, remote from the clinical interface and, at times, autocratic. Further, some management decisions are implemented without any of the supposed evidence base that McGrath and colleagues[3] refer to. Perhaps of greater concern is the notion of "stretch targets".[3] These are considered "essential to stimulate real innovation", but, translated into plain English, sound like asking staff to work harder with no additional resources.

In the past 15–20 years I have witnessed several changes in senior hospital management, each bringing the "latest and greatest"

ideas on public hospital reform. Sorry folks, we don't need more of this nonsense. Rather than yet another futile cycle of reform per se, the community needs to have a debate on the level of health care that it wants, contrasted with how much of the "pie" should be consumed relative to other needs. Until that happens, we are merely pretending that "process redesign" is the answer to our problem.

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Caroline A Brand, Peter A Cameron, Peter B Greenberg and Ian A Scott

TO THE EDITOR: In regard to your recent supplement dedicated to clinical process redesign in health care,[1] we support the need to learn from other industries, but have concerns about an exclusive focus on process redesign to improve the quality and safety of health care for patients.

In industry, unlike in health care, *outcomes* surveillance is almost always feasible. Clinical practice reminds us of the fallibility of surrogate measures of benefit, which, like "processes", require validation by "hard" outcomes.[2] Industry knows when its services or products meet minimum quality standards and satisfy "customer" needs. By contrast, a "lean approach" in health care, while taking a patient-centred perspective of care *processes*, makes several assumptions.

- The first is that better flow processes relate directly to improved outcomes. Process redesign focuses on measuring targets such as access block and elective surgery waiting lists, which are subject to confounding and manipulation.[3,4] The impact on health care outcomes remains unclear. Furthermore, the studies cited in these supplement articles had no concurrent controls.[3,4]
- The second assumption is the relative values of the process measures chosen. Is a relatively small reduction in time spent in the emergency department more important than use of an appropriate device for relieving pressure ulcers in an older woman with a fracture?[5]
- The third assumption is that there are cause and effect links between process redesign and outcomes, such as fewer episodes of litigation at Flinders Medical Centre.[6] Such links cannot be substantiated without a control group, as concurrent changes, such as open disclosure and guideline implementation, may have similar effects.

Other literature pertaining to the benefits of lean thinking in process redesign emphasises opportunities to reallocate resources to implementing best practice as a result of the efficiencies and cost savings achieved.[7] This assumes that process redesign occurs quickly, and that all cost savings are reallocated. These claims appeal to managers and directors constrained by external demands for meeting efficiency targets. The inevitable consequence is that organisations are likely to focus on simple "fixable" problems rather than more fundamental system-based problems requiring more resources and longer timeframes. Also, it can be argued that the process redesign examples are "micro-reforms" within a "macro-system" that remains unchanged. The hospital sector needs broader redesign wherein existing models and systems of care, and not just internal processes, are subject to critical review and improvement.

Process redesign should be viewed as a useful tool, but the primary starting point must continue to be the delivery of evidence-based care, which is known to give patients the best chance of optimal outcomes.

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Tony J O'Connell, David I Ben-Tovim, Brian C McCaughan, Michael G Szwarcbord and Katherine M McGrath

IN REPLY: We agree with Wilson and Collins. Community-based or ambulatory alternatives to admission to an acute facility are essential adjuncts to the redesign and increased bed capacity referred to in our article.[1] The capital costs alone will be prohibitive if our only strategy is adding bed capacity. We see a significant shift in capacity from the acute to community sector as eminently amenable to redesign methods: to map current constraints (as the issue is not just inadequate community services), engage clinicians in changing their referral and treatment patterns, improve awareness of alternatives, identify new processes to facilitate use of the community as a viable alternative, and embed these new behaviours through easily accessible redesigned pathways.

We chose the case study of the frail older patient deliberately, as it highlights how our current default option, hospitalisation, does not necessarily give these patients the best outcomes.

In response to Larcos, we are concerned that the frustrating complexity of our current system for patients and frontline staff alike has produced so many clinicians who, like him, are cynical about improvement. Good redesign activity does engage clinicians, and our best improvements arising from redesigned processes are those that have incorporated clinician and patient input. That is the practical everyday "evidence" on which good redesign is based.

Redesign does not ask staff to work harder. Significant leaps in performance can be achieved by redesigning to make an increased throughput easier to deliver. Good redesign eliminates the frustrating and wasteful steps in care that add no value to the staff or patient experience.

Finally, in response to Brand and colleagues, both delivery of evidence-based care and process redesign are required to improve access to services and, hence, equity, patient flow, and patient and staff

experience, and to reduce wasted effort. There is mounting evidence that better flow processes are associated with better outcomes. An Australian study has shown that delayed progress through Australian emergency departments (EDs) is associated with increased mortality.[2] Our own article illustrates a 30% reduction in statewide mortality in New South Wales EDs as flow improved, with a concomitant reduction in statewide hospital standardised mortality rate.[1] When patient flow improves because constraints and disconnects are eliminated, then system efficiency improves; it is only when patients are processed with indecent haste that one might expect a deterioration in quality.

The improvements reported were not just measured in minutes from initial triage, but also in fewer hours spent in an ED before transfer to a ward, and in fewer days of waiting for tests and consultations as an inpatient before discharge.

The results provided in the supplement[3] are for an entire state health system, the largest in Australia, illustrating a turnaround in state performance, and they therefore warrant serious consideration.

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