THE IMPACT OF ADVANCES IN MEDICAL TECHNOLOGY ON HEALTHCARE EXPENDITURE IN AUSTRALIA.

PRODUCTIVITY COMMISSION ACT 1988

Dr William Marchione

MB,BS

Presented in private capacity with particular referance to patent protection existing for "A Monitoring System" covered by intellectual property laws.

In particular, responses will only be directed at sections a),b), c) and d) in the terms of referance.

PART 1 – includes responses to section a) and b).

The Australian Dept of Health and Ageing has noticed a definite threat, proved by changes in social and lifestyle factors, on obesity and a related area in the rate of diabetes.It has become appropriate therefore that we become aware of social and economic factors that determine the health status of our population.While secondary

and tertiary care are important in improving quality of life and reducing mortality,the recognition of prevention strategies has become much more important.

Through it's commitment to increasing prevention strategies, the Commonwealth has committed funding to strategies that will reduce risk factors to prevent disease and also commit to strategies leading to more effective management of chronic diseases.

In the Australian Dept of Health and Welfare's annual report (2002 – 2003, p 35) preventive healthcare and "strengthening Australia's social and economic fabric" were noted with priority.

This,in effect,translates to the growing importance and measurement of NON MEDICAL or social and behavioural attitudes as being important.

Traditional ethicists base "appropriate medical practice" on principles derived from the "Hippocratic Oath".Hippocrates ,a physician in 400 BC ,sworn by five basic principles.

He would respect an individual's right in freedom and privacy ie autonomy,in doing good ,in doing no harm (non malficence) and justice (fairness).

Our "old" system is patient centred and built on the interest of patients ,however,as cited in the new AMA ethical guidelines , a Doctor – patient relationship is itself a partnership based on mutual respect and collaboration.Within the partnership,both the doctor and the patient have equal rights as well as responsibilities.Changes in society,science and the law raise new ethical issues and challenge an existing ethicist perspective.

The above introduction was necessary for understanding the basis of my response in addressing the terms of referance for this research study.

The terms of referance have been presented in point form , and so will the responses.

a) There are many drivers in the demand for medical technology.It depends on the nature and trends of the disease,its cost for development,other treatments available and the effectiveness and the moral societal needs for such technology to be promoted.Today, cost – effectiveness plays a major role.
b) The net impact of advances in medical technology would be very difficult to measure generally.Each disease and its complications would be at such varying stages of understanding and management that measures of such costs would have to be on a disease by disease case ,other things being equal.

   For example , stenting of coronary artery disease has progressed over the last ten years ,such that it has overtaken surgery as the main method of treatment for CAD.

   The development of disease treatment guidelines , benchmarks and analysis of data that measure cost effectiveness has made this an economically and politically acceptable step in directing health expenditure.This has largely been the role of the NH & MRC (The National Health and Medical Research Council).

   So data accumulation , mining and implementation remain at the forefront of advancing medical technology.

Response to terms of referance, PART 2 – includes section c)

As alluded to in the previous response , the impacts of various technological breakthroughs should depend on both the cost and effectiveness of the proposed technology on reduction of future morbidity with respect to each disease studied.A political dilemma will confront government when those who benefit from current patterns in technology development ,such as drug companies and major technological companies ,find ,that funding for use of their products will be set aside in favour of educational programs to change societal factors such as obesity and smoking.One example is , the non invasive and complication free MRI cholangio pancreatography is too expensive to replace ERCP for anatomical bile duct evaluation. This has not been put on the medicare rebates list even though it can avoid complications such as ERCP pancreatitis.

Areas of potential growth in healthcare expenditure will be directed by epidemiological factors depicting areas of need and the relative cost – effectiveness of such expenditure .The concept of cost – effectiveness refers to comparison of health outcome data of one time period with that of a different period .

The changing social and moral fabric of the society we live , should allow flexibility in our current rigid interpretation and adherence to the "Hippocratic Oath".
In Justice J J Spigelmans address to the judicial conference of Australia 2002
He outlined the economic and social needs for the judiciary to account for the overflowing effects on the insurance system and its subsequent effects on professional services.
Recent tort law reform conducted by the Treasury appointed review panel headed by The Hon Justice David Ipp has addressed this.
Plaintiff lawyers have had enough political influence in the senate that many sections Ipp committees recommendations for tort reform have been blocked.In particular, the section on appropriating liability.Unfortunately this does not allow us to measure or even recognize the unprecedented concept of NON COMPLIANCE (or behavioural factors) as important factors when considering future outcomes in health.

They are those patient dependent factors that will dominate future health spending. Medical technology should focus on data that denotes levels of non compliance of authorized providers against accepted " reasonable" benchmarks ,providing a codified documenting system.The investigation of such breaches can lead to penalties, or requirements for further education ,or whatever is deemed appropriate .

As a necessary and contentious corollary ,it would be beneficial to the patient and system integrity in the long term, that some form of patient compliance system – say documenting a profile of undesireable patient behaviour against advice for benchmarked conditions be placed on a database. This set of guidelines does not exist , can be given legal significance when assessing contributory negligence and appropriating liability and can serve as an inducement for patients to reduce risk.The

inducements may take many forms .One such example would be an appropriate graduated and cumulated reduction to access the full medicare rebate .(Emergencies may be excluded here).
A model way to view a flexible ,ethical and cost effective health system would be for a judiciary to give the Bollam principle and the law equal weight, when appropriating liability.

In the USA the Office of Inspector General is requesting submissions to develop this ideology. A more detailed analysis of their proposal can be seen at http://www.hhs.gov/oig.

It may be of interest that neither heathconnect or HCN pty ltd have incorporated a measure of patient responsibility and ways of documenting behaviour and non compliance as part of their models.This ,we have seen is a necessary instrument for monitoring behaviour dependent disease such as obesity and measuring non compliance, two very important risk factors that will need attention in the near future. My patent protected database takes all these factors into account and provides a way of documenting ,monitoring ,targeting and then reducing risk for the benefit of all stakeholders in our current health system .
When developing future health system designs the owner of such a tool will most certainly attract the interests of those wanting to improve the efficiency of healthcare delivery ,attract the interests of all doctor's who feel somewhat betrayed by the increasingly unaccountable demands of an increasingly litigious community (this probably represents at least 90% of all doctor's in general practice).

As it is outside the scope of this enquiry ,just a short mention will be made of the possible application of this monitoring system to 1) be applied to the findings of the royal commission into the building and constuction industry ,2) applied to the findings of the inquiry into aspects of workers compensation schemes (see recommendation no.3 , sect 8.36 to 8.47),3) the insurance industry itself , as well as 4) simplify the much maligned new corporate governance requirements of the new C.L.E.R.P 9 package.Many more applications can be procured but will not be discussed here.

My database called" a monitoring system",can be discussed in person or when under disclosure protection.Too many of my ideas have somehow popped up in various groups' recommendations.

The above document would remain accessible to the public.
I would be pleased to discuss my specialized and unique data documenting system with an appropriately qualified and authorized official.This would include a confidentiality agreement, likelihood of implementation and terms for development and licencing agreement.

Using massive amounts of data provided to modern utilities
"data mining" techniques use monitoring tools to extract "HOT SPOTS" .These are interesting areas within datasets that satisfy certain criteria

Section d) of the terms of referance allows one to address the fact that most if not all data mining processes are built around detecting provider fraud and misuse of the medicare system.Many instances of provider fraud have been well documented.A possible solution to assist this situation is to implement a practice standard protocol that physicians should follow .This must be backed by law and appropriate penalties when guidelines are not followed.Our law currently provides for plaintiffs who have suffered at the hands of a professional through the law of torts
Compliance mechanisms that set benchmark standards of care are being developed continuously by our National Health and Medical Research Council (NH & MRC).

An ever increasing GAP that stands out when considering the cost – effectiveness of "episodes of care" is when our system 1) neglects the increasing cost associated with the practice of defensive medicine ,2) neglects the intangible , highly expectant DEMANDS of our service recipients, and 3) assumes that overuse , misuse and outright fraudulent abuse by the service requester does not cause significant unnecessary costs to our system.
A GAP occurs when service receivers are not bound by yet undeveloped standards of behaviour and compliance following an "episode of care" .This "accountability" factor serves to encourage collaboration by the patient ,especially if it means they may progressively lose full access to the medicare rebate.(Medical emergencies will not be included here).
Therefore, a system that documents episodes of care that have led to non compliance behaviour against accepted and pre defined communal standards ,may serve to directly reduce risk .
Such will serve to equate the commitment of both parties so producing a more functional Doctor – Patient relationship.

“ A MONITORING SYSTEM “

A MONITORING SYSTEM THAT RECOGNIZES THE IMPORTANCE OF INFORMATICS IN GENERAL PRACTICE. IT’S POTENTIAL BENEFITS ARE IDENTIFIED BY THE MEDICAL PROFESSION AND GOVERNMENT AS AN ESSENTIAL ELEMENT FOR THE IMPROVEMENT AND ADVANCEMENT OF MODERN DAY HEALTHCARE.

FAIR GO MATE P/L

Email: fairgo@accsoft.com.au
ABN 93 073 685 953
Contact : Dr William Marchione
Phones Mb : 0408428924 , Wk 0283021111

Future patterns of human behaviour will be guided by a social and moral fabric ,that a society considers to be desirable.The desireability would require a positive outcome for all stakeholders.Undesirable behaviour therefore leads to negative societal ,ethical and economic outcomes.
Crucial to such ideology would be the standardisation of definitions of such terms as desirable and undesirable behaviour.These terms can be based on an accepted ethical,moral and economically cost – efficient and hence system sustaining behaviour.The nature of this human behaviour therefore becomes relevant,and basic animal instincts that direct it be defined and monitored.
A theoretical model based on permutations of easily understood common syntax ,that are used to codify undesirable behaviour into clinically relevant categories will offer a much simpler and CHEAPER way of applying the e- health initiatives of the Federal government.
A Masta database that subcategorises instinctive behaviour ,providing clinically important information may be much,much cheaper than starting the information gathering process from scratch ,that would understandibly blow out the costs of such an operation.

A system that can lead to an organised access to “THE EXISTING PAPER WORK AND FILES” ,rather than creating them “De Novo” on line ,would be much more sensible and much less costly in resources and time required to implement.

The consequences of conscious behavioural decisions will help the individual decide on what is desirable or undesirable behaviour.
Our previous tort law reform process did not consider the value of one’s autonomy in deciding what was right or what was wrong.This “concept” known generally as responsibility,has come to light for numerous reasons ,for public benefit.

In a two part review of negligence law, a treasury appointed committee chaired by the honourable Chief Justice David Ipp, had made over 60 recommendations .This move recognized the contributions of and interpretations of the current law of “torts” as being at least partly responsible for propagating the “insurance crisis”.

Recommendations number 30 to 32 looked at “contributory negligence” and “proportionate liability”. It essentially states, that when appropriating liability a magistrate can consider a plaintiff responsible to the extent of 100% (up from a maximum 90%).This is to say that our current system supports a “culture” or indelible fixation that any defendant would always be at least 10% negligent.One would consider this to be outrageous and led to the labelling of judges as being the equivalent to “modern day Robin Hoods”.

A much needed extra step in data accumulation is therefore obtaining data on fraudulent and/or exaggerated personal health behaviour , whether for medical negligence, workers compensation, CTP, income protection , the inappropriate overuse of the pharmaceutical benefits scheme and even overuse of Medicare in general.This behaviour would have to be defined and compared to accepted benchmarks.This should apply to both the service provider and service receiver.

We can easily gain the impression that the level of fraud Involved at all levels of services is increasing, and that unchallenged assumption is one reason for my recommendations. The other main reason is that TORT law is directing the behaviour of our doctors rather than clinical acumen and deduction.Our legal system is defining what constitutes appropriate healthcare.

Easy accessibility and litigation fear has increased the cost of maintaining medicare.Patients present much earlier in the illness process , the subsequent paucity of symptoms and signs at the time of presentation lead doctors to order more tests for fear of litigation – one could call this” the vicious staircase of defensive medicine “.

Our Medical system is formed by the interaction between reasonable benchmarks for outcomes guided by fair and ethical guidelines drawn up by fair and unbiased professionals.
High expectations and the propogation of the belief that every “episode” have a desirable outcome is one irrational concept that is propagated by our tort system and those that profit from it . Unfortunately, also supported by some ethicists with big “anti medico” chips on their shoulders .
Our ability to “physically” provide for an unserviceable benchmark is becoming more and more difficult..We could say the difference between the demand and ability to supply for this demand is getting larger and larger.This will only lead to increased dissatisfaction, more complaints and more litigation..

This “Monitoring System” is essentially a data acquisition tool intended to profile doctor and patient behaviour over time and aims to serve as a risk management and cost rationalisation tool that helps the consumer of medical services be more accountable and responsible for their own health.
If not a price signal ,the “episode”of treatment will at least not pass undocumented .

Use of the medicare rebate has become trivialised due to complacency, misinformation and outright abuse.My experience of ten years recognises a public, that rightly scrutinises, but ,also devalues the general practitioners’ input .When one uses such a rebate for alternative and non essential means , do we get a system where the “assigner’s” of the rebate just sign over many millions of taxpayer dollars to litigation wary and now more business wary doctors and doctors’ service companies. The appropriation of medicare benefits for services rendered must not only look at the service provider, but, also look at the service receiver or “requester”.It is time we looked at “over requesting” as well as the usual “over servicing” behaviour.

******

My proposed system has general practitioners (the primary health care providers) as the centrepiece and assumes the likely correctness of their objective interpretation of instinctive components of patient behaviour.
.
The corollary in our health system is over servicing.This can take the form of too many consultations or too many tests.

I believe our general practitioners are best placed to independently supply the data that may reflect medicare use,overuse and misuse .This will include fraudulent activity of other doctor's and unnecessary overuse of the medicare rebate . There are two reasons for this ; firstly ,GPs are strategically placed to provide data and secondly, General Practitioners are notoriously incohesive as a group.This would nullify perceptions of possible complicity amongst them.
In fact ,two features that are causing more cohesion amongst GPs by the day, is the poor remuneration that the medicare rebate provides when one bulk bills and the growing contemptuous attitude of the average patient toward a general practitioners' professionalism and value.
.When costs to maintain a practice keep rising faster than you can maintain bulk billing medicare income ,it is inevitable that any short term cost cutting measure such as corporatisation,or any short term income boosting measure such as "Medicare plus" will eventually fail.There is "NOT A BOTTOMLESS PIT OF FUNDING FOR EXTRAVAGENT DEMANDS".
There must therefore be a dynamic healthcare system that registers and responds to cost cues .Fixation to rigid standards policies and encouraging increased expectations are nice, but unsustainable.Portability and accountability in our health system should be addressed as important long term issues and hence be flexible.
Recognition of undesirable behaviour not conducive to efficient use of the health dollar can be defined,standardised,interpreted and used to help maintain medicare.A system so designed is defined as follows.

In assuming that every consultation with a GP has a secondary gain, we can arrive at four groups reflecting the different permutations formed by two parameters (volition and tangibility) that describe the secondary gain.These four groups define undesirable outcomes ,whether they are intentional or not. The formation of such electronic data does NOT require de novo creation of "e – files" previously touted by groups such as healthconnect. These groups can be formed by linking this behaviour data to the already present " Paprework " by directions on how and where to access this data .
The four goups of clinically relevant episodes can be formed by the aforementioned , COMMONLY understood syntactical permutations of two basic animal instinsts that are well documented for directing human behaviour,ie intent(volition) and the perceived tangible or intangible gains that are expected to result. These groups are aqs follows:

1) Voluntary tangible group
2) Voluntary intangible group,
3) Involuntary tangible group and
4) Involuntary intangible group.

When profiled over time ,each defined “episode” can be tracked by this system.It does not require complete episode description at the “point of entry” .It merely produces useful subsets of codified undesirable episodes .The examples that follow will demonstrate this fact.The term “undesirable “ is used loosely to mean both unintentional and intentional undesirable illness outcome.

Our health minister, Tony Abbott, got it right.The future and viability of our current health system will require intelligent consensual debate and “thinking beyond the square”.It cannot be the bottomless pit for public funds , much longer.A monitoring system that helps detect areas of need and areas of duplication and waste should obviously be of interest .Areas of undesirable outcome can help us target risk areas.

Essential elements are care and honesty from the provider, and the capacity to document patient behaviour without being judgemental or prejudicial. This raises a fine line for doctors when patients access their notes. Doctors are less likely to be subjected to litigation if they refrain from making a judgmental comment on a patient’s statements and/or behaviour, and confine themselves to keeping a true and correct record. This database is not an attempt to undermine the power and role of the court in assessing personal injury damages, but may assist when one is seeking as much information as possible to prove something beyond reasonable doubt and/or quantify the amount of contributory negligence. The success of such a system will therefore depend on the progress of the section on our recent tort reform review on the “Appropriation legislation” (ie sections 30 to 32 of Justice Ipp’s recent list of 60 recommendations) through the senate to finally make it legislation.

The categories of permutation are listed below. The motivation can be seen as the secondary gain and the method seen as the instrument used to achieve it:

Group One UPB – Voluntary tangible gains	
Voluntary Tangible Gains could raise suspicion of fraudulent behaviour,overuse or misuse of medicare. Overclaiming tax deductions ie defrauding the tax office, carries serious consequences.The misuse of health funds (medicare) should be treated similarly.	
Motivation	**Method**
Money	False medical negligence, W/comp, Public liability, CTP, Income protection … claims.
Days off	False illness behaviour seeking medical certificates

Pills	False information used to obtain drugs of addiction - often sold and/or over used on the streets. Also looks at a market where people obtain drugs under the PBS and sell / send them overseas or to third parties. Please note the enacted “prescription shopping project” that builds on the success of the “doctor shopping project” administered by the HIC from 1987 until end of june 2002, is currently and somewhat covertly in progress.It quite rightly looks at the whole spectrum of PBS prescriptions rather than only those involving “drugs of addiction”.

According to recent analysis,about 20,000 people appear to meet an agreed criteria that identifies people who are obtaining PBS medicines in excess of therapeutic need.

GroupTwo UPB - Voluntary intangible gains	
Voluntary Intangible Gains should also be classed as fraudulent. Examples in this class usually start off as a legitimate concern but often lead to inappropriate or reckless outcomes . This group could be of great interest to ▪ HIC, when looking at evidence based medicine, health outcomes and overuse of Medicare ▪ Insurance companies assessing risk of each client ▪ Magistrates, quantifying and qualifying contributory negligence when apportioning liability.	
Motivation	**Method**
Many psychological factors exist. DENIAL,INSECURITY ,INSURANCE……	Pre-consultation research; Asking about specific natural remedies ,wanting our de facto approval – in case things go wrong .An adverse event would be incurred by the patient here and able to access a doctors' indemnity fund due to his/her "de facto" complicity.
Blame directing	Arguing and challenging a doctors' opinion ,mistaking a consultation as a challenge to conventional medicine and process rather than using it to acquire genuinely sought advice.
Obstruct diagnosis or management	A patient not having the money for a bus to go for an x-ray or blood test.
	Too busy to go for the second opinion suggested by a GP, often opting to request an unsatisfactory compromise that obviously puts the patient at risk medically and doctor at risk of negligence
	Purely uncooperative behaviour like refusing to take advice for various reasons, an alarming example of this would be Doctor A advises patient A that by not taking tablets may lead to death, as time passes patient A relocates, sees Doctor B for similar complaint, Doctor B omits some advice assumed given in the past; now consider a negative outcome, patient A then sues Doctor B for not providing enough informed consent.
	Unreasonable demands not consistent with good medical practice, eg. requests for a referral from a

	patient whom the GP has never seen before, who wishes not to discuss the reason for it. Other examples include shopping list presenters who are happy to spend 1½ hrs to get health problems out of the way, patients becoming violent or abusive when things don't go as expected. People intent on patronising and belittling you if they perceive some potential discontent.Other examples exist namely, "while we are all here you may as well look at all the children" and people insisting to have their BP measured every month .Many other examples of medicare abuse and overuse exist, enough to write a book on.

Group Three UPB - Involuntary tangible gains	
Involuntary tangible gains are those when real gains are justified . Where undesirable outcomes have been unintentional.This helps differentiate criminal from non criminal undesirable activity. We can subcategorise unintentional undesirable acute and chronic illnesses into the well known groups such as infective (viral, bacterial, fungal), neoplastic (lung, bowel, renal, breast, endocrine), traumatic, autoimmune, iatrogenic (Surgeon, physician, GP, naturopath, iridologist, masseuse, neglect/abuse etc etc)…An international code of Disease classification (ICD 10) exists to standardise the information provided in this section , and this can be national or international. The standardisation of information obtained from these "points of care" using "authorised" providers can form subjects of future research and development .It draws on the benchmark for a provider's service. Several classes of this category can exist such as clinical diagnosis,pathology and radiology test results and referrals to specialists.This group can serve as a self regulatory standard of monitoring provider compliance.This is where pathology and radiology companies can be required to provide a link to their data .This can be made a legislative reform that could support a compliance benchmark.	
Motivation	**Method**
Involuntary and opportunistic illness.	Justified claims for injuries and losses suffered as a result of professional negligence.
	Days off justified for being sick
	Workers compensation for injury suffered at work

	Our own pharmaceutical benefits scheme
This section can be used by the profession to monitor performance of colleagues, hospitals, nursing homes, and other health care providers, as another quality assurance measure. It is apparent that medical mistakes are causing unnecessary morbidity and mortality that we would do well to minimise. This last point alludes to the possibly unfortunate label, that our doctors are also policing the system that they work in, and, there may be problems here when a body of professionals are asked to scrutinize their own colleagues, but, fortunately we already have a system that punishes provider misbehaviour. Profiling and typing illness/disease activity across our community can help redirect resources to areas of need.The result of this will effect prevention and risk reduction.	

Group Four UPB - Involuntary intangible gains	
Involuntary intangible gains are obtained when people behave incongruously without intent and without societal or significant economic loss . This could be used as a screening tool for psychological disorders. A tool recommended by many in the past.	
Motivation	**Method**
Relief of subconscious psychological conflicts	Irrational and atypical behaviour
	Unsubstantiated irritability
	Abnormal affect
	Disordered thought processes
	Agitation (and many more)

We have now loosely classified four groups of undesirable patient behaviour (UPB) using two parameters; tangibility and volition. Each “episode of care” would have a defined group designated.

There are obvious advantages in such a tool, with full access restricted to the magistrates and authorities given thye power to act on deviations from accepted benchmarks.
In Australia, an act of parliament was required to pass legislation enacting “whistleblower” protection. The form of this legislation is still in evolution as precedents continue to be set as benchmarks.
Configuring sets of meaningful data remains a challenge.Modern data mining techniques have helped generate “interesting” statistical subsets of people satisfying certain criteria. Unfortunately,I can only remember instances where this system is used to detect provider overservicing.
When applied to all stakeholders in our health system ,ie the “over requesters” ,such tools can be powerful efficient directors of health care spending and greatly increase the efficient use of our health dollar,especially when all stakeholders and players are aware of a common ,voluntary documentation process, that documents and profiles undesirable behaviour.
Naturally , responsibility and accountability will follow.
Recognition of the need for collaboration between doctor and patient in modern conept of a duaql and equitable partnership ,goes a long way to making a system more tuned to cost cues and changing community attitudes and behaviour towards respecting the need for them to contribute equally to their own health outcomes.

Researchers from the University of technology in Sydney are trying to establish a $38 million data mining centre of excellence to involve universities , industry and government.The Dean of information technology said the centre would help business and government to better understand and apply knowledge discovery and data mining to enhance productivity,prosperity and international competitiveness.
He also says that the availability of the datasets would give the centre an unprecedented ability to conduct multi-database mining on large multimedia datasets.

Some major clients for this Data Mining technology include:

The Australian Department of Health and Ageing
The Australian Taxation Office
The Health Insurance Commission
NRMA Insurance Limited.

In anticipation of you're considered response

Yours sincerely

Dr William Marchione
MB,BS ; FRACGP

Tel 0408428924
Wk 02 83021111

APPENDIX

Fair go mate pty ltd will assume that:

a) Desirable patient behaviour in consultations would be defined as one where the patient behaves such that a doctor's advice is appropriate and optimal and that the patient appreciates and takes the doctor's advice gladly. Obviously, undesirable behaviour would occur when the above situation breaks down.

b) That a doctor's documentation and interpretation of patient behaviour is Appropriate and accepted and without bias or malice.

c) This database is not perfect because there will be situations where Undesirable patient behaviour may not be an efficient use of health dollar , but appropriate for the individuals' needs.

d) Full access to the database be restricted to the courts;
Access for patients be restricted to the data cumulated by their presentations to all practitioners;

Access to doctors be restricted to data cumulated by consultations provided by themselves only. (for example it would be impossible for doctor A to see what doctor B had for the same patient)