

# Adherence to evidence-based guidelines is the key to improved health outcomes for general practice patients

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## YES

Were all vehicle drivers to never drink (alcohol) and drive, then road casualties from drunken drivers would be non-existent. Were all general practice to adhere to evidence-based guidelines, then health outcome improvement would be inevitable. In reality, both on the road and in health care these visionary ideals are never reached, for behind the glib summarisations lie a plethora of reasons why the ideal world of best practice remains largely a nirvana. However, there is no reason not to try to improve. How to do so requires two key factors which are:<sup>1</sup>

1. High quality evidence-based advice for GPs; evidence that is from primary care research.
2. Mechanisms that allow GPs to implement the evidence; not just the distribution of paper or big books to GPs, not just didactic presentations at conferences, but rather placing advice before the GP in the consultation room—on the GP's desktop, in the computer software, in the practice's Chronic Care programme. More importantly, the health service has to support general practice

implementing the evidence, providing the necessary resources in a consistent manner across the whole nation—something that is, with 21 DHBs and 40+ PHOs, best described as a challenge.

### The evidence

Such is the vast body of research evidence that, for clinical use, research needs to be distilled into summary points of clinical guidance in a process of the best quality, not one that is quick and dirty, for patient care is at stake. The term 'evidence based' needs careful consideration for it can hide a plethora of quality, ranging from 'this is the right/correct/only way to do it based on my selective choice of studies that suits our purpose' through to clinical recommendations developed by appropriate clinicians and patients based upon a high-quality systematic review of all the applicable evidence. To simply sit down with a group of colleagues and summarise a selection of studies will simply repeat the mistakes made by opinion-based predecessors with which medical history is littered. For this reason a systematic process is necessary, as exemplified by that used by the New Zealand Guidelines Group: a process based on a significant body of international research and wisdom on synthesising clinical advice from research.<sup>2</sup> Best practice requires the best advice.

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BACK TO BACK this issue:



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While evidence can help inform best practice, it needs to be placed in context. There may be no evidence available or applicable for a specific patient with his or her own set of conditions, capabilities, beliefs, expectations and social circumstances. There are areas of uncertainty, ethics and aspects of care for which there is no one right answer. General practice is an art as well as a science. Quality of care also lies with the nature of the clinical relationship, with communication and with truly informed decision-making. The **BACK TO BACK** section stimulates debate, with two professionals presenting their opposing views regarding a clinical, ethical or political issue.

### Focus: the clinicians or the system?

Many commentators on quality, when considering this debate, focus on reducing needless variation in care due to clinicians (GPs and nurses) not 'adhering' to the evidence.<sup>3,4</sup> Needless, because the variation (gap between what should be done and what actually happens) is said to originate not from patient need, but from clinical behaviour. What should be done is best practice. What is done is reality. Implementing evidence-based guidelines focuses on closing the gap between the two.<sup>5,6</sup>

However, needless variation has many non-clinician causes. Consider echocardiography for diagnosing congestive heart failure, which is safe and accurate and best practice.<sup>7,8</sup> Whether heart failure general practice patients in NZ receive such depends more on their postcode than the clinician decision. GP access varies according to DHB and how echocardiography service provision is decided is as varied and opaque as most regional resource decisions made in our country.

### Proving: the research problem

So how do you prove that adherence influences health outcomes? Consider the converse (null) hypothesis 'Non-adherence to guidelines results in reduced health outcomes'. The library of HDC cases provides a number of cases bearing truth to this statement in which adverse events, at the individual patient level, have been linked to non-adherence to evidence guidelines.<sup>9,10</sup>

Associating adherence with outcomes is not as easy. Linking commencing Mr Jones, who has a CVD risk of 20%, on a statin, to his not having a heart attack five years later is difficult. We can estimate the chance that this was due to the statin, but confounding factors are many. Is it the smoking cessation, or perhaps the aspirin? Maybe his riding a pushbike to work? What then if we use intermediate outcomes such as total cholesterol and LDL cholesterol, reduction of which should mean his long-term prospects of survival are improved? Is that good enough proof?

At a population level, we have a number of studies showing improvement in intermediate outcomes after various mechanisms to improve adherence to evidence guidance are implement-

ed.<sup>11</sup> The UK Quality and Outcomes Framework results is an example.<sup>12</sup> Maximum benefit is usually about a 5% improvement. Note maximum. The problem is for every study showing benefit, there is another showing no benefit.

To demonstrate a quantitative improvement in health outcome, a researcher must try to control for the multiple variables that operate in a system. In general practice, when looking at adherence, the favoured target is the GP, in particular, interventions that attempt to assure GP 'adherence' such as CME, desktop reminders, outreach visits etc. But consider that significant change in health outcomes in recent clinical history such as the reduction in cardiovascular deaths. There are many reasons for this, but look at one small component: statin prescribing. That required the NZGG cardiovascular guidelines, PHARMAC funding a statin, PMS reminders, CVD risk assessment tools, practice-based activities funded through PHOs and more. A researcher trying to prove that only one of those factors worked has many confounders to control or correct for.<sup>13</sup>

Thus if we are going to relate 'adherence' to health outcomes, we need to look at the whole health system, not just the GPs. The practice team, the practice business model, the practice (corporate?) owners, the PHO, the IPA, the DHB, the Ministry and the Minister. A very complex system in which they all influence, to a greater or lesser extent, the way evidence is implemented. How well do all the people making the decisions understand the guidelines?

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**NO**

‘Clinical Practice Guidelines’—a Google search using this term netted 26 200 000 results in 0.43 seconds. Guidelines are as unmanageable as the research they were designed to summarise. Guidelines were intended to bring the best scientific evidence to bear on primary care practice—an upgrade from the Blue Book that we used to carry in case of knowledge emergencies as a house surgeon. Guidelines have now moved beyond this—the quality of family practitioners’ care is increasingly measured by guideline adherence.

Is adherence to guidelines the best way to improve health outcomes? No—it may result in care that seems measurably better, but is meaningfully worse for health outcomes. There are three broad reasons for this—the quality of guidelines, the quality of the available research data that underpin them and their unfitness for purpose in a primary care setting.

### The quality of guidelines

If guidelines stuck to the data and critical assessment of its gaps and uncertainties this might

be useful—but back-filling the gaps in data with ‘consensus’ appears to be irresistible. In a study of 2700 recommendations in the American Heart Association / American Cardiology Association guidelines, only 10% were based on high-quality RCT evidence.<sup>1</sup> Half were simply consensus. The widespread levels of conflict of interest of group members with the manufacturers amplifies the concern.

The label ‘level C evidence’ does not undo the air of certainty of the written word on the page of a guideline. One example is HbA1c target levels for Type 2 diabetes, which are standards that increasingly doctors are exhorted to adhere to, and in some countries carry an income bonus. There is no good evidence for treating to any particular target HbA1c. Large well-designed studies have shown the harm and increased mortality associated with tight glucose control and the lack of meaningful benefit of tight control on outcomes that matter to patients. Yet guidelines continue to include these targets, and do so inconsistently: targets in recent Type 2 diabetes guidelines internationally vary between <6.5% (<47.5 mmol/mol) and 8% (<64 mmol/mol). Adhering to the targets specified in many guidelines for diabetes would kill more patients than were helped. Forcing HbA1c low also increases the risk of the patient suffering hypoglycaemia, which does have an association

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