GEMS OF NEW ZEALAND Primary Health Care Research

Heroic actions promote health services research

Health policy, politics and implementation agendas often get in the way of clinical research, and pose challenges to robust research processes. In a manner similar to the television action hero MacGyver, health services researchers, therefore, need to respond to the pressure of unpredictable demands and constrained time frames. The results are often both innovative and functional as researchers get things done despite the politics, and maintain the intended scientific method and rigour. This paper identifies MacGyver-type dilemmas from local New Zealand health services research. Readers are invited to reflect upon potential 'MacGyver drivers' in their own research environment.

Perera R, Moriarty H. The MacGyver effect: alive and well in health services research. BMC Health Services Research. 2011;11:226. **Corresponding author:** Roshan Perera Email: roshan.perera@otago.ac.nz

Health and emission benefits of urban cycling

Climate stability requires lessening of greenhouse emissions, whilst protecting human health and environment. Various New Zealand models were employed to estimate the impact of cycling on urban kilometres as opposed to motor vehicles. This paper demonstrated that health benefits of cycling heavily outweighed road crash injury costs and that transport policies advocating cycling can make a difference to pollution and emissions. Modelling used in this study, whilst mentioning its limitations, raises future important research questions and implications for policy makers in other sectors. How the move from vehicles to bicycles might be achieved was not addressed.

Lindsay G, Macmillan A, Woodward, A. Moving urban trips from cars to bicycles: impact on health and emissions. Australian and New Zealand Journal of Public Health. 2010; online.

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Comparing primary care prescribing and pharmacy dispensing data to determine adherence to medication in New Zealand

There are various techniques described to calculate WHO-defined adherence to medicines. New Zealand has highly computerised primary care prescribing data and pharmacy dispensing data. These two datasets can be matched by patients' unique National Health Index identifiers to see how often medications prescribed by GPs are dispensed by pharmacists. This paper used medication data from these two databases over 15 months to calculate the Medication Possession Ratio, using 80% as the criterion to determine adherence. Half of patients showed high adherence to all six most prescribed longterm medications, and 93% of prescriptions were dispensed within seven days.

Mabotuwana T, Warren J, Harrison J, Kenealy T. What can primary care prescribing data tell us about individual adherence to long-term medication?—Comparison to pharmacy dispensing data. Pharmacoepidemiol Drug Saf 2009; pp 956-64 DOI 10.1002/pds.1803 **Corresponding author:** Jim Warren Email: jim@cs.auckland.ac.nz

Using the no-fault injury dataset to identify characteristics of patient injury in primary care

In 2005, New Zealand's injury compensation legislation was reformed and both the 'error' and 'rarity and severity' eligibility criteria were waived. This study analysed the first four years of primary care treatment injury claims data to identify the type, incidence, severity and cause of injury in primary care. Medication was the leading cause of injury, diagnostic delay caused few injuries overall, but injuries were disproportionately severe. The claims dataset provides an unusual no-fault perspective of a wide range of health care adverse events. Use of the dataset to direct injury prevention initiatives is curtailed by the lack of information on injury preventability.

Wallis K, Dovey S. No-fault compensation for treatment injury in New Zealand: identifying threats to patient safety in primary care, BMJ Quality & Safety, 2011;20(7):587–91. Wallis K, Dovey S. BMJ Qual Saf (2011). doi:10.1136/bmjqs.2010.047696 **Corresponding author:** Katharine Wallis Email: katharine.wallis@otago.ac.nz



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