Is a concentration on generalist medical practitioners the solution to the New Zealand health workforce crisis?

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Cognisant of the fables of *Chicken Little*, who spread a doomsday message upon the basis of a misinterpreted stimulus, and *The Little Boy Who Cried Wolf*, we would like to cautiously report increasing evidence of a worsening crisis in the New Zealand health workforce. We would also like to suggest some corrective strategies that have significant potential reliance and impact on the general medical practitioner (GP) community. These suggestions are made in the context of an apparent inability of health system administrators to conceive and implement sustainable solutions.

Using New Zealand demographic data,[1] the New Zealand Institute of Economic Research (NZIER) predicts that an increase of between 40 and 70% in health workers will be needed to maintain current health service levels to 2021. The New Zealand Health Workforce Advisory Committee (HWAC) echoes these concerns,[2] but its report is notably weak on suggestions for corrective strategies. What neither reporting agency emphasises adequately in these analyses is that existing health service levels are variously inadequate. Indigenous and rural communities are aware of these existing shortcomings; their shorter, sicker lives are well recognised.[3,4] Many others share similar insights. The GP readership of the Journal knows it is increasingly difficult to access public health services for many of their patients. Some senior hospital doctors are increasingly disillusioned by the nature of their duties and the lack of continuity of patient care that has arisen since greater restrictions have been placed on junior doctors' hours of work. Progressive fragmentation of care of individual patients has further diminished the opportunities to observe both the natural history of, and factors influencing, common and uncommon conditions; a trend already accelerated by the economically determined disappearance of domiciliary visits and consultations. These trends, we believe, have contributed to a reduction in job satisfaction. Pregnant women can only dream of the co-operative and co-ordinated public obstetric services available to their mothers, and express regret at the loss of the variable period of rest away from home duties and distractions which formerly marked the puerperium. Psychiatric nurses in Northland bear the brunt of an increasing patient load in the essential absence of genuinely vocationally registered psychiatrists. For some people and some conditions, accessible high quality public health services may have, to a large degree, joined the Moa in New Zealand history.

While we do understand the ideology that underpins recent initiatives such as capitated primary health care (PHOs), subsidised fees, and nurse practitioners, we cannot identify a relevant generic evidential base for either cost or outcome efficacy. History makes us a trifle sceptical of the assumption that many of the predominantly white, middle-aged and middle-class married and/or maternal nurses we see undertaking courses that will give them drug prescribing rights, will be setting up shop in either Wairoa or Kaitaia. Instead, it is more probable that the affluent, urban, well-worried-sick community will have an additional source of health services.

In summary, maintenance of existing levels of health service is a very modest ambition and, on this basis, the forecast health workforce crisis may yet exceed even Chicken Little's predictions.

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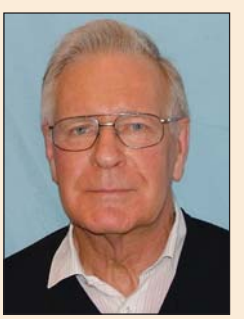

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We have previously proposed five hypotheses that we think explain, at least in part, any shortcomings in existing health services and the basis of the probably imminent crisis in the health workforce.[5-7] Firstly and secondly, society has been extensively medicalised and medicine has been just as extensively socialised. Thirdly, current health force composition and related education programmes are somewhat inappropriate and inadequate respectively for the health needs of today's society, let alone the significantly older version confidently predicted for 2021.[1]

Our hypothesis here is that this is predominantly due to a misalignment of education and health resources versus need, and that this in turn is consequent to perverse incentives in the context of factors such as medical graduate debt, plus international and private recruitment pressures. Fourthly, the nature of under- and post-graduate medical education reduces the likelihood of doctors universally basing their actions on up-to-date knowledge and tested opinion. Fifthly, many medical graduates have abandoned one or more of the characteristics of professionalism. We will not iterate the supporting arguments for these hypotheses here and would instead invite interested readers to look at either our earlier writings,[5-7] and/or the medical anthropologies of Illich,[8] Lifton,[9] and Porter.[10]

Our emphasis here is on recommended solutions. Again, we have previously identified four general categories of solution to the putative heath workforce crisis.[7] Firstly, the years of morbidity in later life could be compressed. Secondly, the elements of the education and health systems could be better aligned with each other and with patient care needs. Thirdly, the percentage of the community employed in health services could be increased and/or greater output could be obtained from the current workforce. Fourthly, provocative but thoughtfully-crafted challenges to health service structures, staffing and work distribution (disruptive practice), and service innovations generally, could be identified and employed. To these four categories of solution we have added a fifth over-arching consideration; we suggest that the NZ health workforce crisis will not be adequately addressed until there is a national, non-partisan devised and complete reorganisation of the fiscal basis of the health system, including agreement on the balancing of private and tax payer contributions.

Although some eminent health workforce planners would disagree with us, we believe there is little likelihood of a compression of morbidity in later life rescuing the New Zealand health system. Hopefully, our opponents are correct. However, imminent national epidemics of obesity and diabetes will act against any such compression. More importantly, even if morbidity is compressed in later life, this almost certainly will not be accompanied by a reduced need for health workers and especially doctors. It is clear that New Zealand society, individually and collectively, has increasing health expectations, is better, rather than necessarily well, informed, and is more demanding of health advice and services. This is the urban affluent well-worried-sick syndrome we referred to above; already first world communities are heavily somatoform in expression.[11] This translates into a clear increased need for generalist, thoughtful, somewhat cautiously applied, individual health care within a population health approach.

Similarly, we see little prospect of there being appreciable gains in health workforce productivity and/or there being a greater percentage of the community engaged in delivering health services. Although we have noted that the effect of every doctor in New Zealand working an extra hour per week would equate to 500 additional doctors,[7] it is highly unlikely that the increase in work hours per doctor seen over the last 20 years will continue. We predict the opposite in response to the combined effects of the increasing feminisation and unionisation of the workforce, the greater attention being paid to 'healthier' work-life balances and the concern about the safety of practice by overworked tired doctors.[12] Increasing recruitment into medical schools for many people will also be hindered by the inevitable debt,[13] which is already the major determinant of local medical graduate career choice,[14] and by decreasing relative and soon perhaps actual numbers of younger people.[1] Other negative factors will include ongoing and increasing international and private (versus public) recruitment pressures and by the attraction of highly profitable, but low utility, disciplines such as appearance/cosmetic, patient-self-defined medicine. The overwhelming conclusion is that to be appropriately effective in 2021, the health workforce will need to be differently configured and/or work differently. Examples of this being put into place now include British Foundation Degrees for community health workers, and geriatric health workers,[15] and the North American employment of nurse practitioners, endoscopists and anaesthetists. In the context of the advocacy of nurse practitioners, we would like to cite verbatim our already published views.[7]

We believe it makes little sense to move significant numbers of fully-trained practitioners from one area that is already experiencing shortages such as nursing, and to retrain them over months to years for these novel roles. While it might seem easier to initially prove the concept with a group that already has legitimacy in the health care system, this may reinforce the assumed necessity of the traditional doctor-nurse paradigm. It might be better to start with a new grade of health worker trained solely for the purpose from the outset.

In New Zealand, we are aware of, and support, the concept under consideration of a Physician Assistant as a method of reducing the need for resident medical officers and as a way of enhancing the continuity of patient care.

It follows that the corrective strategies we see as being potentially ef-

fective are those related to the alignment of the elements of the education and health systems with each other and with patient care needs and the identification and employment of disruptive innovations (as defined above).

The best analysis we have seen of the effect of misalignment is that conducted by the economists Baicker and Chandra of Medicare spending in the USA.[16] It needs to be noted contextually here that the USA health expenditure overall as a percentage of GDP is about twice that of New Zealand; despite this, about 40 million of their citizens have essentially no access to health care.[17] We already have local inequities in health access and outcome;[3,4] these USA data are a somewhat frightening forecast of our future if even the more modest predictions of the disparity between health worker supply and demand occur here.[1] Amongst the increasing proportion of adolescent and young Maori in the NZ population, the rising prevalence and incidence of Type 2 (and possibly Type 1) diabetes will increase morbidity, educational and 'health' care needs at the same time as the proportion of 'earlier illness' becomes manifest amongst Polynesian adults.

Baicker and Chandra ranked each State of the USA for quality of health care using the frequency of accepted good practice; eye examinations for diabetics, beta-blockade for post-myocardial infarction, and anticoagulation for patients in AF and breast examinations for older women. Surprisingly, in terms of the strength of the correlation and the extent of the effect, there was a negative linear relationship between State expenditure on health per capita and the health quality rank. It would seem that in those States where expenditure was highest, low utility, high cost, high technology, end-of-life care was exhibited at the expense of high utility, lower cost, across-life care. Further analysis showed that the number of specialists per capita had a similar linear negative effect on quality rank and a linearly positive effect on cost. By contrast, but not surprisingly, the more GPs per capita, the higher the quality rank and the lower the cost of health services per person. Finally, the percentage of nurses in a community had no significant effect on either quality or cost. There is a plethora of sociological findings here. We would like to concentrate on the following unambiguous conclusions. Firstly, spending more money on health does not necessarily translate into better health care. Clearly, it is reasonable to conclude, as some have,[18] that there are already enough doctors and a large enough health budget in the USA to meet the consumers' needs. The problem is that health services there are not well-aligned to need, and are perversely motivated. Both phenomena are driven by media hyperbole, pressure of industry and demands of the elite and wealthier sections of society. Secondly, there is an absolute need to increase the number of GPs, and, within the specialist ranks, to increase the relative proportion of generalists. The Journal's readership will know the opposite is happening. Good data are hard to come by,[2] but we suspect that the cited recruitment figures of 10–20% of medical school graduates into general medical practice are about twice what would be obtained if the assessment was of graduates with an interest in becoming full-time GPs and who also had an intent to invest in practice infrastructure. At present, however, such investment, and initial enthusiasm to enter general practice, or generalist internal medicine, are inhibited by the private functioning of the 'dual system'. Procedures, as units, are rewarded at much higher rates than time spent in exploring, explaining, counselling and generally guiding and 'managing' people and their problems.

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The rendering of general medical practice to be more attractive to our graduates could by achieved by increasing the profitability of such practice by allowing meaningful fees for service, increasing the status of GPs, and by increasing the enjoyment of general medical practice, perhaps in part by restoring the concept of GP obstetrics and anaesthesia. Work conditions also need to be considered, including the setting of an acceptable level of on call commitment, and leave and continuing education opportunities. These reforms would need to occur as part of a much larger rationalisation, which we have described beforehand and summarised below.[7] Such reforms would be politically unacceptable at present to many within and without the health professions. Studies are needed urgently into the impact of current practice and resource allocations into common big-ticket conditions.[19] Equally urgent should be the mounting of studies into the time-freed benefits and resource gains from switching from defensive, scattergram-testing type 'medicine', to intelligent, careful interviewing, legitimate screening based practice, which allocates strong support to the recuperative aspects of natural history. Such a revolution, if proven to be positive in outcome, might well help restore interest and job satisfaction to general practice and also to generalist physician practice.

Firstly, however, there is an urgent need for a relative values study to align remuneration with need and to prioritise cognitive over procedural technology dominated practice, as evidence-based problem-solving, care planning and coordination are the only foreseeable sole province of the doctor of the future. The current pro-

cedure bias in medical remuneration is 70 years old and arose out of a fear of the effect of then increasingly global communism on doctors' incomes.

Secondly, the effect of student debt on determining career may justify bonded cadet schemes, but certainly warrants debt forgiveness for entering priority roles (e.g. rural general medical practice and mental health training schemes), and, perhaps even, capping already well subscribed specialities.

Thirdly, the duration of vocational medical education must be reduced. Some elements of this education process might benefit from being streamed, as is planned at the University of Queensland.[20]

Fourthly, and even in ACC-protected New Zealand, limits need to be placed on and/or systems rationalised for doctor litigation and complaints processes, so that over-servicing (and defensive medicine) are reduced and care is redirected from the legal protection of the practitioner to the health needs of the consumer.

Fifthly, and perhaps most importantly, it is essential that trials of new forms of health providers occur. This leads into our final corrective strategy category of innovative disruptions. The term 'innovative disruption' in its simplest form refers to a super-imposition of changed practice patterns upon pre-existing 'establishment' systems, previously complacent, non-self-critical, and well 'dug in' and shielded by traditional economic considerations.

It is our strong recommendation that readers review the excellent *Harvard Business Review* description of what is a disruptive innovation and how such disruptions could be used to reform health services.[21] It is also our advice that we need to identify and employ disruptive innovations to salvage the New Zealand health service. This should include trials of genuinely integrated care, of electronic patient information and monitoring systems, and of telemedicine. There is an equally urgent need to field-trial employment of new grades of health care workers such as non-physician endoscopists, technician anaesthetists and Iwi-based community health providers; a concept we are actively exploring. These trials will not be easy and will require strong drivers and assured finance to establish and sustain. It is inevitable that those being disrupted will oppose the trials. We have previously cited the current relatively high levels of CABG surgery as an example of how difficult it is to disrupt established elements of the medical guild;[7] a more recent example is the response in the *New Zealand Herald* to Dr George Salmond's suggestion of employing innovations such as Fred Hollow's type eye 'surgeons'.[22-24]

We are cautious in predicting the extent and consequences of the current and future health workforce crisis; however, we have no reservation in claiming that there is an urgent need for reform. To us, the key issues are to do with alignment, a shift back to reliance on generalists, and a brave series of innovative trials. The time for these reforms may well be shorter than we envisage, or that Chicken Little and The Little Boy Who Cried Wolf ever imagined. The clock is ticking; students starting Medical School in 2006 will become vocationally independent practitioners in 2021.

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