AUTHORISED: 13-10-95



## Redcliffe - Bribie - Caboolture Division of General Practice



8/107 Anzac Ave., Redcliffe QLD 4020 PO Box 258, Margate Beach QLD 4019 Tel 07 3284 5155 Fax 07 3284 5877 email john@rbcdgp.com.au web www.rbcdgp.com.au

#### SUBMISSION TO THE STANDING COMMITTEE ON HEALTH AND AGEING OF THE COMMONWEALTH HOUSE OF REPRESENTATIVES

- 1. The Redcliffe-Bribie-Caboolture Division of General Practice is the peak body representing nearly 60 general practices on the northern outer metropolitan area of Brisbane, Queensland.
- 2. Accordingly the Division's submission focuses only the funding of primary health care.
- 3. The Division has been instrumental in developing primary health care services for a new development centred on the new suburb of North Lakes. A copy of this report is attached. The model has received positive support from academics and health managers in both Australia and New Zealand.
- 4. The issues faced in this catchment are rapidly increasing population, an ageing population with the increased prevalence of chronic diseases and an ageing workforce (particularly of general practitioners). These conditions apply in the outer metropolitan areas of the capital cities.
- 5. The Division has accordingly had to develop a model for primary care that uses nurses and allied health practitioners to do work traditionally performed by general practitioners, and also to prevent illness occurring.
- 6. Throughout the consultation phase of this project the boundary between state community health services and general practice has been troublesome with general practitioners being unable to employ allied health practitioners to work within their practices. The increasing prevalence of chronic care has made the need for alternative models of care more important.

- 7. In its deliberations the Division was struck by the fact that the funding models did not allow for most preventative care. Put starkly, the current funding model maximises income for GPs when their patients are <u>ill</u>, not when their patients are <u>well</u>. It seems that this is like paying our swimmers to swim slowly but still expect them to win medals. The country wants to achieve a well population, not an ill one!
- 8. Similarly the current fee-for-service model does not allow for other modes of care such as group patient education, lifestyle counselling, phone and Internet consultations, and many other innovative interventions.
- 9. The other big-ticket item for general practice, the Pharmaceutical Benefits Scheme (PBS) charges the patient a co-payment under the "user pays" philosophy. The patient has little discretion over this choice only whether or not to fill the prescription. Indeed they are mostly poorly suited to make this decision.
- 10. An alternative would be to pay the GP a fixed amount per patient (possibly adjusted by demographic or morbidity factors) from which the *doctor* would pay for the required pharmaceuticals.
- 11. This would enable the GP to make the best tradeoffs between various pharmaceuticals and also between pharmaceuticals and other treatments. Under this model the GP would be better to prescribe physical exercise rather than antidepressants for depression.
- 12. Overseas research has shown that savings from this sort of approach are at least 5% a not inconsiderable saving from the health budget.

The looming threats to general practice means that we have to adopt more proactive approaches to keeping people well – not merely fixing them when they get ill.

Dr Ralph Smallhorn President/Medical Director 20 September 2005

Funded by the Commonwealth Department of Health and Ageing

# WELLNESS CENTRES REVISITED

### A NEW MODEL OF PRIMARY HEALTH CARE FOR NORTH LAKES AND SURROUNDING SUBURBS

February 2005

John Stafford Project Officer C/o Redcliffe-Bribie-Caboolture Division of General Practice PO Box 258 Margate Beach Queensland 4019 3284-5155 john@rbcdgp.com.au

## **EXECUTIVE SUMMARY**

The rapid population growth in outer metropolitan Brisbane, together with worsening workforce shortages will leave primary health care services unable to cope with demand in our area. Totally new approaches to delivering care will be required for us to address these problems.

This paper proposes a shift in delivering primary health care services from an illness model to a wellness model, aiming at providing services to the rapidly-growing population centred on the master planned community at North Lakes. It builds on a number of initiatives that have proven to work in rural Queensland and overseas. It proposes a chain of Wellness Centres – multidisciplinary primary health care facilities that address the lifestyle determinants of health.

The model offers the prospect of not only better health for the community by addressing health needs before they become critical, but also the potential for reducing the costs of the chronic diseases plaguing our hospitals and community.

ILLNESS MODEL	WELLNESS MODEL	
Service provided by general		
practitioners with support from practice nurses	Service provided by a multidisciplinary team including GPs, wellness nurses, exercise physiologists, lifestyle coaches, fitness trainers,	
T71	nutritionists, dietitians, counsellors	
Emphasis on curing patients - addresses symptoms	Emphasis on keeping people well - addresses lifestyle issues before they become symptomatic	
Mostly individual doctor-patient consultations at a practice	Significant role for nurses and allied health practitioners including group settings and domiciliary care. Consultations by phone and over the Internet	
Funding of doctors through fee-for service model	A new funding model based on keeping patients well, and including budget holding for pharmaceuticals and diagnostics	
Stand alone practices	A chain of Wellness Centres collaborating with other health, fitness, and welfare organisations in same locality	
Occasional reference to lifestyle	Ongoing and regular concentration on lifestyle	
issues where it affects illness	issues such as nutrition, exercise, and substance misuse	
Fixed charges to patients	Patient co-payments based on lifestyles	
Managed by doctors in their "spare time"	Managed by managers under a new governance model	
Patients phone in to book appointments	Patients can book appointments on the Internet	

The fundamental differences are:

The key difference is in the approach to preventing illness. The wellness concept has nurses and allied health professionals, such as dietitians/nutritionists and lifestyle coaches/counsellors, taking over roles previously filled by GPs. The emphasis will be on changing lifestyles with healthy weight, smoking cessation, stress management, and physical activity programs. These will run with screening, early intervention programs and education for managing chronic conditions. By establishing a healthy lifestyle and proactively managing chronic disease the major illnesses resulting from these conditions may not occur, will occur later in life, and/or will be not be as serious.

The model proposes new funding, management and governance styles. In particular it seeks to have health professionals using decision support software, a common electronic patient record, integrated electronic care pathways and common quality systems.

#### **INTRODUCTION**

In early 2002 I was asked to explore how general practitioners could be attracted to the emerging suburb of North Lakes some 25km north of the Brisbane CBD. A new subdivision was being developed and a condition for the approval was that there had to be a general practice in the centre of the suburb. The developers approached the Redcliffe-Caboolture Health Service District, the Brisbane North Division of General Practice, and the Redcliffe-Bribie-Caboolture Division of General Practice for assistance after they had approached most of the general practices in the area to expand or relocate with no success.

The Health Service District was particularly concerned about the lack of GPs in the area because the vast majority of secondary care flow from this suburb was likely to be to Redcliffe Hospital which faced capacity challenges in both its Emergency Department and inpatient wards.

In July 2002 a paper called "Ideas for a Wellness Centre at North Lakes" was released. It was intended to be a discussion paper from which more rigorous planning could be developed. This was revised in October 2002 after visiting practices in New Zealand and getting initial feedback from a variety of heath and academic professionals.

The concepts behind these papers were:

- to bring GPs together in a critical mass for mutual support and sharing of onerous out of hours work
- to delegate non-core clinical care to nurses and other practitioners within their practice
- to embed general practice within a supportive environment
- to reduce patient demand by preventing illness

These key concepts remain today. It is the last of these that makes this model innovative.



During 2003 Queensland Health contracted Carla Cranny and Associates, a Sydneybased Planning and Management Consultancy, to conduct a study to identify potential models of care for North Lakes, and a similar project began in 2004 to refine and implement that model. Both Divisions, the two health service districts, the Public Health Unit, Pine Rivers Shire Council, and the Commonwealth Department of Health and Ageing have been represented on these working parties. Issues remain unresolved at this point but discussions continue. This paper does not pre-empt the results of the latter study which will embrace the whole primary health care sector but is a review of this Division's approach to the care provided within general practice and takes into account knowledge and perspectives gathered since the last report.

Perhaps the most valuable learnings from these two studies has been the extent of shortages in health professionals in outer metropolitan areas, the poorly defined boundaries between health organisations that allow duplications and deficits in service, the complexities caused by the funding system between State and Commonwealth Governments, and the large differences in organisational cultures between health agencies.

It would be a tragedy if the opportunity to evaluate the long term benefits both to the patient (by way of improved health) and to Governments (by way of reduced short-term costs, the reduction in hospital costs through lower morbidity rates, and improved productivity through a fitter workforce) were missed.

#### THE NORTH LAKES DEVELOPMENT

(A more complete description of the proposal, including a virtual tour, can be found at www.northlakes.com).

North Lakes is a planned community on a 1,000 hectare site twenty-five kilometres north of Brisbane where Anzac Avenue meets the Bruce Highway. In March 2002 it received national acclaim by taking out the master planned development category of the esteemed Urban Development Institute of Australia (UDIA) awards for excellence. In November 2004 the North Lakes' landscapers won the Queensland Landscape of the Year Award for the northern Shearwater Village Park.



Around 6,500 new homes will be built,

along with a town centre and business park. A wide range of educational and community facilities such as an aquatic centre and a library are already in place and are expanding. Community groups are gradually developing as the population grows. Features of the development include a rigorous planning approval process for buildings, energy efficient buildings, and an emphasis on building a whole community. It is expected that the population will increase to over 20,000 people by 2015. The progressive nature of the development, and its emphasis on community building, education, and leisure in an integrated way mean that it would be an ideal venue for a health facility that breaks new territory.

The North Lakes suburb itself is only part of the rapid expansion of population in this area. The Pine Rivers Shire estimates the total population of the Mango Hill/Griffin area (which includes the North Lakes development) to be 24,973 by 2016<sup>i</sup> and the neighbouring suburbs of Kallangur, Dakabin and Murrumba Downs are expected to double in population (to around 30,000) in the same period<sup>ii</sup>.

The whole of South East Queensland has an inflow of aged people and this trend is most pronounced in the coastal areas. This inflow means that in Mango Hill/Griffin the population aged 65 years and over will increase from 83 in 1996 to 845 in 2016 and the Kallangur/Dakabin/Murrumba Downs area from 1184 to 1608 in the same period. These people have rapidly increasing health usage patterns.

The North Lakes development itself is expected to be relatively affluent but the surrounding areas, that will use North Lakes as a service hub, are categorised by lower socio-economic levels. Deception Bay and Lawnton have higher proportions of indigenous and ethnic minorities, higher unemployment, lower incomes, and a higher proportion of solo parent households<sup>iii</sup>.

New demographic information prepared by JHD Advisors Pty Ltd has become available since my initial report.



ce : Census Basice 01 with Maplinity, Winter Consulting Produced by : JND Advisors Pty Ltd

In summary the projections are that from 2001 to 2016 the population in the area within 15 minutes drive time from North Lakes will increase by almost 90,000. Comparable growth figures for 5 minutes and 10 minutes drive time are slightly over 32,000 and 60,000 respectively. Using traditional GP to population ratios of 1 GP for every 1,205 population in urban divisions<sup>1</sup> this data suggests that there will need to be over 15 more FTE (full time equivalent) GPs to service the population growth for the North Lakes development and over 70 FTEs for the 15-minute drive zone.

It is evident that a larger population than the North Lakes suburb itself has to be considered as patients in the

currently under-doctored neighbouring districts are likely to access any services to be provided in the North Lakes development. There has been some doubt as to what time patients would spend travelling for a GP. While this remains unknown, the 15-minute drive zone is somewhat understood. If services were spread evenly throughout this zone the *maximum* drive time would be  $7\frac{1}{2}$  minutes. This would not appear excessive

and most of the residents would travel that far to the supermarket more regularly than they visit a practice. A public transport hub is being planned for close to the North Lakes shopping centre and this should cater for most of the population, even those in the lower socio-economic areas.

Regardless of the actual population it is certain that the population we have to consider will be considerably larger than the 20,000 we initially anticipated. This does not allow for current under supply of doctors nor the need to replace retiring doctors.

#### **ISSUES IN PRIMARY HEALTH CARE**

This section summarises the major trends in primary health care that have relevance in the greater North Lakes area.

#### (a) Decreasing numbers of General Practitioners (GPs)

There is a general shortage of general practitioners in outer metropolitan areas throughout Australia. These can be identified in the following map found at <a href="http://www7.health.gov.au/workforce/pdf/omconbrisb.pdf">http://www7.health.gov.au/workforce/pdf/omconbrisb.pdf</a>.

The North Lakes catchment area is included in the top blue zone of the map (dark grey in photocopies). The areas of workforce shortage were based on populations at the 1991 Census when the North Lakes district was unpopulated<sup>v</sup>. The addition of areas of consideration. where areas can



(but not necessarily automatically) attract the same advantages has allowed the potential for GPs to be rewarded for coming to this area. To date the outer metropolitan initiative has not really had an impact on attracting GPs to the area. There is still a significant shortage of GPs to service the established population.

There are a growing number of practices in the Redcliffe-Bribie-Caboolture Division that have closed their books to new patients. This applies particularly to the Redcliffe peninsula but the number and geographical spread is increasing. The situation is even worse for practices that bulk bill. As at April 2004, in the Deception Bay area the only practice accepting new patients bulk bills only patients having immunisations<sup>vi</sup>. In the Burpengary postcode only one practice accepting new patients bulk bills all patients, another bulk bills cardholders.

The average age of general practitioners is increasing and the trend of retirements is likely to increase over the next few years. In 2003 28% of the general practice workload in this district was provided by GPs aged 55 years or over - nearly as much as all GPs aged under 45  $(32\%)^{vii}$ . By 2015, when the North Lakes population is established these doctors will all be aged over 65 years and many will have retired. Anecdotal evidence is that general practitioners have left this district to go to other districts where they can work "office hours". As indicated in Queensland Health's 2020 Discussion paper<sup>viii</sup> this problem is a state-wide issue.

As GPs retire, the existing patient load for the Redcliffe-Bribie-Caboolture district has either to be absorbed between the remaining GPs or some services may be neglected. It hardly needs saying that the increased pressure on GPs is adding to their discontentment with work and decreasing involvement in all but direct patient care – this is detrimental to both them and the long-term care of their patients.

The increasing "feminisation" of the workforce is leading to more part-time work and more resistance to working outside normal office hours. This means that it is highly likely that the number of doctors (headcount) required to maintain existing levels of cover will be more than we currently have with each working shorter hours. This trend is expected to continue in the foreseeable future.

#### (b) Use of Hospital Emergency Departments

Patients are regularly reporting that they are experiencing several days' delay in getting routine GP appointments. This is leading to them going directly to public hospital Emergency Departments as evidenced by large increases in attendances for Category 4 and 5 (non-urgent) patients. This is causing long delays (up to 5 hours) at both Redcliffe and Caboolture Hospitals. This problem can only get worse as the availability of GPs decreases.

The reluctance of GPs to pay for hefty professional indemnity insurance has meant that more and more are getting out of procedural work and referring patients to public hospital Emergency Departments. This trend is likely to continue.

#### (c) Corporate practices

The emergence of corporately-owned medical centres has meant that many GPs have been eager to get away from the business requirements of general practice but some have found their practice of medicine compromised by directives to use services, particular diagnostic, related to business rather than health imperatives. A chain of Wellness Centres offers the possibility of incorporating the best of corporate practices without the disadvantages.

#### THE REASONS FOR A WELLNESS APPROACH

This section draws heavily from two documents

Queensland Health Health Indicators for Queensland, Central Zone 2001

• Australian Institute of Health and Welfare <u>Chronic Diseases and Associated Risk</u> Factors in Australia, 2001

This section makes no attempt to be a complete epidemiological study and there is no specific data available for the North Lakes catchment because the population has barely started arriving. Although the population pattern is probably skewed (with residents falling disproportionately into the "young families" and "early retired" categories) at the moment, presumably this will even out over time.

The key to the reason for a wellness approach comes from <u>Health Indicators for</u> <u>Queensland</u> (p vii), "Preventable health risk factors such as smoking, physical inactivity, overweight, excessive alcohol consumption, high blood pressure, high blood cholesterol, and insufficient fruit and vegetable consumption are responsible for a large proportion of the burden of disease in Australia."

Among the facts supporting this statements are:

- "In Queensland, 55% of adults did not undertake sufficient physical activity to provide a health benefit"
- "55% of adult males and 41% of adult females self-reported overweight or obesity"
- "In 2001, 84% of adults did not consume the recommended intake of vegetable and 51% did not eat the recommended intake of fruit".

It concludes, "Due to the commonality of many of these risk factors, prevention and control of chronic disease interventions should be delivered as part of an integrated program."

"Insanity: doing the same thing over and over again and expecting different results." Albert Einstein

<u>Chronic Diseases and Associated Risk Factors in Australia</u> explains how these lifestyle choices impact upon health. For diabetes the behavioural and biomedical risk factors include excess weight, physical inactivity, and poor diet and nutrition (p49); for coronary heart disease they include tobacco smoking, physical inactivity, alcohol misuse, poor nutrition, high blood pressure, high blood cholesterol, and excess body weight (p18); for strokes they include high blood pressure, high blood cholesterol, tobacco smoking, alcohol misuse, excess body weight, physical inactivity, and poor diet and nutrition (p25). These patterns are repeated for many other illnesses.

The obvious conclusion is that, if we can change lifestyles by increasing physical activity, stop smoking, reduce or stop drug and alcohol consumption, manage stress, and eat properly we can reduce our chances of getting, and reduce the severity of both acute and chronic diseases. Changing lifestyles is much more a behavioural challenge than a medical one. It requires different skill sets than traditional general practice.

If you give a man a hammer, everything looks like a nail to him.

Anon

#### A WELLNESS CENTRE DEFINED

A Wellness Centre is a multidisciplinary primary health facility that focuses on addressing the lifestyle determinants of health.

The Smart State: Health 2020 discussion paper (pp 31-32) outlines an enhanced role for primary care and community-based care. The Wellness Centre concept goes beyond this in its broadening of roles to include a higher emphasis of active inclusion of preventative and alternative therapies. This is consistent with the Department of Health and Ageing's Strategic Plan<sup>ix</sup>, which includes proposing initiatives in public health, minimising the incidence of preventable mortality, and improved quality, integration and effectiveness of health care.

The wellness concept is similar to the concept of health expressed in the Alma Ata Declaration<sup>x</sup>, i.e. "a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity".

The focus for a Wellness Centre will be to address the lifestyle determinants of health - such as physical inactivity, obesity, excessive alcohol consumption, hypertension, high cholesterol levels, and dietary consumption<sup>xi</sup>. This is a major strategic direction for Queensland Health in 2000-2010.

The lifestyle changes associated with obesity and physical activity can be facilitated by ongoing collaboration by a multidisciplinary workforce – most notably dietitians/nutritionists, and nurse educators working with fitness therapists/lifestyle coaches. The rapidly growing problem of childhood obesity will involve this workforce working with health educators in schools. Some of the barriers to exercise can be addressed by fitness trainers, lifestyle coaches, counsellors, and a range of complementary therapists. It will be critical to tailor the exercise regime to the patient – any exercise must be enjoyable or it is likely to lapse. Many of the obese patients will have negative attitudes to physical exercise developed in their childhood.

The other key element will be the management of chronic health conditions by educating the patient to take control of their own conditions. The most common example of this is diabetes where diabetes educators teach patients, often in a group setting with their friends or relatives, how to measure and control their diabetes. Experienced patients become adept at adjusting their food, exercise and insulin levels to maintain good diabetic control. Good diabetic control will reduce the incidence and/or severity of eye complications, amputations, and renal failure. The Wellness Centres will play a significant role in reinforcing positive lifestyle decisions and in helping patients to find appropriate solutions for themselves. Another example of the wellness approach would be in falls prevention. The cost of falls to secondary care facilities is large - \$318million in Queensland Health hospitals in 2001<sup>xii</sup> and the social impacts even larger with as many as 40% of the elderly losing their independence as a result of having a fall. The Wellness Centres, having frequent contact with at risk patients, can take a more proactive role in falls. For example, they can investigate more intensively when the elderly have their bumps and bruises attended to. If patients with risk factors present themselves the GP can conduct a medication review (with the Centre's pharmacist), get a Centre occupational therapist to conduct a home visit to identify and resolve issues around poor lighting, poor home layout, loose mats, and poor footwear, make a referral for an eye examination and encourage the patient to take up one of the Centre's exercise or tai chi programs. One English program reduced falls by as much as 30% by adopting this strategy<sup>xiii</sup>

The Centres would be supported by primary prevention measures by the Public Health Unit and local councils (like general fitness programs and reviews of housing standards), and also possibly by a community health service for patients with a history of falling and multiple high level risk factors.

The wellness philosophy must be the core value of the centre. This will encourage lateral thinking in all aspects of the Centre's operations. Should we have a passive waiting room or can patients be given a pager that allows them the freedom to take some exercise until their appointment, access the health Internet sites, or have a cup of tea at the health food shop cafeteria (away from the risks of cross infection)? Can the Centre (after negotiation with the local tribe) have aboriginal artwork in the foyer to reduce the cultural attitudes that discourage their participation? The same applies, to a much lesser extent, to college students. How do we balance the physical, mental, spiritual and family aspects of health?

It will require all staff to expand their thinking outside traditional limits. It will also require Centre staff to manage their own working lives according to those principles. For example staff should be given some time off during the week to undertake fitness activities locally so that the public see we "walk the talk". Staff should also be given free immunisation and stress management courses as both an example of good industrial relations and as a model to patients.

At the Australian Divisions of General Practice (ADGP) Forum in 2003 a leading futurist Dr Peter Ellyard presented a keynote address on the future of health care. The Power Point presentation and a discussion paper can be accessed from the ADGP website at http://www.adgp.com.au. It covers similar ground to the Wellness Zone proposal, was mentioned as a highlight in the closing plenary session, and was one of the highest rated papers in the on-line evaluation of the conference.

#### Major features of a Wellness Centres:

• Multidisciplinary care provision including general practitioners, nurses, allied health professionals covering the complete range of traditional general practitioner care.

• Addresses the lifestyle determinants of health – smoking, excess alcohol and drug consumption, poor diet, lack of exercise, and stress. There is evidence<sup>xiv</sup> that "green prescriptions" have success in reducing weight and improving exercise – at least when there is support from a fitness organisation.

• An emphasis on patient education so that patients can manage their own (mostly chronic) conditions. This would mean the provision of such care as antenatal education, diabetes education, asthma education, and cardiac education.

• A focus on secondary prevention of illness including an aggressive immunisation program, stress management program, smoking cessation, cholesterol reduction, and healthy weight programs, and also screening for breast, prostate, cervical, and skin cancers.

• Nursing care at home as well as the centre.

• A call centre staffed with nurses to give prompt advice and care (dependent on state or nation-wide alternatives).

• Pharmacist based in the practice to review medications and to review new products.

• Integrated mental health services including substance abuse, anger management, parenting skills.

• The integration of fitness including a base for walking and cycling groups, tai chi, Pilates, and yoga classes, and possibly a fitness trail.

• Provision for indigenous health care, including traditional medicines, after consultation with local tribes.

• Access to spiritual/religious counsellors and bereavement support.

• Provision of a library and internet so patients can be fully informed about their ailments.

• An integrated information management system including integrated clinical records (accessible by patient through a secure website), patient access to allow them to book appointments, integration with public hospital patient management systems, electronic decision support programs, and electronic care plans. Consideration should be given to making these notes web-based.

• Links with other community groups such as community transport, baby sitting clubs, and child car seat loan service.

One of the principles of providing health care is that specialised services (whether they be tertiary medical care or more specialised population health) should be centralised to concentrate the specialised skills of providers whereas more generalised services (such as general practice, maternity and aged care) are best decentralised to improve access to the most commonly required services. Accordingly it is desirable for there to be wellness centres spread throughout the catchment area.

There are critical masses involved in setting up a practice and equally there is a point at which the size of the practice becomes unmanageable because the larger size means that communication becomes more difficult and change much more difficult. This limit seems to be quite low – maybe as low as five FTE (full time equivalent) doctors but still larger than most practices in our catchment area. This is confirmed by Foundation Healthcare's findings that the optimal number of doctors is six<sup>xv</sup>.

Accordingly the Division proposes a chain of linked Wellness Centres. In brief each Wellness Centre would have 5-6 FTE general practitioners, nursing and clerical staff, and at least a nutritionist/dietitian, counsellor/lifestyle coach and an exercise physiologist/fitness trainer. The Wellness Centre would provide all services currently provided by general practice but would have a central philosophy based on preventing illness by rigorously addressing lifestyle issues such as smoking cessation, healthy

weight, nutrition, physical exercise, stress management, and would have highly developed screening and recall systems. Each Wellness Centre would included a pharmacy on the premises and ideally would co-locate with other health providers such as diagnostic services, dentists, community gymnasiums, and the like.

The Centres would also have spare consultation rooms so that other health professionals could operate from the Centres. Examples could be public and private medical specialists, allied health professionals, acupuncture, chiropractic, and the like. These services would have to be approved by a Clinical Board.

Some of the important but lesser used allied health professionals such as podiatrists or speech therapists, where there would not be a need for a FTE therapist, could be shared between the Wellness Centres of the chain ensuring the co-ordination of care and more secure employment – something that will be of increasing importance for staff retention as workforce shortages become more pronounced.

Each Centre would have an activity room where meetings of community health groups such as arthritis support groups, privately-run yoga, tai chi, Pilates and the like classes could be held, as well as patient education sessions run by nurses, nutritionists, counsellors and visiting therapists.

Another potential benefit of a chain of centres could be the centralised provision of after hours service where both patients and centre staff could come with the advantage of the availability of electronic medical records. A centralised position near the public transport hub would maximise access. Among the benefits of this would be the sharing of out-of-hours responsibilities, stability for patients, and improved staff security.

Common systems (with electronic links, benchmarking between Wellness Centres, quality systems, common management systems and common clinical boards) must be developed. This will obviously depend on the uptake of North Lakes residents for the wellness model and whether other practices set up in the district.

Wellness Centres would be located throughout the target community to maximise access. Each Centre would have a fixed patient population based on the ability to give 95% of patients a same-day medical appointment.

Patients would enrol with the chain and be assigned to a primary doctor who would act as the care co-ordinator for that patient. There will be instances when other practice staff act as co-ordinators for specific (usually complex chronic) conditions but the primary GP will be the overall co-ordinator. Electronic records of care by other centre staff will be forwarded to the primary doctor enabling overall coordination.

The enrolment process would include receiving information packs that would outline the chain's features such as (this list would be expanded as the Centres work through accreditation requirements):

- the role of the primary doctor in care co-ordination
- our philosophy of care
- the requirement to have a Wellness Plan

• our health screening policies and practices

• our phone triage system (this may be dependent on the success of Queensland Health's Health Contact Service)

• how to order repeat prescriptions

how to get laboratory results

• the Centre's website and how to link to quality health sites for information

• their PIN number for making appointments and receiving confidential information

- our appointment policy
- how to send test results (e.g. glucose meter readings) by e-mail
- how to make a complaint
- our confidentiality policy and practices
- patient access to their health (and their children's) record
- how to access our fitness programs and discounted fitness programs in the community, and
- how to use the Centre most effectively.

The ability to link Centres electronically, especially with a capacity to do Internet appointment booking, will allow patients to book appointments with their primary general practitioner especially for chronic or related conditions. It would also allow patients to book the first available appointment with any doctor in any centre in the chain for acute conditions that have little relation to their other health issues (such things as minor cuts, and earache). Many patients in the Redcliffe-Bribie-Caboolture district currently go to either a seven-day or similar practice or a hospital Emergency Department because they cannot get an appointment in an appropriate time span).

It would also enable special needs to be within the chain. As an example it could allow women with a male primary doctor to have gynaecological examinations done by a female doctor or PAP smears to be taken by a specialist nurse. After a consultation with a non-primary doctor the clinical notes would be automatically transmitted to the primary doctor who is able to co-ordinate the patient's care and can organise follow-up if required.

The larger resource base would allow specialist management services (such as financial, human resources and quality) to be shared. The Centres would have sufficient resources to allow rigorous quality measures to be put in place such as inter-Centre benchmarking, and evidence-based "journal" clubs.

The concept of a chain means that growth can be managed and as more staff, especially GPs, can be recruited then further Wellness Centres could be developed. If the first centre(s) could have slightly more capacity then these practices could become a little larger than desired and then break off to form a new one. This modular approach dramatically simplifies both planning and management.

#### Governance

The chain deserves a form of governance structure that matches the innovative approach taken in other aspects of the model. Options could include private enterprise (possibly ownership by GPs or by all practitioners), public ownership by either Commonwealth, State, or local Government, or by a public trust. There is an increasing reluctance by GPs to owning their own practices so other options should be explored.

One option is a public trust with representatives from the local councils and the Divisions of General Practice and representatives from the North Lakes community. In recognition of the original stewardship of the land and because severe indigenous health needs will only be met by recognising the cultural component of health, two indigenous representatives should be on the trust. There is no indigenous-specific primary health facility on the north side of Brisbane.

In addition expertise in financial and legal matters and an external expert on primary health care (possibly someone from a university with an interest in wellness rather than traditional general practice) would be invaluable in overseeing the strategic direction of the Centre. An independent voice for wellness would also be essential at governance level to ensure the breadth of the Centre's vision is represented.

The other possible option is a true community trust with the patients voting their own representatives to manage the Centres. In a relatively privileged area like North Lakes there are likely to be accounting, legal and possibly health workers in the community who could sit on the Board. An example of the approach is the Group Health Cooperative in Seattle which manages its own hospitals and health centres. More details of this can be found at <u>www.ghc.org</u>. This would give true community participation. A small charge could be applied to cover the costs of postal elections. In the short term the two Divisions could sit alongside a smaller interim board until the population is fully established.

The Trust's major roles would be in appointing the Centre Leader, determining policy and strategic plans, and in monitoring progress towards business plans.

#### Leadership structures

The traditional occupation-based management structures in general practice and public hospital systems are far less effective than service-based models especially where multidisciplinary teams are required to work together for patient benefit. The evaluation of the Otumoetai Health Centre<sup>xvi</sup> suggests that the Centre was limited in its success because the practice was run by doctors who maintained their curative role (p38-39).

Managers are people who do things right and leaders are people who do the right thing. Warren G Bennis and Burt Nanus

It is critical, especially in resource-scarce areas, that clinical staff be used for the clinical work that they are trained for rather than in administrative areas where they are not trained, often do not enjoy, and arguably do not do well. The decrease in availability of general practitioners means that current non-core clinical GP roles will

continue to be transferred to nurses and allied health professionals (assuming they too can be recruited given national shortages). A similar transfer of non-clinical responsibilities, such as human resource management, finance, and information management, should also take place.

It is proposed that the management structure be as flat as possible with as small a corporate structure as possible. All staff working at the Wellness Centres would be on a salary and could report to a Centre Leader. Clinical decisions must remain at clinical level but within policies determined by the Clinical Board.

A key element to this would be effective electronic communication and data sharing. This would allow Centre Leaders to benchmark key indicators such as pharmaceutical usage, numbers of patients at ideal body weight, numbers of patients stopping smoking etc. The obvious purpose of this is to identify the clinical actions that are achieving the best results and using this wisdom for the benefit of all patients.

The Centres should share corporate functions such as finance, human resource management, information systems, clinical policy and clinical audit. This model is common among corporate practices.

A key component of the structure must be some form of clinical board (a multidisciplinary Wellness Board) that will develop wellness (clinical) pathways consistent with the chain's broader philosophy and will monitor quality of care and customer satisfaction. It is critical that nurses, allied health professionals, complementary therapists, and fitness therapists be represented on the Wellness Board. Getting clinical leaders with an understanding of both traditional and complementary therapies may be a challenge.

### Managing doctors is like herding cats Royal Australasian College of Surgeons

A key component will be clinical review with an emphasis on reviewing clinical practice to ensure quality is maintained – the Centre will not seek to achieve best practice but rather to set it. This will require state of the art information systems. It will be critical that staff, and general practitioners in particular take time out to manage quality initiatives.

In a similar manner Centres could well benefit from advisory committees such as an indigenous people's committee and a women's health committee to give consumers' perspectives of the services the Centre should provide. The operation of the committees will have to be well managed to ensure their input is incorporated into the Centres' practice without becoming bureaucratised.

New roles for therapeutic staff will emerge. For example the Centres' nurses would rotate through practice nursing, patient education, and domiciliary nursing roles. In

the initial stages we would look for a nurse educator to cover diabetes education, asthma education and cardiac rehabilitation etc but as patient numbers increase these could divide up into separate specialties.

The Centre will strive to be an innovator and will actively pursue project funding to explore new ways of operating. It will pursue accreditation as long as the standards reflect the progressive nature of the Centre's practice. It would be expected that accreditation will be a by-product of its pursuit of clinical excellence rather than a goal in its own right

#### **EMBEDDING WELLNESS CENTRES IN A SUPPORTIVE ENVIRONMENT**

There would be additional value in having Wellness Centres collocated with other primary health care providers, most notably the chemist and diagnostic services the GP interacts with the most, to co-ordinate care to take part in common policy development, and to develop combined programs and activities. Queensland Health community health services are another obvious example, especially for specialised patients. The Premier of Queensland, Dr Peter Beattie, has announced that \$10m has been allocated for the provision of a community health centre in North Lakes in the next electoral cycle.

During the Queensland Health study three levels of preventative care - primary, secondary, and tertiary have been examined. Primary prevention focuses on population-wide education and would be the primary domain of Public Health Units and local councils. There is also an opportunity to address the social determinants of health such as housing, employment and transport through whole of government approaches.

Secondary prevention focuses on the identification and early intervention of at risk patients. Wellness Centres are well placed to identify and treat at risk adult patients, and school-based nurses are in a similar position to identify child health issues. In Australia the average annual number of visits to a general practitioner is seven for females and five for males<sup>xvii</sup> – the highest for any group of health professionals. Each of these visits, regardless of the purpose of the visit, is an opportunity to review the patient's life style and to give advice. Having nurses and allied health practitioners within the practice will mean that the GP can immediately pass on patients requiring attention. GPs can also play a leading role in the provision of tertiary prevention - preventing further illness in patients with an unidentified condition.

This continuum of care is shown in the next diagram. Primary prevention, with the Public Health Unit and local councils as the lead agencies, deals primarily with whole of population and whole of government approaches. Wellness Centres and schoolbased health nurses will manage the identification and resolution of at risk patients and those with an identified condition. Community health services are ideally positioned to take a small number of patients with complex and/or specialised conditions. An even smaller number of patients are referred on to secondary care.



The role of community health services should be realigned. The main roles should be in school-based care and in providing primary health care services for conditions that GPs see relatively infrequently so that their skills cannot be maintained. Examples of this could include sexual assault, specialized wound management such as ostomy care, child development, and care of brittle diabetics.

The Centres should be located close to the community. The Westfield Shopping Centre and a proposed public transport hub make the North Lakes shopping centre a natural focus for this catchment area. It would be possible for regular visits to a centralised Wellness Centre (perhaps the one that houses an after hours service) to coincide with clients' weekly visits for their grocery shopping. This offers the possibility of having dietitians working from the supermarket to help clients with healthy food purchases. This is significant because no amount of education for a diabetic or heart patient will succeed unless the person who purchases and prepares the household food is educated on the diabetic's dietary requirements. It also offers the possibility of arranging supermarkets to have special "healthy meal deals", endorsed by a dietitian, to enhance healthy living – this would benefit both the patients and the supermarket

Complementary therapies are often derided, especially by medical practitioners, as being unscientific. Some therapies have, however, built up impressive bodies of research confirming their efficacy. Evidence is that GPs agree that the major forms of complementary therapies (acupuncture, meditation, hypnosis and chiropractic) were considered moderately to highly effective<sup>xix</sup>. They also indicated a willingness to refer patients for the major forms of therapy.

There is also increasing acceptance of herbal and Chinese traditional medicines. The 1995 National Health Survey estimated 1% of the population used medications prescribed by a doctor. This was dwarfed by the 34.6% who used orthodox medicines that were not prescribed (most notably pain relievers and skin ointments and creams), the 25.8% who used vitamin or mineral supplements, and even the 9.4% who used herbal or natural medications<sup>xx</sup>. The Centres must encourage patients to talk freely about their use of these medications – there can be interactions between prescribed medications and complementary medicines, and ineffective solutions to problems that have not been raised by the patient – and complementary medicine options taken, after consultation, when this is preferred by the patient.

The services intended are those for which insurance companies will offer rebates. This limits the range of services to those that will be more acceptable to GPs and the public. Any therapist offering care would be required to be a member of the relevant national body thereby guaranteeing a standard of care. Before they practiced within a Centre they would have to be approved by a Clinical Board. It would be expected over time that complementary therapy would increase in importance within the Centre as all practitioners become confident with the contributions each other can make. As an example instead of treating insomnia with medicines a patient may be given dietary advice (e.g. reduction of caffeine consumption), an exercise regime, and a lavender oil bath. The complementary therapists could work either as members of the Wellness Centre or as visiting therapists.

A certain amount of opposition is a great help to man. Kites rise against, not with the wind. John Neal

### BARRIERS TO PROGRESS

#### Funding

GPs' revenue can be maximised by "six-minute medicine" – longer consultations are reimbursed at a lower "hourly" rate than shorter ones. There is no incentive for providing good care – it is financially preferable for any doctor to prescribe a medicine for say depression than to spend extra time providing counselling. The introduction of the Enhanced Primary Care (EPC) items has been accompanied by a raft of paperwork that has blunted their potential. The Medical Benefits Schedule (MBS) book is around 500 pages long and revised quarterly – small wonder that few GPs bother even looking at it.

To leave "production line" medicine the method of funding will have to change. To create a wellness environment the financial incentives should encourage wellness rather than illness and recognize a multidisciplinary workforce. Applying traditional funding schemes to new goals would be akin to paying sports teams not to win games or paying actors to forget their lines. This will require a significant change in thinking and a leap of faith by all parties.

Appropriate mechanisms will be required to reduce the risk on both funders and providers. These must include both parties being fully involved together in developing a funding system, in and regular review, particularly in the early phases.

Significant amounts of the Wellness Centres' work will be done by nurses and allied health professionals who currently attract MBS payments for only a limited range of activities (notably immunisation, wound management and diabetes education).

Duckett<sup>xxi</sup> notes that the impact of this is that 'it is easier for a person with diabetes to get access to a consultant physician than to a podiatrist or a dietitian'. There is indeed a disincentive to refer patients to nurses or other types of health professionals in the practice<sup>xxii</sup>. This reflects the approach taken in New Zealand's Primary Health Care Strategy, which aims to encourage population-based approaches, provision of comprehensive services for enrolled populations, multi-disciplinary team-based approaches, and increased community involvement in governance<sup>xxiii</sup>

Any "savings" in using less expensive nurses and allied health professionals instead of doctors will be balanced by longer and more frequent appointments to achieve the continuity required for complex lifestyle changes. Funding will also have to allow group therapies so that the costs to the patient for healthy weight and similar services provided by nurses and allied health practitioners can be reduced to very low levels to avoid the resistance to participation – they must be cheaper than accessing the same service from GPs.

Alternative models of funding do exist at least overseas. I propose a form of fixed payment for the whole of primary care over a period. This payment would cover all MBS benefits, the Pharmaceutical Benefits Scheme (PBS), diagnostic benefits, and other primary health care benefits such as EPC and practice nurse subsidies would be brought into one payment per patient. Ideally Department of Veterans Affairs (DVA), and Home and Community Care (HACC) payments would be included.

Evidence from New Zealand is that such models can be effective but that the financial incentives must be well targeted and the provider's philosophy is critical<sup>xxiv</sup>. This would be paid to the Wellness Centre, which would have to pay chemists and diagnostic companies for their services. Having one payment would allow the Centre to make tradeoffs such as green prescriptions rather than drugs, group education rather than individual care, and having nurses doing work that GPs traditionally do.

Demographic adjustments will have to include at least age and socio-economic status, as these are the principal determinants of health expenditure. The nature of the population at North Lakes is likely to mean that the capitation rates will be at the low end of the scale since its population will be relatively young and not in the lower socio-economic groupings.

The funding might require details of registration to be sent to the funder and financial incentives if targets (such as 90% of patients immunised, and 95% of diabetic patients having been reviewed in the past year) are achieved. This could be implemented by withholding 10% of funding until targets are achieved. Crampton et al (2000, p273)

note that capitation funding may encourage reduced utilisation. Such quality measures will ensure that patient care is maintained and not merely used to line doctors' pockets.

Centres would enrol patients for all their primary health care needs. Any services provided by external primary health care providers could be deducted on some form of fee-for-service system but in no instance could deductions exceed the payments made on behalf of that patient.

One of the benefits of this approach is a guarantee of revenue so Centres could plan to expand their number of practitioners as their patient base increases ensuring clinicians do not become overworked. It would also be significantly easier for the Health Insurance Council to administer.

The issue of patient co-payments will have to be explored. Centres should be neither advantaged nor disadvantaged relative to traditional general practices. To encourage patients to have much of their care given by nurses and allied health practitioners (and this especially applies to the regular dietetic and exercise reviews that would be essential to support patients' moves towards healthier lifestyles) it would be preferable for patients to have free preventative care.

Most practices in the Redcliffe-Bribie-Caboolture district require patients to pay a copayment. To achieve equity the same should apply to patients of the wellness centres. In recognition of the positive contribution to health that a healthy lifestyle contributes, well-publicized discounts for patients who do not smoke and are in the healthy weight range should be applied. An intermediate discount could be applied to patients who are smokers or outside healthy weight but who regularly attend and make progress towards their health goals. These direct financial incentives to patients should enhance the whole concept of wellness.

Services such as yoga, tai chi, and Pilates would be fully funded by the patients. Hopefully having reasonable numbers of patients taking up these options will allow for relatively low costs relative to normal commercial equivalents.

The budget holding for pharmaceuticals and diagnostics (perhaps reducing to 95% after the first year) is another tool the practices can use to effect good care. This would ensure that the Centre makes overall efficiencies through savings in pharmaceuticals and possibly diagnostic testing (especially if clinical notes were able to be integrated with secondary care providers). New Zealand has demonstrated savings for both funder and provider can be achieved by this approach (Macdonald, 2002, p75).

Wilton and Smith<sup>xxv</sup>, after an extensive literature review, concluded that "budget holding for general practice be considered further as a viable, and potentially more efficient, alternative to the current piecemeal reform of the primary care sector." They cited rising pharmaceutical costs and lack of incentives for GPs to prescribe costeffectively as being the key drivers of change in Britain and New Zealand. There is some evidence (e.g. Bradlow and Coulter<sup>xxvi</sup>, Glennerster<sup>xxvii</sup>) that budget holding achieves reductions in health care spending and improves patient access. The United Kingdom gradually reduced the size of practice able to take up budget holding (and thus extended the numbers of practices able to take it up) indicating that the model has merit. It is clear that there must be negotiation of any weighted capitation formula as there is ample evidence (e.g. Pritchard and Beilby<sup>xxviii</sup>) that setting the level of capitation too high will mean addition to the cost of health care while setting it too low will not be conducive to getting changed practices by GPs.

QDGP<sup>xxix</sup> concludes, "Evaluations of GP fundholding results are generally favourable, but there is some debate on their impact with regard to quality of care, and savings generated. One criticism has involved the 'cream-skimming' of 'easy' patients to reduce costs at the expense of complex or high-end users." The issue of cream skimming can be resolved by wellness centres being contractually required to register any patient who seeks care (although the Centre must be able to close its books to all patients once it reaches certain thresholds). Quality of care issues could be resolved through regular clinical audits that will be able to be benchmarked against other practices.

#### THE NEXT STEP

"Progress always involves risk; you can't steal second base and keep your foot on first" Frederick Wilcox

The concepts in this paper require considerable examination and debate. Although the component concepts are hardly new, they have not, to the best of my knowledge, been introduced in Queensland (though some parts are well established particularly in rural settings where alternative ways of operating are required because of the difficulty in recruitment). Overseas too there is generally an illness approach to primary health although Singapore and China have demonstrated some success in population health approaches<sup>xxx</sup>. New Zealand has moved to a capitation model of funding and the United Kingdom has introduced budget holding for pharmaceuticals, diagnostics and secondary health care.

The critical issue will be operational funding. The project could not succeed, particularly in the lower socio-economic areas adjacent to the North Lakes development itself, without Medicare funding. Will the Department of Health and Ageing accept a novel proposal like this as a pilot for reform of health funding systems? Is there an alternative method of funding, such as nurses and allied health professionals being able to claim under the MBS? This is especially important since the project is not likely to see its major benefits in the immediate short term. The major impact of improved fitness may not be achieved for twenty or more years. How can we get some assurance of long-term funding in a system that is geared towards electoral cycles?

This form of care will be more expensive initially as there are a wider range of staff involved in operating Wellness Centres. There are likely to be short term reductions in pharmaceutical costs and, further down the track, savings in complex and costly hospitalisation.

The other critical element will be capital funding. Can we attract capital from a Government source as project funding is often targeted for more specific purposes? Will Queensland Health support the project under its Smart Health 2020 project? Can we attract overseas funding from a charitable foundation? Can we get a Queensland benefactor/investor? Will this be appealing for the Smart State? It is probable that a bank would advance money if a realistic business plan were available.

The information system requirements will be the other major sticking point. The interface between private and Government organisations will take a considerable time to achieve and there are many potential stumbling blocks. Few, if any, computer systems are available off the shelf to implement. This is even more critical if we work towards shared electronic patient records and shared electronic care pathways.

More work needs to be done on the organisation structure and the synergies of working with other organisations.

We need to set up a working party, preferably with a span of funders and multidisciplinary medical, health and fitness providers, to review the issues and to come up with ways to bring a model to fruition. It is important that this working party is kept small to ensure it does not get bogged down. Project funding for this feasibility study is urgently needed.

An invasion of armies can be resisted, but not an idea whose time has come

Victor Hugo

<sup>i</sup> http://www.prsc.qld.gov.au/yourShire/ShireInfo/PopulationProjection/Mangohill&Griffin.htm <sup>ii</sup> <u>http://www.prsc.qld.gov.au/yourShire/ShireInfo/PopulationProjection/Kall,Dak&Murr.htm</u>

<sup>iii</sup> Carla Cranny and Associates <u>Primary Health Care in North Lakes Options to Develop Integrated</u> Service Models in a Metropolitan Growth Area unpublished, May 2004, pp 48-49

<sup>iv</sup> Modra, C. and Kalucy, E <u>Practices, Partnerships and Population Health: Report on the 2000-2001</u> <u>Annual Survey of Divisions of General Practice Primary</u> Health Care Research and Information Service, Department of General Practice, Flinders University, Adelaide, 2002

<sup>v</sup> Courier Mail 17 July 2002

<sup>vi</sup> Redcliffe-Bribie-Caboolture Division of General Practice <u>Practice Access Survey</u> unpublished April 2004.

<sup>vii</sup> Health Workforce Queensland Overview of the Queensland General Practice Workforce 2003-2004 Brisbane, 2004, p43

viii ibid p42

<sup>ix</sup> Department of Health and Aged Care <u>Corporate Plan 2000-2001</u> Department of Health and Aged Care, Canberra, 2001

<sup>x</sup> International Conference on Primary Health Care <u>Declaration Of Alma-Ata</u> Alma-Ata, USSR, 6-12 September 1978

<sup>xi</sup> Mathers, C., Vos, T., and Stevenson, C. "The Burden of Disease and Injury in Australia" cited in Queensland Health <u>Health Indicators for Queensland</u> Brisbane, 2001

<sup>xii</sup> Walters, J., Hoare, H., Brown, B., and Stafford, J. <u>Development of a Falls Minimisation and Injury</u> <u>Prevention Framework in the elderly population of the Redcliffe Caboolture Health Service District</u> Redcliffe-Caboolture Health Service District, unpublished, 2004.

<sup>xiii</sup> Oldham, J. <u>Collaborative Efforts in the UK</u> Presentation at the <u>Quality and all that Jazz</u> Conference, Gold Coast, 2003.

xiv http://www.harbour.sports.org.nz/snhgreenprescription.asp	and
http://www.hillarysport.org.nz/aboutpushplay/greenp.shtml	
http://old.healthnet.org/programs/procor/icpc/0016.html	

<sup>xv</sup> <u>Medical Observer</u> St Leonards, New South Wales, 11 April 2003

<sup>xvi</sup> Seddon T D S, Reinken, J A, Daldy B M <u>Capitation Funding of a New Zealand General Practice:</u> <u>Department of Health Occasional Paper 26</u>, Health Services Research and Development Unit, Department of Health, Wellington, 1985

<sup>xvii</sup> Australian Institute of Health and Welfare <u>Australia's Health 2002</u> Australian Institute of Health and Welfare, Canberra, 2002

<sup>xviii</sup> Modified from Walters, Hoare, et al, op cit, 2004

<sup>xix</sup> Pirotta, M. V., Cohen, M. M., Kotsirilos, V., and Farish, S. J. "Complementary therapies: have they become accepted in general practice" Med J Aust, <u>172</u>, 105-109, February 2000.

<sup>xx</sup> Australia's Health 2002, op cit p323,

xxi Duckett, S. "Medicare: where to now?" Australian Health Review, vol. 18, no. 1, pp. 117-124, 1995.

<sup>xxii</sup> Macdonald, DJD <u>Purchasing Primary Health Care Provided in General Practice</u> Office of the Controller and Auditor-General, Wellington, March 2002 <u>www.oag.govt.nz</u>

<sup>xxiii</sup> Crampton P, Sutton F, and Foley J "Capitation funding of primary care services: principles and prospects" New Zealand Medical Journal, vol 115, no 1155, 7 June 2002

<sup>xxiv</sup> Cumming, J. <u>Funding Population-Based Primary Health Care in New Zealand National</u> Health Committee, Wellington, 1999 <u>http://www.nhc.govt.nz/pub/phc/phcfunding.pdf</u>

<sup>xxv</sup> Wilton, P. and Smith, R. D <u>GP Budget Holding for Australia: Panacea or Poison?</u> Centre for Health Program Evaluation, October 1997, also found at <u>http://chpe.buseco.monash.edu.au/pubs/wp75.pdf</u>

<sup>xxvi</sup> Bradlow, Jean and Coulter, Angela "Effect of fund holding and indicative prescribing schemes on general practitioners' prescribing costs" British Medical Journal, <u>6913</u>, <u>307</u>, 1186-1189, November 1993

<sup>xxvii</sup> Glennerster H, Manos Matsaganis M, Owens P et al "GP fundholding: wild card or winning hand" cited in Drummond, M "The United Kingdom National health Service reforms: where are we now?" Australian Health Review, <u>18</u>, <u>1995</u>, pp 28-42 <sup>xxviii</sup> Pritchard DA and Beilby JJ "Issues for fundholding in Australian general practice" Medical J Australia, <u>164</u>, 19 February 1996, 215-219

<sup>xxix</sup> Queensland Divisions of General Practice <u>Alternative Funding Models Workshop</u> Queensland Divisions of General Practice, Brisbane, 27 October 2000

<sup>xxx</sup> Cited in Appendix 2 of National Public Health Partnership <u>Preventing Chronic Disease: A Strategic</u> <u>Framework</u> National Public Health Partnership, Melbourne, October 2001

m

teasts