

Discussion Paper: Enhanced Quality of Care through More Effective Collaboration

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CAPACITY SUSTAINABILITY COLLABORATION INNOVATION

towards 2010



MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

1. Executive summary

As it is currently configured, the health system is struggling to meet demand. Fundamental changes methods of service delivery will be required if the system is to adequately respond to anticipated epidemiologic and demographic pressure.

The Hospitalist system currently in place has several vulnerabilities which impact upon its ability to maintain and increase capacity. These vulnerabilities relate to information transfer and to the working relationships which exist between medical practitioners in the primary and secondary sectors.

Modest changes in the nature of working relationships related to communication, task allocation and teamwork have the potential to significantly increase capacity, improve quality of services and enhance job satisfaction. The rationale for and scope of such changes are discussed in this document.

2. Introduction

MidCentral District Health Board's (MDHB) vision is that "the people of our district enjoy the best possible health and independence". To further this vision, a long term pathway has been developed which outlines the direction of MDHB's efforts over a ten-year period. The 2005 Health Needs Assessment¹ provides a comprehensive analysis of the community's health status and areas of need. The organisation now intends to address areas of need as it enters the investment phase of a 10-year long-term plan.

As a prudent investor in population health, MCDHB seeks an environment which will maximise the health gains achieved for each dollar spent. This paper examines that environment with particular reference to the current working relationships which exist between medical practitioners within the DHB. It suggests that, with the adoption of several small and easily implemented changes in the structure of practice relationships, significant gains in system efficiency and capacity may occur. Although the focus is on medical practitioners, the principles expounded may apply equally to the nursing and allied health professional workforce.

For at least the last two decades, the health system in New Zealand has been the subject of constant change, with the result that the sector has become the subject of 'change fatigue'. In this context, calls for change are often met with scepticism or resistance. To some extent, these reactions are justified given that not all the change which has taken place has been beneficial. Many people working in health long for either a return to dimly remembered good old days, or at least a break in the pace of change. Given the current demands faced by the healthcare system, neither of these options is feasible.

In healthcare, many of the trends which require anticipation and response are not subtle: they are an obvious part of the daily working environment. Major trends faced by all parts of the sector include:

- An aging and increasingly consumerist population with an apparently insatiable demand for care and an increasing burden of chronic disease
- The implications of the Primary Healthcare Strategy with associated resource shifts into the primary sector
- An obesity epidemic and consequent epidemic of type II diabetes with anticipated escalation of healthcare costs
- A declining, aging General Practitioner workforce
- Rapid growth of information technology with major potential benefits to practice.

The challenge confronting MDHB is how to configure its manpower and services to best respond to this changing environment in order to derive the maximum benefit for its population.

It is particularly timely to examine whether any change in the way doctors collaborate can assist both the DHB and the practitioners themselves to achieve their shared goals. Much of the dissatisfaction expressed by doctors appears to stem from recognition that, as it is now configured, the healthcare system is struggling to meet current demand. As the implications of the epidemiologic trends listed above become manifest, the possibility of system failure looms.

Encouragement to challenge and enhance existing methods of service delivery is forthcoming from the Ministry of Health, as evidenced by the recommendations of the Addressing Disincentives Working Party Report²:

“DHB’s should encourage innovation within individual specialties designed to achieve a more productive and/or improved patient service. DHB’s should support such innovation either by:

enabling the service to retain ‘income’ when less ‘countable’ activity occurs or not reducing future budgets by the extent of any savings achieved

It is clear, therefore, that there is both a mood for change present at Ministry and individual practitioner level, and a compelling need on the part of the DHB to do so in order to avoid being swamped by the impact of the trends outlined above.

The introduction and management of a change process affecting a population of doctors requires an appreciation of their apparently paradoxical attitude towards change. On one hand, doctors enthusiastically embrace change, particularly of a technological or scientific variety. Most doctors practising for more than ten years are currently using a completely different pharmacopoeia from the one they were taught at medical school, as they have seamlessly introduced new drugs into their daily practice. Many are early adopters of technological innovation including PDA’s, wireless internet etc. On the other hand, with some exceptions, doctors as a group tend to be innately conservative. They like to feel that they are already doing their best for their patients, so any suggestion of a change in practice challenges this notion. As a result of change fatigue, many have adopted the role of victims of enforced change, resulting in the claims of disempowerment mentioned above. With increasing demands on their time, many doctors simply find themselves too busy to consider or implement change, instead falling prey to frustration and entrenched work practice. In general, doctors will embrace changes which have either proven patient benefit, or those which make their own lives easier, or both. Ideally, any proposed change should have support in the medical literature or a well-functioning model elsewhere to avoid being regarded as change for change’s sake.

The rationale for change can therefore be summarised as follows:

1. The health system as it is currently configured is struggling and in some cases failing to deliver care.
2. Demand for care will inevitably escalate as a result of demographic and epidemiologic pressure.
3. There is widespread dissatisfaction amongst doctors with the current system as a result of both work pressure and practitioners own perceptions of unmet need.
4. An environment which encourages innovation and change without disincentives has been signaled by the Ministry.

Problems and pitfalls of the hospitalist system

The model of primary/secondary interaction which has developed in New Zealand is essentially a hospitalist system. In such a system, patients are cared for in the community by their General Practitioner until such time as a service which is located within a hospital is required. Such a service may take the form of an episode of inpatient care, a learned opinion from a specialist colleague, or a diagnostic/therapeutic intervention which is not available in the primary care setting.

As the patient transitions from the primary to the secondary sector, there must be a transfer of information which outlines the patient's current status and the rationale for requesting the service. On referral, responsibility for patient care is assumed by the hospital-based practitioner until such time as the service has been deemed to have been provided. Exit from the hospital system is generally at the discretion of the hospital based practitioner, whereupon a further transfer of information and of responsibility for ongoing care takes place.

Inherent in the hospitalist model are several system vulnerabilities where the continuum of care can break down, often with serious consequences for the patient. Such system vulnerabilities can be conceptualised as occurring in relation to:

- deficiencies of information transfer
- dislocation/fragmentation of care
- inefficient multi-step care.

These features are best illustrated in the form of brief case studies.

Deficient information transfer:

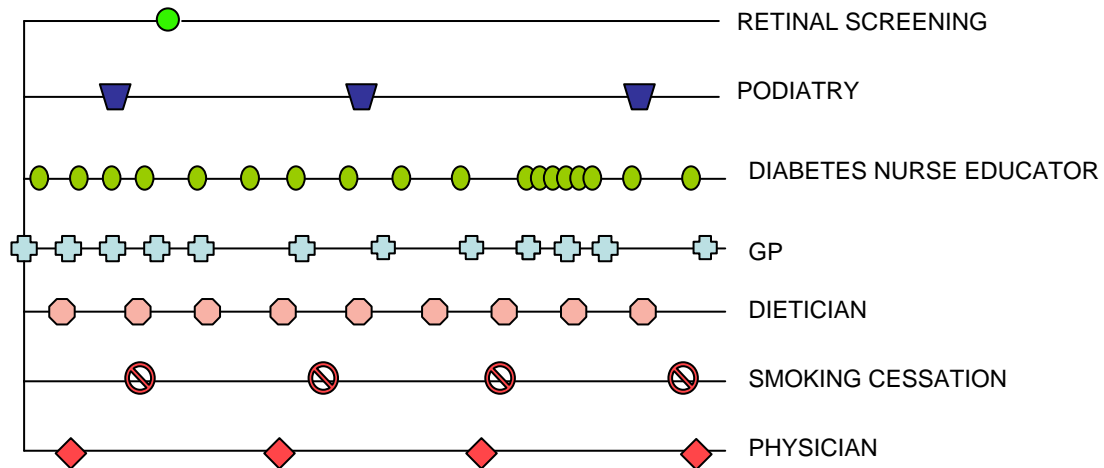
A frail elderly man is admitted to a geriatric unit for rehabilitation after failing to cope at home following a lower limb amputation. His GP faxes the referral to the unit coordinator with lab results and drug regimen. Apart from the cover sheet, the remaining pages of the fax do not have a clear patient identifier. The coordinator staples pages relating to a different patient to the referral. The admitting doctor and nursing staff accept the drug regimen on the fax as that of the patient, as he is unable to offer a drug history owing to confusion. On the night of admission, he is given an anti-diabetic medication which he does not usually take. He suffers prolonged hypoglycaemia and dies the next morning from multi-organ failure.

The above case is real, and serves to underscore the critical dependence of care quality on accuracy of information transfer. While this case represents an extreme example, it should be noted that high levels of inaccurate information transfer related to drug regimens occur with both the 1^o/2^o transition, the 2^o/1^o transition, and between departments of hospitals. The potential for adverse outcomes associated with defective information transfer is not confined to drug regimens, but is present in all aspects of care and is frequently cited in the medicolegal literature.

Dislocated/fragmented care:

An obese, cigarette smoking 57 year old man presents to his GP with symptoms of diabetes and exertional chest pain. A diagnosis of diabetes is confirmed, drug treatment is started and arrangements are made for follow-up to optimise drug dosing. The patient is referred for smoking cessation, and to a dietician for dietetic advice, as well as to the diabetes nurse educator for education on blood sugar monitoring etc. Referrals are also made for retinal screening and podiatry, and because of the chest pain, the patient is referred to the General Medical services for assessment. Each of the parties involved in the patient's care follows him up at clinically appropriate intervals. After eight months of oral treatment, he is switched to insulin with close GP and DNE supervision.

At first glance, the above scenario seems to indicate a high standard of care. The patient has received a diagnosis, has been referred appropriately, and is subject to a multidisciplinary approach. However, while the care he is receiving is comprehensive, it is also dislocated and fragmentary because of the temporal and spatial separation of the various practitioners involved in the network. The first twelve months of the scenario (i.e. the time during which crucial behaviour patterns are being established which will govern the patient's future approach to his chronic disease and hence the likely outcome), is illustrated below.

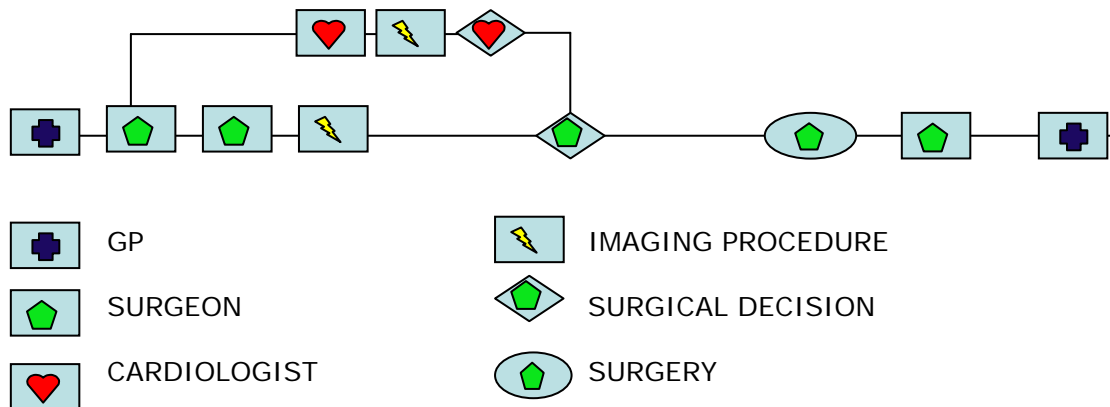


Each of the icons represents a separate visit to a healthcare practitioner. From the individual practitioner's perspective, the burden of attending for care does not appear excessive, but from the patient's perspective, he is faced with multiple appointments in various locations at various times provided by a wide array of personnel. If a socioeconomic dimension is added to the illustration (e.g. the patient lives 90 minutes drive from the hospital and each appointment represents time off work), it is not difficult to see why so many patients choose to opt out of part or all of such networks of care. The problem in essence is that the team delivering the care is a notional or virtual team, each of the members of which continues to provide his/her contribution to care in relative isolation. Even when services are delivered in a community setting, temporal separation of team members, each of whom has his/her own appointment schedule, requires from the patient a high level of motivation to attend.

Inefficient multi-step care:

A 57 year old diabetic man with a prior myocardial infarction presents to the GP with symptoms of claudication. He is referred to a vascular surgeon for assessment of lower limb ischaemia. At the first specialist appointment, the surgeon decides that vascular imaging is required before any decision regarding the necessity for surgery can be made. The surgeon is also concerned about the history of coronary artery disease, and refers the patient to cardiology for assessment of this. The patient attends for a magnetic resonance angiogram, and sees the surgeon for follow-up, but has not yet been seen by cardiology by the time of his surgical follow-up visit. The decision regarding surgery is postponed until this information is available. The patient then sees the cardiologist, who books him for stress echocardiography. The stress echocardiogram is satisfactory, and the patient sees the surgeon again, at which point a booking for surgery is made. The surgery is performed, and the patient sees the surgeon for follow-up four weeks postoperatively, with discharge to the GP at this point.

The continuum of care in this example can be represented thus:



The surgeon is involved at 5 separate points of care along the continuum, including two encounters prior to any definitive decision regarding intervention, and a follow-up visit after intervention has taken place. Ideally, the GP should have the ability to refer patients who have been completely worked-up, thereby adding value to specialist appointments, allowing the specialist to produce a definitive action plan at the initial appointment. Currently, barriers to this taking place include gated access to diagnostics and inability of GP's to readily discuss patients with specialists prior to referral. Follow-up visits, which generally involve checking for variances against the expected outcome of specialist intervention, are frequently performed by specialists themselves, occupying clinic slots which could be more usefully spent seeing new patients.

From the patient's perspective, the primary/secondary transition represents moving from a familiar healthcare environment with a limited number of well recognised personnel (the GP surgery), to a less familiar, often threatening environment staffed by a bewildering number and variety of new faces. Given that the patient may be unwell as this transition occurs, particularly during an episode of inpatient care, and given the anxiety associated with being the recipient of healthcare interventions in general, the likelihood of useful patient education taking place during this process is quite low. Paradoxically, it is at exactly this point where patients often receive their most intensive educational input. 15 minute Outpatient appointments represent a further example of an environment in which successful patient education is unlikely to transpire.

From the GP's perspective, the hospital frequently functions as a "black box" with varying degrees of transparency. The hospitalist model offers the GP a limited repertoire of choices when seeking help from specialists. Often all a GP wants is advice or reassurance that he or she is on the right track with a particular patient, for whom the GP otherwise feels competent to continue caring. Without ready access to specialists, the GP is forced to request an outpatient appointment or, in extreme cases, admission. Real-time advice, available over the phone at the time of the GP consultation, is rare and often rendered by registrars with varying degrees of expertise and training in a given discipline.

Having entrusted patient care to the hospitalist, the GP is usually unaware of the processes which take place after the patient enters the system. The information received following the episode of care is of varying quality, despite the complexity of the care which may have been delivered. While the issue of timeliness of discharge summaries has been addressed by an electronic format, these are generally delegated to a junior member of the team and the literature suggests that errors are commonplace³. The quality of clinic letters varies considerably, while unembellished diagnostic reports without the ability to discuss the findings with the reporting doctor represent a further example of low quality information.

Hospital doctors also experience considerable frustration with the hospitalist model, often in the form of what are perceived to be inappropriate admissions or inappropriate referrals. As many as 10% of outpatient referrals may be inappropriate⁴, with anecdotal evidence suggesting that in many centres these are currently fielded and booked for an appointment rather than serving as an opportunity for collegial interaction and re-education. The problem may be compounded by inter-specialist referral, with the result that the GP becomes disenfranchised as the patient moves from specialist clinic to specialist clinic. Further frustrations arise when referrals are made principally to access technology otherwise unavailable to primary care, with hospital specialists viewing a gate keeping role such as this with distaste.

For the foreseeable future, the hospitalist model is likely to remain in place as the dominant method of service delivery, yet it is clear that it suffers from several flaws which impact on the quality of care including:

- Care quality and continuity critically dependent on information transfer
- Information quality variable and often incomplete both in 1°/2° and 2°/1° transition
- Multidisciplinary care frequently overwhelming to patient and difficult to adhere to owing to dislocation/fragmentation
- Inherent inefficiencies of multi-step care stemming from barriers to GP/specialist communication, diagnostics access and inappropriate task allocation
- Environment and location of site of care delivery inhospitable to target population serviced
- Limited range of responses to real needs of primary care practitioners resulting in inappropriate referrals.

At present, the hospitalist model is struggling to cope with the demands placed on it. It is pertinent at this point to examine some features of the primary care and hospital environments which will undoubtedly impact upon the model's future viability.

The General Practice Environment

For several years, many commentators have made reference to a looming or incipient crisis in the General Practitioner workforce. The data presented below suggest that a significant decline in the GP workforce has been occurring in the MDHB area since the late 1990's. Accurate contemporary data on the state of GP manpower within MDHB are not readily available, with the most comprehensive figures coming from the NZMA workforce survey of April 2004⁵. Data from NZHIS are similarly dated.

ACTIVE GENERAL PRACTITIONERS BY MDHB AREA 1998-2002

	1998	1999	2000	2001	2002
Palmerston North	66	65	65	57	53
Manawatu	10	12	9	14	12
Tararua	8	11	11	10	9
Horowhenua	19	16	14	14	11
Kapiti Coast*	49	44	56	42	40
TOTAL	152	148	155		125

*includes non MDHB serviced area

These data reflect total active practitioners rather than the more informative GP FTE's/100,000 population, but the trend shown is clear. In 2001, MCDHB rated 18th out of 21 DHB's in GP's/100,000 at 65.8 (range 56.1 West Coast-106.6 Auckland).

The workforce issues confronting General Practice have been extensively addressed in a number of publications. These include, but are not limited to:

- Low morale
- Low prestige and income relative to other specialties
- An aging workforce with large numbers intending to cease practice within 5 years
- Poor recruitment into the specialty with low numbers of new medical graduates indicating Primary Care as a preferred career option
- Diminishing value of practices, with some GP's walking away from unsaleable practices
- Increasing reliance on overseas trained doctors, with competition from other countries in a global marketplace.

A cursory reading of the GP magazines is sufficient to derive an appreciation of the factors which appear repeatedly on the top of GP wish-lists. In summary these are:

- Support/advice/reassurance
- Access to specialists
- Access to services for their patients
- Professional fulfillment
- Collegiality
- Security of income
- Respect.

The difficulties GP's face in obtaining timely specialist support inherent in the hospitalist model have been alluded to above. Greenslade⁷ elegantly articulates the frustrations GP's face in obtaining or providing services for patients. He notes that, while primary care is being urged to provide an increasingly comprehensive range of services, DHB's have been reluctant or slow to devolve services or contracts to allow this to happen. He contends that the scope of primary care is being constrained by DHB's. Greenslade also notes that GP's want to take an increasing role in the management of chronic illness, but that when such patients are referred to hospital services, their ongoing care is often assumed by hospital specialists. As a result, hospital clinics are stuffed with follow-up patients making first specialist appointments even more difficult to obtain. This viewpoint needs to be tempered with the recognition that, perhaps in part as a result of de-skilling related to the loss of chronic care patients to the secondary sector, more than 60% of GP's would prefer hospital clinic follow-up for such a common chronic illness group as patients with type II diabetes and complications⁸.

Professional fulfilment is clearly a very individualised concept, but common themes include the ability to work a patient up fully with access to an appropriate range of diagnostic facilities, the potential to develop a special interest, and the desire to be appreciated as an integral part of the healthcare team. As doctors have become busier and more focussed on their individual areas of expertise, there has been a perception that the collegiality which formerly existed between primary and secondary practitioners has suffered. This might be an anticipated outcome of the interaction between two groups of busy stressed individuals who seldom share physical proximity with each other and who communicate primarily or exclusively in writing.

The desire for security of income leads directly to consideration of the future trends which must be anticipated by MCDHB. Nationally, GP's currently comprise approximately 35% of the medical practitioner workforce. Surveys of medical students indicate that only 13-16% are considering General Practice as a career option⁶. A major shortfall in GP manpower is inevitable. This shortfall has already impacted on the provision of rural General Practice, and over the last several years metropolitan group practices have been struggling to staff themselves.

The appeal of marginally viable rural General Practice to newly qualified GP's, who may be burdened with student loans and looking for work/life balance, is extremely limited. Single, two or three person practices in rural areas are unlikely to survive this workforce reality. Increasingly, salaried GP positions will be sought by new entrants to General Practice and the small business fee-for-service model of General Practice will be required to adapt as practitioners coalesce into practices of a sustainable critical mass. Remote centres will likely access GP services from practitioners who are rostered from coalesced critical mass practices. Contracts for salaried GP's will need to align in terms of remuneration, superannuation, annual leave and CME allowances with those currently offered to hospital specialists. The fundamental nature of general practice will come under increasing pressure from an aging population with an increasing burden of chronic disease, and GP's will need to refocus on their role as diagnostician and drug therapist, sharing more of the other aspects of chronic disease management with nursing teams.

The physical premises of many GP surgeries will be inadequate to accommodate the range of services which will ultimately be provided in the primary care setting. A shift in practice ownership from an owner-operator small business model to other models of ownership may be seen, with private investors, PHO's, insurers and others all potentially involved. The development of the Horowhenua Health Centre presents MDHB with the opportunity to trial and model processes which may develop in the sort of premises in which much of the future delivery of primary healthcare will take place.

Initiatives already in place or under development such as the Community Cardiology Service and the CT/headache scheme indicate recognition on the part of MDHB of some of the issues faced in primary care and responsiveness towards them. The challenge is to greatly extend the range of such initiatives with the goal of addressing the needs of GP's in particular and primary care as a whole, with the dual purpose of becoming a preferred location for General Practice and enhancing the quality of services provided. Many potential initiatives will require the involvement and goodwill of hospital-based specialists. It is therefore appropriate to examine the features of the hospital environment which may act as barriers to the development and implementation of such initiatives.

The Hospital Environment

The hospital environment shares many of the same problems as the General Practice environment as it struggles to cope with the demands placed upon it by an aging population with a high level of demand for services and increasing expectations of the quality and timeliness of care. Hospitals expose doctors and other staff to many of the features of a stressful workplace environment, including:

- Work overload
- High work rate/time pressure
- Continual dealing with customers (patients)
- Unpredictable/long/unsociable working hours
- Conflicting demands of work and home life
- (perceived) lack of participation in decision making
- career stagnation.

Hospital based specialists as a group tend to have strong personalities, selected for to some extent by the rigours of the training programmes which they have had to endure to attain specialist status. Interpersonal conflict is frequent, and most hospitals around the country have examples of interpersonal conflict leading to dysfunctional working relationships. Although it has softened to a degree in recent years, the adverse medicolegal environment which characterised the late 1990's has left a legacy of bitterness and defensive practice amongst hospital doctors. Fragmentation of care, loss of collegiality, burnout and 'checkout' (attending work without passion or enthusiasm) have become commonplace, as has exit to the private sector. The foregoing perhaps paints an excessively gloomy picture of the hospital environment as it is perceived by specialists, but most would accept that these features are present to varying degrees in their current workplace.

The manpower issue facing hospital specialists is not as grave as that described in the GP setting, but shortages in key specialties presently affect all hospitals and threaten the viability of services in many. Competition in a global marketplace and increasing reliance on overseas trained practitioners is common to both the primary and secondary sectors.

Although comparative numerical data on job turnover for hospital specialists are not readily available, there is a general recognition that specialists are not staying in their positions for as long as was previously the case. As a result, quality initiatives and practice innovations, which are often the result of an individual clinician/champion's enthusiasm, have proven difficult to sustain. In the past, many high-quality units became that way as the result of ongoing 'tinkering' by one or a few clinicians as they attempted to improve their service and address workplace

frustrations by gradual incremental change. Increasing turnover has resulted in a diminution of this culture of continuous quality improvement.

Some hospital clinicians are of the mindset that their responsibility for patient care starts and finishes at the hospital gates. For many, a lack of interest in General Practice was an early factor involved in the decision to specialise in hospital based medicine. As the career ladder is ascended, a hospital doctor develops more and more layers of personnel between himself or herself and the primary healthcare environment. This tendency may be more or less deliberate or developed depending on the individual practitioner, but, whether or not it is acknowledged, the aura of exclusivity is a powerful factor in hospital specialist behaviour. To optimise collaboration with the primary sector, a complete paradigm shift is required whereby a hospital specialist's mana is determined not by exclusivity but by accessibility.

While individual specialists have limited control over inpatient volumes, which are either set by others (elective surgical) or demand driven (acute surgical and virtually all medical), there is considerable scope for influencing outpatient response times and FSA availability. Hospital specialists vary with respect to the diligence with which they "prune" their outpatient clinics of unnecessary follow-ups, and in extreme cases the result is the de facto provision of a parallel system of General Practice. The reasons for such behaviour are complex, and include difficulty in terminating a relationship with patients, patient resistance and preference for specialist follow up which may not be strictly necessary if a clear ongoing management plan were communicated back to the GP.

If the paradigm shift described above is to occur, clinical leadership will be required to influence change. The barriers to such a process include the aforementioned:

- stressful work environment
- dysfunctional working relationships
- manpower issues
- difficulty maintaining an environment of continuous quality improvement
- exclusivity
- entrenched work practice.

The task is not insurmountable, particularly if the principles of introducing change to a group of doctors alluded to earlier are given due regard. If a change has demonstrable or plausible patient benefit, or if it will make the doctor's life easier, it is likely to gain acceptance. Hospital based doctors need to come to regard themselves as part of a wider medical ecosystem, and in particular to acknowledge the mutual inter-dependence they share with GP's. Small changes in the work practice of hospital specialists have the potential to enormously enhance the quality of GPs' day-to-day practice, and hence to retain and develop the GP workforce.

1. Alternative Models of Primary/Secondary Interaction

The challenges confronting the healthcare system are profound, and the answers will not come from simply providing more resources, even if such resources were available. The way ahead must lie in seeking to change the existing model where this is practicable, or to change work practice within the same model to maximise efficiency. Put simply, how do we get sufficient numbers of:

- The right people
- In the right place
- Doing the right task?

As applied to the medical manpower resource within the DHB, the question expands to:

The demand for services is escalating and apparently limitless. We have a finite number of precious, scarce individuals who are available to meet this demand. We are competing nationally and globally for this manpower resource. One key component of the resource has become depleted to the point where ongoing viability is threatened (GP's), while job turnover, entrenched practice and work stress amongst another part of the group negatively impacts on its ability to maintain a quality environment and participate in innovation. All members of the resource are change-wary if not frankly change averse. How do we turn this around to get these people working smarter?

In order to address this issue, some basic principles and assumptions deserve emphasis.

- **A workforce cannot function efficiently if there are insufficient members to deal with the workload.** From the earlier analysis, it is clear that, at least in terms of GP's, the workforce is threatened. Thus, there must be developed a strategy which will over time retain and ideally increase GP numbers. Such a strategy should be based on establishing clear point(s) of difference within MCDHB which will attract and retain practitioners. The strategy would logically incorporate taking steps to respond to the frustrations and needs of GP's as outlined above.
- **A workforce cannot function efficiently if communication between its members is inherently inefficient.** The hospitalist model runs on written communication, which, although it has the advantage of leaving a paper trail, suffers from problems related to timeliness, completeness, accuracy etc. Direct GP to specialist, real-time, verbal communication is likely to improve efficiency. An existing model of such a system is described in detail below.

- **A workforce will function most efficiently when each member is doing what s/he is trained to do and does most effectively.** The corollary is that some workforce members should not be doing tasks which are properly the task of others, nor should there be duplication of tasks. A further corollary is that there must be sufficient collegiality and trust between each individual workforce member that the appropriately allocated tasks will be performed. At present, most outpatient systems are hamstrung by a combination of inappropriate follow-ups and inappropriate referrals.
- **A workforce cannot function efficiently unless its members operate from a common set of information.** Care can only be integrated when the information on which the care is based is integrated. At present, medical records in primary care and the hospital system have major discontinuities and inhomogeneity.
- **Workforce efficiency may be enhanced by having members work in physical proximity to each other where appropriate.**

For a variety of reasons it is considered unlikely that a fundamental change in the hospitalist model as it applies to inpatient care will occur. Alternative inpatient care models, such as those involving fully credentialed GP's looking after their patients in hospital, with consultation as required from the relevant specialists, are unlikely to enhance care, and may in fact lead to increasing fragmentation. Most episodes of inpatient care involve drugs, interventions and the application of diagnostic/therapeutic techniques which are well outside the range of expertise of the GP workforce, and given the manpower issues facing General Practice any attempt to upskill the workforce to the degree required to co-ordinate inpatient care would be futile, even if there were GP's who wanted to practice along these lines. The areas of outpatient/ambulatory care and diagnostics are likely to be much more amenable to changes in their current models which could enhance primary/secondary interaction and hence quality and efficiency of service delivery.

Currently, MCDHB has two models of primary/secondary interaction operating which have been particularly well received: the Palliative Care Partnership and the Sleep Apnoea GP programme. It is notable that both have been developed in large measure as the result of the efforts of clinician/champions who have had long tenure of employment with MCDHB, underscoring the earlier point about the dependence of quality initiatives on stability of staffing.

The Palliative Care Partnership⁹

This model incorporates many of the desirable features of primary/secondary interaction alluded to earlier, including good communication, joint decision making, specialist resource and support, and respect for all providers' skills. Continuity of information is based on a care plan which is held by the patient, ensuring that all members of the network of care are operating from a shared information base. Role delineation within the network is explicit, avoiding duplication of effort. A high level of participation by General Practice teams has been achieved, and the quality of the service as experienced by both patients and providers has been enhanced.

Sleep Apnoea GP's

This is an example of a disease-specific primary/secondary interaction model. Referrals for sleep disordered breathing are fielded by the respiratory service and triaged appropriately, with high risk individuals seen by hospital based respiratory physicians. GP's who have undergone specific training are involved in assessment and management of medium and low risk patients, with resulting improvements in service access and GP professional satisfaction.

A variety of models have been investigated overseas which also have potential applicability to the MDHB environment:

The Kaiser Permanente Urophone Model¹⁰

The Kaiser Group is one of the largest not-for-profit groups of medical care providers in the USA. Several years ago, the Northwestern Kaiser group introduced a system of direct cell phone access for primary care physicians to urologists. The enhanced access proved extremely popular with the primary care doctors, and the model has been extended by other Kaiser groups to specialties such as gynaecology and orthopaedics. Kaiser's own system evaluation has shown that approximately 1/3 of the calls received were able to be managed over the phone, without specialist appointments being required. Consideration was given to requiring that all specialist referrals be initiated by a phone call, but this was not pursued as it was felt to be excessively burdensome for the GP's. Cell phone contact was chosen as opposed to email because of the ability for the GP to discuss aspects of patient care during the GP consultation (i.e. real-time responsiveness). Occasional problems have been encountered e.g. when the specialist is in an area of the hospital such as a radiology department with poor cell phone reception, but overall 80% of GP's expressed a high level of satisfaction with the service.

The introduction of such a system to MCDHB might go a long way to addressing problems such as inappropriate referrals, referrals being made with incomplete workup in primary care, referrals being made to the incorrect service etc. The Kaiser specialists also noted that calls served as an opportunity for skill/knowledge transfer, with a considerable amount of 'guidelining' being done over the phone. It is very likely that GP's who had guaranteed access to such a system would feel better supported, and such a system would represent a clear point of difference between MCDHB and elsewhere.

Specialists providing the system would need to regard answering such calls as an intrinsic part of their job rather than extra work. The fear that increasing their accessibility might lead to being swamped with work is unlikely to be borne out, and given the large number of enquiries which can be dealt with by phone alone, over time both a reduction in outpatient volume demand and an improvement in the quality and appropriateness of referrals might be expected. The Addressing Disincentives paper indicates that no organisational penalty will accrue for the reduction in volumes which might be experienced with such an initiative.

Enhanced GP access to diagnostic tests

GP's are frustrated that they cannot adequately work up patients in primary care, while specialists are frustrated by being used as gatekeepers for diagnostic tests. There is an unspoken and almost certainly incorrect implication in the restriction of access to diagnostics that were access to be freed up to GP's, such tests would be over utilised. MCDHB has recognised this issue and to some extent addressed it with initiatives such as the CT/headache scheme.

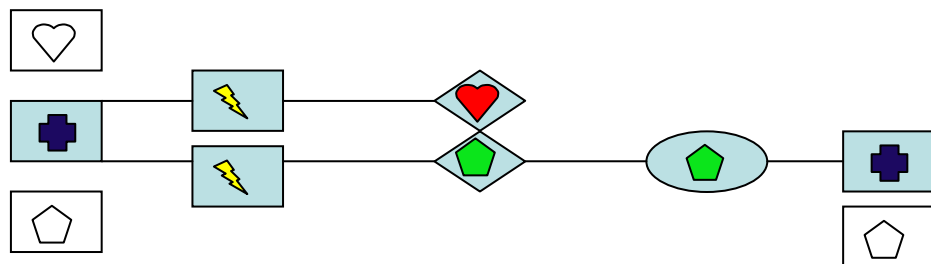
The Royal College of General Practitioners and Royal College of Radiologists joint position paper on this issue states¹¹:

"Direct access to clinical radiological services is essential for modern General Practice. It can shorten time to diagnosis, which improves the quality of care. It can also help prevent unnecessary referrals to secondary care. General practitioners should have rights to request radiological examinations similar to those enjoyed by hospital consultants, bearing in mind the limitations in capacity within some departments of clinical radiology and the recommendations contained in nationally agreed guidelines on referral of patients for radiological examination."

In the absence of national guidelines, consideration should be given to the formation of locally agreed guidelines for not only the majority of radiological services, but eventually the majority of all diagnostic services (for example respiratory function tests, cardiac exercise testing, Holter monitoring, diagnostic endoscopy etc.), with a view towards enhanced/open access for all of these to primary care. Ultimately, funding for these services may need to be devolved to primary care. Utilisation review, with identification of guideline non-adherence providing an opportunity for practitioner education, would be an integral part of such a process. GP's operating in such an environment (which would again serve as a clear point of difference for MCDHB), would experience an enhanced sense of fulfilment, while hospital consultants would be fielding referrals where the appropriate diagnostics had already been performed, allowing a definitive treatment plan to be formulated at the time of the FSA rather than at the time of a follow-up visit booked after the wait for the diagnostic test.

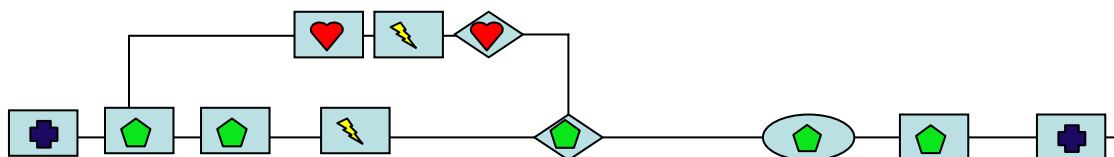
The potential impact of phone access and enhanced diagnostics access on the continuum of care discussed in the section 'Inefficient Multi-step Care' is presented here in case study and diagram form:

A 57 year old man with prior myocardial infarction presents to the GP with symptoms of claudication. The GP discusses the case by cell phone with the duty vascular surgeon, who advises that vascular imaging is required. The surgeon is also concerned by the background of coronary artery disease. Accordingly, the GP consults with a cardiologist by phone, and is apprised of the necessity for stress echocardiography. The GP orders both tests. The patient is subsequently seen by the cardiologist and vascular surgeon in clinic, where definitive management decisions are made on the basis of the information to hand. He proceeds to surgery, and is seen for follow up by the GP, who seeks some phone advice from the surgeon about wound healing.



Clear icons represent phone calls

When compared to the original continuum, the improvements in efficiency are obvious. Particular attention should be given to the reduction in requirement for specialist surgeon involvement.



Co-located clinics

The idea of hospital specialists conducting outreach clinics in the General Practice setting is not new, and has received considerable attention in the medical literature^{12, 13}, as well as having been the subject of a Cochrane review which concluded¹⁴:

“This review supports the hypothesis that specialist outreach can improve access, outcomes and service use, especially when delivered as part of a multifaceted intervention. The benefit of simple outreach models in urban non-disadvantaged settings seems small. There is a need for good comparative studies of outreach in rural and disadvantaged settings where outreach may confer most benefit to access and health outcomes.”

It is clear that simply shifting a traditional outpatient clinic into a General Practice surgery accomplishes little, perhaps because the model of outpatient clinics has major flaws to begin with, including:

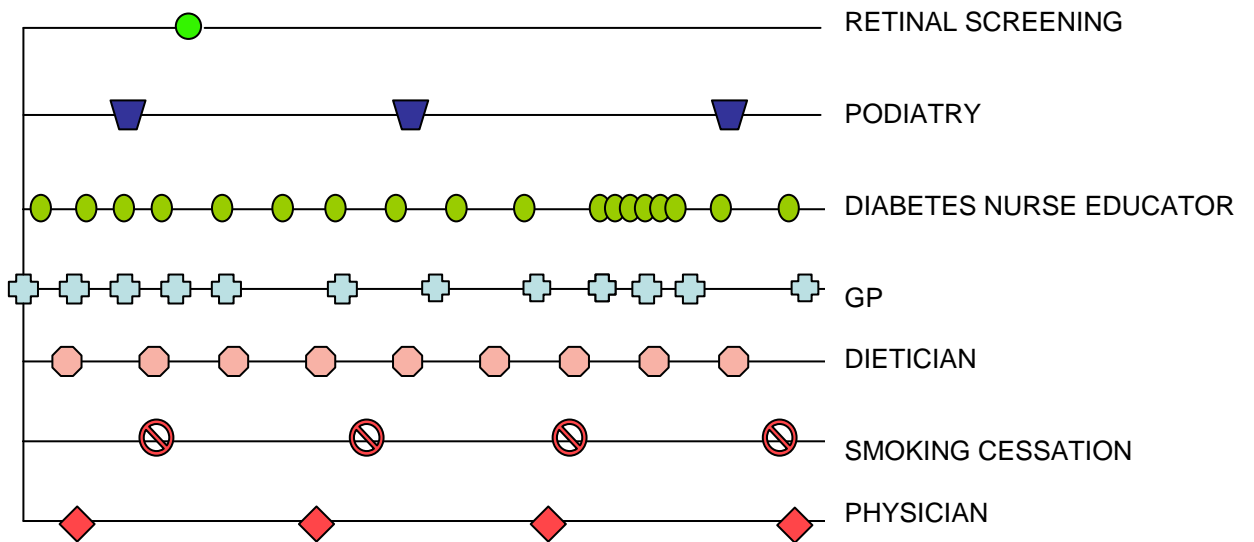
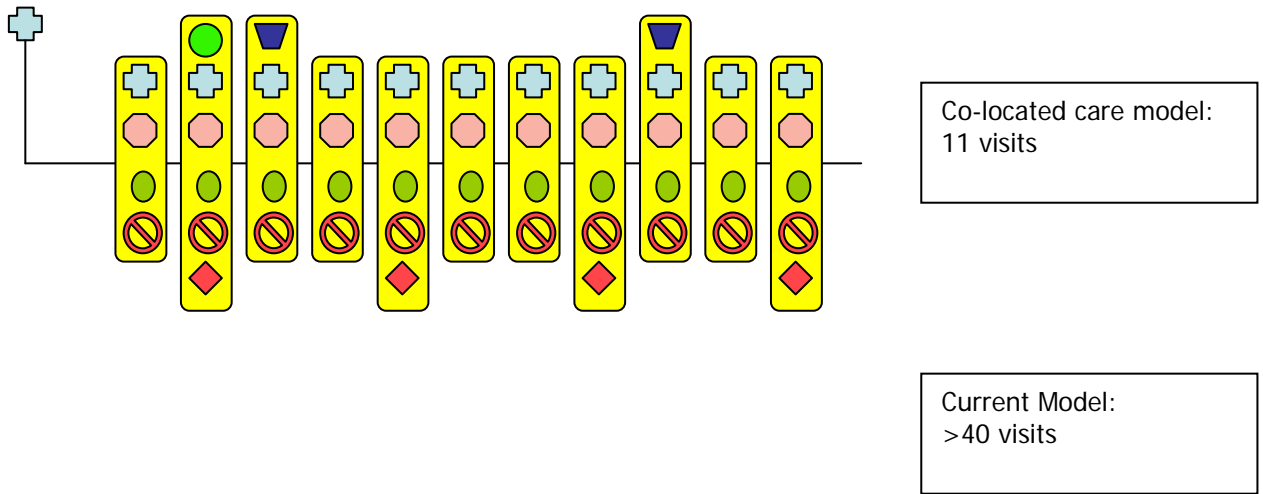
- Time pressure resulting in often hurried consultations with poor quality patient education
- Failures to attend on time or at all, leading to obligatory specialist 'down time' and re-bookings
- Delays in clinic output related to dictation/typing
- Lack of multidisciplinary approach
- Specialist repeating largely the same set of information to multiple individual patients rather than to a group with the same problem.

Co-located clinics can enhance support for GP's, allow skill and knowledge transfer to take place, and allow for rapid fire, focussed specialist responses to specific GP enquiries. Because all team members are in the same place at the same time, patients are not required to attend multiple appointments at different timeslots and locations. Clinics can be structured so that group learning can take place, which may be the preferred education modality of the target patient group. By ensuring that a significant proportion of the clinic time remains unstructured, patients are not penalised for failure to attend at a given timeslot, with information being presented in a 'digestible' fashion repeatedly over the course of the clinic. Such clinic can also provide a structure for the nursing resources developing in Primary Care to work within

The potential impact of a co-located multidisciplinary diabetes service on the network of care discussed in the section 'Dislocated/Fragmented Care' is shown below:

A 57 year old man presents to his GP with symptoms of diabetes. The diagnosis is confirmed, and the patient is referred to the Multidisciplinary Diabetes service which operates from the GP surgery. Each month, a diabetes nurse specialist, a dietician, a pharmacist, a smoking cessation advisor and a GP with a special interest in diabetes attend the clinic. A specialist physician attends three-monthly. A podiatrist attends six-monthly, and digital retinal screening is available annually. The first half of the morning involves brief educational talks in PowerPoint format from three of the clinic staff, followed by the opportunity for questions and answers from the patients attending. The clinic facility can accommodate twenty to thirty patients at a time. During the second half of the morning, the staff are seated at tables and the patients are free to "graze" at whichever table(s) they feel most appropriate. During lunch, the physician presents an update on diabetes management to the other GP's in the practice, as well as fielding several queries about non-diabetes related patient care. The staff spends the afternoon seeing patients on a one-one-one basis, along the lines of a more traditional outpatient

service. The Multidisciplinary Diabetes service attends four different practices throughout the region.



2. Conclusion

As it is currently configured, the health system is struggling to meet demand. Fundamental changes methods of service delivery will be required if the system is to adequately respond to anticipated epidemiologic and demographic pressure.

The Hospitalist system currently in place has several vulnerabilities which impact upon its ability to maintain and increase capacity. These vulnerabilities relate to information transfer and to the working relationships which exist between medical practitioners in the primary and secondary sectors.

Modest changes in the nature of working relationships related to communication, task allocation and teamwork have the potential to significantly increase capacity, improve quality of services and enhance job satisfaction. The rationale for and scope of such changes are discussed in this document.

3. References

1. Fong R: 2005 Health Needs Assessment; Funding Division, MidCentral District Health Board
2. Addressing Disincentives Working Party Report; Ministry of Health, 10 May 2006
3. Rao P et al: Assessing quality and efficiency of discharge summaries; Am J Med Qual 2005 Nov-Dec; 20(6) 337-43
4. Malloy E, O'Hare JA: Unravelling referrals to medical outpatients; Ir Med J 2003 May 96(5):145-6
5. New Zealand Medical Association: An Analysis of the New Zealand General Practitioner Workforce May 2004
6. Austin C: The General Practice Team: The Foundation of the Health System. Royal New Zealand College of General Practitioners March 2003
7. Greenslade A: Primary Care Sector in Search of a Future.
http://www.nzdoctor.co.nz/viewpoints/alan_greenslade.doc
8. Kenealy T et al. Diabetes care by general practitioners in South Auckland: changes from 1990 to 1999. NZ Med J 25 October 2002 115 1164
9. Stewart B, Allan S et al. Palliative Care Partnership: a successful model of primary/secondary integration NZMJ 22 September 2006 119 1242
10. Systems Challenge for Primary Care and the Specialties: Relationships and Access. (Panel Discussion) The Permanente Journal
<http://xnet.kp.org/permanentejournal/winter98pj/challenge>
11. Royal College of General Practitioners: Radiology and the Patients of GPs (Joint statement of the Royal College of General Practitioners and Royal College of Radiologists) Spring 2004
12. Bailey JJ et al: Specialist outreach clinics in general practice: Br Med 1994; 308:1083-1086
13. Bowling A et al: Evaluation of specialist's outreach clinics in general practice. J Epidemiol Comm Health 1997; 51:52-59

14. Gruen RL et al: Specialist outreach clinics in primary care and rural hospital settings. Cochrane Database of Systematic Reviews 2006 Issue 3 (ISSN1464-780X)