

neither Reid nor Paterson provide any explicit suggestions that recognise the key factor that will determine the outcome of the ACHAs. This is the policy gridlock that any federal system almost inevitably imposes.

A recent issue of the *Journal of Health Politics, Policy and Law* was devoted to health politics and policy in a federal system. The editor, Petersen, concludes with a view relevant to Australia: "You can love it, you can hate it, but ... federalism thwarts uniformity and universalism, frustrates responsiveness and policy analysis, limits large scale innovation while churning more localized mills of idea generation and promotion, and offers a permanent employment plan for health policy researchers".³

Parts of Australian health arrangements certainly need an overhaul. An example is general practice. This sector, differently organised and financed, could deliver much more to the community, the rest of the healthcare system, the Federal Government and to general practitioners themselves. Change in this sector would not depend on improbable cooperation between levels of government, and would be more manageable than the multifarious whole-of-system reforms about which Reid and Paterson speculate.

1. Reid MA. Reform of the Australian Health Care Agreements: progress or political ploy? *Med J Aust* 2002; 177: 310-312.
2. Paterson JP. Australian Health Care Agreements 2003-2008: a new dawn? *Med J Aust* 2002; 177: 313-315.
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Pertussis: adults as a source in healthcare settings

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TO THE EDITOR: In their article describing an outbreak of *Bordetella pertussis* infection, Spearing and colleagues report an adult contact who was infected with *B. pertussis* and was treated with roxithromycin.¹ In our experience, this is common practice in Australia, where roxithromycin is a frequently used macrolide antibiotic.

We are currently preparing a systematic review (registered with the Cochrane acute infections group) of the effectiveness of antibiotic therapy for treating pertussis. We have found no studies of the effectiveness of roxithromycin for either treatment or contact prophylaxis for pertussis infection. *B. pertussis* is sensitive *in vitro* to roxithromycin but 2-4-fold less so than to erythromycin.

While relying on the class effect of macrolides in eradicating *B. pertussis* and using roxithromycin in preference to erythromycin because of its lower side-effect profile may seem logical, there is no evidence to support this practice. In contrast, there is at least one study showing the efficacy of clarithromycin as an alternative to erythromycin for the treatment of pertussis.²

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2. Lebel MH, Mehra S. Efficacy and safety of clarithromycin versus erythromycin for the treatment of pertussis: a prospective, randomized, single-blind trial. *Pediatr Infect Dis J* 2001; 1149-1154. □

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IN REPLY: As we mentioned in our article, erythromycin is the drug of choice for treatment and prophylaxis of pertussis in people of all ages.¹ Several statements can be made about the use of macrolides in this condition.²

Firstly, erythromycin has been shown to decrease the duration of illness when given early in pertussis infection and to eliminate *Bordetella pertussis* from the nasopharynx.

Secondly, erythromycin therapy for index cases has been shown to reduce the rate of secondary cases of pertussis in households in uncontrolled studies.³ However, in a recent randomised placebo-controlled study, while erythromycin reduced the incidence of culture-positive pertussis in household contacts there was no reduction in respiratory symptoms.⁴

Thirdly, clarithromycin and azithromycin have been shown to be at least as effective as erythromycin in treating pertussis in two small comparative studies.⁵

As Massie et al point out, there are no clinical studies of the use of roxithromycin in this condition, and laboratory *in vitro* sensitivity studies suggest roxithromycin may be inferior to erythromycin.

Roxithromycin is the most widely used macrolide in Australia, but it requires a leap of faith and extrapolation to prescribe this drug for prophylaxis or treatment of pertussis. In the one case in our series where roxithromycin was prescribed, this was not our decision. We would have recommended erythromycin on the basis of the available clinical evidence.

Vaccination is preferable to antibiotic prophylaxis for long-term control of pertussis.

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Boundaries of medicine

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TO THE EDITOR: Van Der Weyden has asked a provocative question about the relevance of what he calls "medicine's homage to health".¹ In so doing, he pays his own homage to a world where boundaries are sharp and healing becomes reduced to a matter of applying "bioscience to matters of mind and body".

While I daresay many editors of biomedical journals would share his view, he is only highlighting an age-old tension. Indeed, Crookshank wrote in 1926 about the Ancient Greek schools of Cos and Cnidus, and of their debate about doctrines of the natural/descriptive and the conventional/aca-

demic approaches to medical knowledge.² The Coans promoted the importance of the influence of the individual and society on the presentation of illness, and managed illness holistically with regimens oriented towards the needs of the individual, while the Cnidans oriented their practice around the distinctions between diseases, treating specific diseases with specific remedies.³

These differing approaches to illness and disease highlight the conflict between cybernetic and linear thought which has underpinned medical history ever since. It is rarely understood that the linear doctrine of biomedicine has only become dominant in the last century or so. Medicine's isolation from contemporary scientific thought explains our long delay in confronting the challenges of systems thinking — challenges that the basic and applied sciences took on in the early years of the 20th century.⁴

Our contemporary error is in assuming that the accumulation of data that passes for modern medical knowledge is sufficient to deal with the tasks of medicine. The disquiet expressed by Van Der Weyden is only a symptom of the continuing inability of a mechanistic view of medicine to deal with caring for patients in the real world.

1. Van Der Weyden MB. The boundaries of medicine [From the editor's desk]. *Med J Aust* 2002; 177: 465.
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3. McWhinney IR. A textbook of family medicine. New York: Oxford University Press, 1989: 113.
4. White K. The task of medicine. Dialogue at Wickenburg. Menlo Park, Cal.: The Henry J Kaiser Family Foundation, 1988: 6. □

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IN REPLY: Russell implies that my recent column on the boundaries of medicine¹ conveys the premise that medicine is a defined and discrete discipline underpinned by biomedical science. So it did, but the contention is not mine, it is that of Seldin.²

However, no one would deny that biomedical knowledge is the best developed and most powerful component of modern medicine; nor would they deny that there are other intrinsic components, such as the art of caring.³

My argument is that the boundaries between medicine and health have become blurred with modernity's overwhelming homage to health.⁴ Furthermore, the very nature of health is difficult to define, shaped, as it is, by variable psychological, socioeconomic and cultural factors.

If, in fact, health is the World Health Organization's utopian "the complete [my emphasis] physical, psychological and social well being", then most of us are unhealthy.⁵

My purpose was to question the boundaries of medicine and health. In particular, to question where the responsibility for attaining the modern Shangri-La of health rests — with the individual, society or medicine?

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