

When Harm minimization is not harm minimization – Australia as a Case Study

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Abstract:

This paper is based on evidence given by the author to the Family and Human Services (FHS) Committee, House of Representatives, Parliament of Australia, in 2007. The Committee undertook an enquiry into the impact of illicit drugs in Australia and particularly the impact of harm minimization on Australian families. It released its final report on 13th August 2007 [1, Table 2.3,] in which 31 recommendations were made. In general the committee were highly critical of various harm minimization practices in today's Australia, on which some \$500 million is spent annually. The evidence given by this author was extensive and detailed, and constituted an assessment of current harm reduction practices in Australia, comparing them where applicable to other countries, and concluding with detailed suggestions as to how a more health-promoting strategy and range of practices could be initiated.

Keywords: Heroin drought, harm minimization, prevention, policy, addiction, epidemics, devastation.

1. Introduction

In the early months of 2007, the Family and Human Services Committee (chaired by Mrs. Bronwyn Bishop) in the House of Representatives, Parliament of Australia, began public hearings of an enquiry into the impact of illicit drugs in Australia, taking evidence from a wide range of witnesses with diverse attitudes to drug strategy. The findings of the FHS Committee were published on 13th August 2007. Amongst others, their recommendations included that the nation's stringent policing policies continue in force for their salutary and uniquely proven preventative role (including inducing the only heroin drought in the world); that basic and clinical research on the fundamental health impairments involved in drug addiction be dramatically up-scaled and used to inform and better educate a largely complicit treatment industry; and that the language and practices of harm minimization were deliberately confusing and duplicitous in that they were overtly and unashamedly intertwined with the rhetoric of the drug decriminalization movement both intra- and inter- nationally. In particular in this latter respect, FHS strongly enjoined that the word "harms" be dropped from this discussion and terms such as "damage", "devastation" and "destruction" be used to replace them [1, Recommendation 16 Page xxv] [1].

This author was an invited witness, and at the request of the Committee he augmented his initial evidence by supplementary submissions of evidence – this paper combines the gist of these presentations and concludes by setting out a range of initiatives which together are aimed at strengthening a health-promoting (as distinct from health-compromising) strategic approach.

Australia presently spends at least \$500 million annually on harm minimization techniques - needles, methadone and addiction as well as ATODS (Alcohol, Tobacco, and Other Drug Services) personnel salaries. There is a clear need for urgent review, given that there are now 197,000 Hepatitis C patients - a disease which is clearly out of control in this group [2], and new HIV infections have risen 31% from 2000-2006 [3] with recent infections having risen from 97 to 284 or 182.5% [2,4] – most probably due to community fatigue with the harm minimization paradigm. Put simply, the community are bored with the message. Moreover, the advent of anti-viral therapies has rendered many harm minimisation practices less important to many consumers.

There is much that can be done to repair the damage and neglect which has occurred under what has proved to be an overly simplistic harm minimization paradigm.

It is frequently said by the leaders of the harm minimization movement that they take direct credit for the low HIV infection rate in Australia. Whilst it is true that HIV is low and that harm minimization provision is high, to assert that the one flows from the other is overly gratuitous, and in particular, assigns causality where it has not been formally demonstrated. What is beyond doubt is that the propagation of harm minimization has fostered a trivialized view of illicit drug taking to the point where it is widely considered an inconsequential activity by far too many of Australia's young people. This outlook has been promoted on the world stage, and it is no coincidence that the leading advocates for harm minimization are also the loudest voices for drug liberalization. As their confidence has grown, so have they become more open as to their long-term goals; harm minimization, sold to the community as (ostensibly) an HIV protection strategy, is now identified in their own words as nothing more than a veneer for the open drug society:

“In many countries it is time to move from the first phase of harm reduction – focusing on reducing the adverse consequences – to a second phase which concentrates on reforming an ineffective and harm generating system of global drug prohibition.” [5]

HIV is now rising, Hepatitis C is at a persistently very high level, and rapid infections of new users is evident. Australian society is blighted with one of the highest levels of drug epidemics amongst industrialized nations. In this setting, harm minimization is not only a seriously inadequate paradigm, but by fostering and sustaining false triviality, and promoting a (discredited) libertarian agenda, it self-evidently does a great deal more harm than good to the community as a whole.

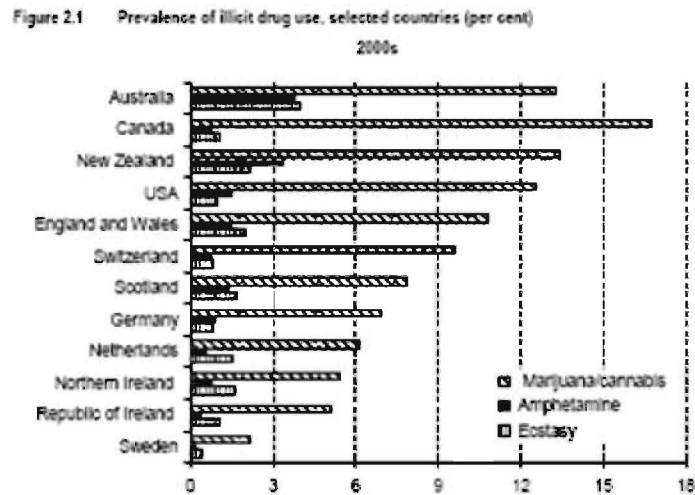


Figure 2.1 Page 22 from FHS Report

2. Harm Minimization commentary – a summary

This summary of the evidence follows the same three main headings as stipulated by the FHS Committee.

- 2.1 The financial, social and personal cost to families who have a member(s) using illicit drugs, including the impact of drug induced psychoses or other mental disorders.
- 2.2 The impact of harm minimization programs on families.
- 2.3 Ways to strengthen families who are coping with a member(s) using illicit drugs.

These are considered in more detailed sub-sections (as follows).

2.1.1 ABS Deaths and 'Years of Potential Life Lost' (YPLL) data

Detailed ABS (Australian Bureau of Statistics) death statistics have been obtained for the period 1997-2005 (see Tables 1A to 1E). (Note that the data for 2005 will shortly be in circulation). On such a list drugs are responsible for 10,987 (1.9%) of a total of 528,721 deaths, in 8th place behind other well known causes such as stroke, heart attack, suicide and lung, bowel and breast cancers.

It is interesting to note that HIV/AIDS claimed only 1396 lives in this time, despite the enormous publicity and funding devoted to it (Table 1A). Similarly, despite the rhetoric of the ATODS industry which has been heard for years now, alcohol was directly responsible for only 2182 deaths, or 19.5% of those ascribed to drugs. Drugs, however, are responsible for 408,051 (4.9%) of 8,297,522 years of potential life lost (YPLLs) during that same period which is fifth most common and follows only suicide, car crash, heart attack and lung cancer (Table 1B).

A very interesting index is the number of years of potential life lost per death, which may be estimated by dividing the YPLLs by the number of deaths in that category. YPLL data was not produced for 2005. Methadone top scored at 46.3 years of life lost per death, followed by car wrecks at 41.9 years and drugs at 41.2 years (Table 1C). This shows that drug related deaths score first and third in the official ABS collated statistics for 1997-2004; and indeed, that methadone related deaths scored above all other major causes! This alone is reason for a re-think of the Methadone Maintenance Program.

When judged by individual cause of death, drugs are responsible for 41.2 years of life lost per death, second only behind motor vehicle accidents (41.9 years), which goes a long way to explaining the unusual community distress and tragedy associated with overdose deaths. Of the drugs responsible, opiates are the most common, accounting for 6901 (55.8%) deaths and 238,745 (58.5%) YPLLs.

The years of life lost due to methadone are worth considering. Table 1A ascribes only 78 deaths to methadone during this period. This figure should be clarified in that this relates only to those deaths in

which methadone was the sole drug involved. The full figure is 957 as shown in Table 1D and includes deaths in which methadone was found in combination with other agents. An approximate coefficient for methadone for translating numbers of deaths into YPLLs can be determined by averaging the coefficients for the years for which it is known. This figure is 45.3. When this is multiplied by the total number of methadone deaths including poly-drug deaths (namely 957), the total number of years of life lost in which methadone was involved may be estimated at about 39,419 (as indicated in Table 1E) - almost 10% of the drug related YPLLs lost in Australia. This is a profoundly shocking figure; it contrasts starkly with the figure for deaths from illicit drugs: 1.9%.

The massively subsidized methadone industry has never given a genuine account for this. Nor indeed are methadone prescribers, for the most part, held to rigorous accountability, in the same way as, say, naltrexone prescribers have been subjected to close scrutiny in every state of Australia. The standard defence of the methadone industry is that they have reduced the rate of opiate related death by four fold, as has been determined by numerous studies. Notwithstanding such a position, the significant mortality which has been defined after methadone warrants much deeper scrutiny.

In this context it is interesting to note that prominent harm minimisation advocate Dr Alex Wodak, when asked by the Committee to explain the high figure of methadone related deaths, declined to answer – an omission not unnoticed by them. This author addressed the subject by stating that methadone related deaths indicated life expectancy reduced by 46 years; i.e., death at around 30. The corresponding shortening for illicit drugs was around 41 years.

DISEASE BURDEN AND EXTENT OF THE PROBLEM

TABLE 1.: ABS DEATH 1997-2004 AND YPLL DATA 1997-2004

TABLE 1A.: Deaths by Cause, to 2005				TABLE 1B.: YPLL-75 by Cause to 2004			
Rank	Cause	No.	%	Rank	Cause	No.	%
1	Heart Attack	53697	9.40%	1	Suicide	630737	7.60%
2	Lung Cancer	47442	8.00%	2	Car Crash	608904	7.30%
3	Stroke	33069	5.70%	3	Heart Attack	509769	6.10%
4	Colon Cancer	27440	4.70%	4	Lung Cancer	503475	6.10%
5	Suicide	18224	3.10%	5	Drugs	408051	4.90%
6	Breast Cancer	17771	3.00%	6	Colon Cancer	322263	3.90%
7	Car Crash	16044	2.70%	7	Breast Cancer	296617	3.60%
8	Drugs	11839	1.90%	8	Stroke	293355	3.50%
9	Alcohol	2182	0.40%	9	Alcohol	45886	0.60%
10	HIV	1396	0.20%	10	HIV	45170	0.50%
11	Methadone	957	0.00%	11	Methadone	3613	0.00%
	All Causes	528721			All Causes	8297522	

TABLE 1C.: Mean YPLL by Cause to 2004

Rank	Cause	No.	Relative Rate
1	Methadone	46	2.9
2	Car Crash	41.9	2.7
3	Drugs	41.2	2.6
4	Suicide	38.3	2.4
5	HIV	34.4	2.2
6	Alcohol	23.7	1.5
7	Breast Cancer	18.8	1.2
8	Colon Cancer	13	0.8
9	Lung Cancer	11.9	0.8

These tables show that of 11 common causes of death, Drugs was ranked 8th. When judged by Years of Potential Life Lost (YPLL), Drugs was ranked 5th. When judged by the YPLL per Death, Drugs ranked 3rd behind methadone.

Note that these calculations assume a uniform $408051/9912 = 41.17$ YPLLs per drug death. Note also that methadone deaths count only those cases where this was the only drug involved. Of the different drugs, by far the most serious was opiates, which ranked 1st both by numbers of deaths, and by YPLLs.

Opiate abuse forms the focus of the present study.

10	Heart Attack	10.2	0.7
11	Stroke	9.8	0.6
	All Causes	15.7	

TABLE 1D.: Drug Related Deaths by Drug Type – '05

Rank	Drug	No.	%
1	All Opiates	6901	55.80%
2	Benzo's	2804	22.70%
3	Alcohol	1867	15.10%
4	Antidepressants	1839	14.90%
5	Heroin	1618	13.10%
6	Methadone	957	7.70%
7	Opium	870	7.00%
8	Amphetamines	715	5.80%
9	Paracetamol	672	5.40%
10	Other Narcotics	315	2.50%
11	Cannabis	250	2.00%
12	Cocaine	185	1.50%
	All Drug Deaths	10987	

TABLE 1E.: Drug Related YPLL by Drug Type to 2004

Rank	Drug	No.	%
1	All Opiates	238745	58.50%
2	Benzo's	105189	25.80%
3	Antidepressants	67478	16.50%
4	Heroin	61220	15.00%
5	Alcohol	40029	9.80%
6	Methadone	39418	8.60%
7	ATS	26184	6.40%
8	Paracetamol	25525	6.30%
9	Other Narcotics	12022	2.90%
10	Cannabis	9469	2.30%
11	Cocaine	6917	1.70%
	All Drug YPLL's	408051	

In the final FHS report, YPLLs were replaced by "DALYs" or disability-adjusted years of life lost. On page 44 the report cites a table as follows [1].

Table 2.3 Number of deaths and disability-adjusted life years (DALYs) attributable to illicit drug use, by condition, 2003

Condition	Deaths		DALYs	
	Number	Per cent (a)	Number	Per cent (b)
Heroin/polydrug use	283	0.2	16,758	0.8
Hepatitis C	759	0.6	11,709	0.4
Cannabis abuse	0	0.0	5,208	0.2
Suicide and self-inflicted injuries	204	0.2	4,458	0.2
Hepatitis B	329	0.2	3,637	0.1
Benzodiazepine abuse	1	0.0	2,858	0.1
Other	149	0.1	7,040	0.3
Total attributable	1,705	1.3	51,483	2.0

Note (a) Of total deaths (b) Of total DALYs. The disability-adjusted life year (or DALY) is a summary statistic used to measure the burden of disease that combines both the years of healthy life lost due to disability and the years of life lost due to premature mortality. One DALY represents one lost year of 'healthy life'.

Source Australian Institute of Health and Welfare, Statistics on drug use in Australia 2006 (2007), cat no PHE 80, p 37.

2.1.2 Disease

Drug related diseases are many and varied. The impact of drugs on disease is not only greater than usually supposed, but also more severe. Several analyses now have demonstrated consistent findings that the addicted require disproportionately far more medical and psychological health services than controls of the same age. Whilst Hepatitis B&C and HIV/AIDS are well known, so too is a list of disorders [6]. Whilst the list below is actually taken from a paper on older people's diseases, virtually all pathologies have also been described in addiction – for example:

Hyperplasia/Neoplasia:

Adrenal hyperplasia, Angiosarcoma, Harderian gland adenoma, Endometrial hyperplasia, Lung adenoma, Lymphoma, Mammary gland adenocarcinoma, Mast cell tumor, Ovarian cystadenoma, Paraovarian cyst, Pituitary adenoma, Sarcoma, Thyroid follicular cell hyperplasia, Uterine leiomyoma/leiomyosarcoma.

Leukocytic infiltrates:

Kidney, Liver, Lung, Mesentery/omentum, Perineurium, Salivary gland.

Genito urinary system:

Hydronephrosis, Ovarian/testicular atrophy, Seminal vesicle dilation, Renal tubular.

Bone:

Decreased cancellous bone, Degenerative joint disease, Molar teeth periodontitis, Proliferations in the head/spine.

Neurological:

Hydrocephalus, Neuronal lipofuscinosis, Radiculopathy, White matter gliosis, and

Other:

Amyloidosis, Fatty change of the liver, Focal myocardial degeneration, Hepatocyte polyploidization, and Thymic involution.

This information is derived from research into common pathological features in mice by Bronson and Lipman, 1991 [7] and Cao et al, 2003 [8].

It is also important to appreciate that while many of these same disorders occur in non-addicts, they are much more severe in addicts. This author has had three patients whose eyeballs were completely replaced by fungus (Candidal endophthalmitis), many with heart valve infections requiring open heart surgery (which is of course very rare in patients in the 20-40 years age group), and one who had so many brain abscesses that his autopsy reported that "his brain had been largely replaced by abscesses, he was fitting severely, and we could not control this; that is why he died.").

It has also been largely overlooked that addiction itself suppresses the immune system, thereby making patients more susceptible to infectious conditions such as those mentioned above. This has not been factored into the harm minimization thinking.

The gateway activity of cannabis has now been proven by several scientific analyses. This has also been studiously overlooked by ardent harm minimization lobbies.

It has also been established, largely by scans done at the National Institute for Mental Health (NIMH) and the National Institute for Neurological Disorders and Stroke (NINDS), that all addictive drugs impede brain growth and development. This was one of the main subjects of a recent supplement in the *Medical Journal of Australia* [9, 10 and 11]. Furthermore, important stages of brain development occur in the teenage and early years up to about 26 years of age. Hence it can be confidently predicted that such addictions (or even supposedly "recreational" drug use) – from which habitual use typically stems – must impede brain growth and development, potentially in a permanent manner.

Indeed, health science leaders at Johns Hopkins Medical School in Baltimore accept that addictive agents are causally related to the onset of mental illness, an obvious connection - albeit still allegedly (according to Australian "experts") in dispute in Australia.

2.1.3 Blood borne virus including HIV and Hepatitis C transmission

It is well known that intravenous drug use forms one of the major routes of spread of the HIV virus, and that therefore IVDU form a major target group for HIV preventative behaviours [12, 13].

It is also agreed that Australia leads the world in harm minimization in many respects – notwithstanding the very high rate of Hepatitis C and B amongst its drug users. One could well observe that the relatively trivial way in which drug use has been portrayed in the public health harm minimization paradigm has actually been a major cause of this calamity.

Currently, many Hepatitis C patients are becoming increasingly unstable and are beginning to decompensate in important ways including cirrhosis. This suggests that Australia's encounter with Hepatitis C and the management of its 197,000 cases [2] is only just beginning.

Australia's rate of new HIV infections has been rising since its low point in 1994. It is now double this level, and as reports come in from all over the country of new infections, this rate of increase seems inevitably set to rise quickly in the coming years.

Furthermore, many recent studies demonstrate that normal levels of activity in the brain and its circuitry are required to all low proper pruning and maturation of the dendritic and synaptic circuits in the brain which form the structural underpinning of memory and emotional states. As they are well known to

interfere with brain activation levels, their general disruption of memory and mood maintenance functions is entirely within their pharmacological and toxicological profile.

2.1.4 Drug-Related Crime

It is well established by many surveys that 70% of all property crime in Australia is drug related.

2.1.5 Family disruption – family of origin and family formation

This is widespread and typically severe. It applies both to the family of origin from which drug users come and any subsequent families that such patients try to establish.

2.1.6 Intergenerational transmission of drug taking behaviour

Several patients treated by this author were introduced to drugs at 1, 2 or 6 years of age by addicted and dealing families as strategies to control normal child behaviour.

2.1.7 Intergenerational transmission of drug related morbidity including cancer and fetal malformations

Evidence has been published of more than 1,000% elevation of the risk of leukaemia in the off-spring of cannabis smoking mothers [14]. This is related to extensive chromosomal damage which has also been identified in such patients.

2.1.8 Aggressive behaviours

This is now being reported increasingly from many sites in the community such as hospital admissions departments, doctors' surgeries, shopping malls, etc. Its presence is underscored by large posters in hospital admissions areas declaring

"Violence will not be tolerated in this place. Victims will be supported in the referral of the matter to the police."

(Princess Alexandra Hospital Accident and Emergency Casualty Department)

Reports on this problem have recently appeared from both sides of the country in the *Medical Journal of Australia* [15, 16].

2.1.9 Prostitution related behaviours, crimes and risks of violence

Prostitution and the sex industry generally are well acknowledged to be major routes by which drug habits are funded. Most of the addicted sex workers met in this author's clinic agree that they would not work if their addiction could be successfully addressed. Since established prostitution is notoriously difficult to dislodge, an obvious course of action is to target effective treatments at such populations to free them from the necessity of such high gain employment.

2.1.10 Failure of achievement of major life goals

The proponents of the harm minimization paradigm seem to think that it is a relatively trivial concern if teenagers and people in their twenties and thirties "get wasted" thereby "wasting a few years." Since these are the key formative years of their lives when normal life tasks such as gaining a training and/or qualification and forming a stable life partnership occur, then clearly such activities will be seriously jeopardised.

2.1.11 Long term welfare dependence

It would seem obvious that if patients have a malformed brain, have a mental condition, have unstable personal relationships or families of origin which cannot cope with their behaviours, have a poor employment record and no training behind them, then they are likely to be long term social security dependents, as are their children. To this of course must be added the effects of nutritional deprivation from such families, the effects of drug exposure to their offspring in utero, and even the poisoning effects of the addictive drugs on the egg and sperm prior to fertilization.

Indeed the Barker hypothesis [17, 18] suggests that the changes of ageing, which seem to be accelerated in drug addicts, begin in utero and prior to conception when egg or sperm are damaged. It is therefore highly likely that ageing and degenerative changes begin in such offspring prior even to fertilization. Clearly, this area merits further study.

2.1.12 Maintenance of addiction, even across a major heroin drought

The 'harm minimization paradigm' is obviously related to long term drug addiction; its flagship is the 'methadone maintenance treatment' (MMT) program. The advent of the Australian heroin drought is well known - what is less well known is that this was the only nation where drought occurred. Of course, there was no evidence that the number of national methadone program registrants (about 39,000) declined during this time. The MMT has the ability, to a large extent, to negate the effect of such a drought.

This effect could presumably be extrapolated to other drugs such as cannabis and amphetamine with similar results.

2.1.13 Long term mental conditions

In addition to the impacts - mentioned above - of addiction degrading the normal processes of brain development, illicit drugs impair vitally important normal patterns of brain cell regeneration which are

required for normal processes of memory and emotional stability. Furthermore, they cause cell death. This particularly applies to the stimulants and to combinations of stimulants and cannabis which have a superadditive effect. Opiates added to this cocktail further exacerbate this cell death effect.

2.1.14 Short term violent mental states including those difficult to contain

There are myriad accounts in the community of erratic, violent, aggressive and dangerous behaviour by patients either under the influence of addictive drugs or in an acute withdrawal phase. There have been numerous such encounters, many of them dangerous and personally threatening. Doctors have been killed in these encounters - such as the well publicized case of Dr. Khulod Maarouf-Hassan in Melbourne.

2.1.15 Lack of quality mental health services

It is axiomatic in clinical practice that if patients are having acute difficulty with drug induced states they receive at best summary, perfunctory and terse treatment in hospital casualty departments. The difficulties of families with drug-using parents or children are magnified enormously by this lack of specialist mental health support. The expenditure by the Prime Minister of \$3 billion on mental health from April 2006 under the "Beyond Blue" program is perhaps beginning to impact this appalling situation [17].

2.1.16 Lack of quality medical protocols to treat stimulant offenders

It is a desperately sad commentary on the appalling lack of quality control within Australian medicine that radical calls for chronic stimulant prescription to stimulant abusers have emerged. This has emanated from some of the highest authorities of addiction medicine in the land, and yet this comes at a time when leading figures in the USA have concluded that such agents are definitely neurotoxic - also that they are directly responsible for the epidemic of mental illness and criminality, including reduced public safety. Communities pay the price for this misinformed ideology, which runs directly contrary to expert medical opinion in addiction research neuroscience.

2.1.17 Lack of any basic sciences research and expertise within Australia on addictive drugs

It is a national disgrace that there are no basic researchers in the addiction sciences in this country. International observation by this author coincides with the abiding impression of many leading scientists in other countries, which is that the area of addiction toxicology is being systematically avoided, apparently for ideological reasons. Many new biological systems are being discovered, both in the brain and in other body systems, and yet these are not being investigated.

This author has estimated that \$50 million over three years would go a long way to redressing what appears to be a deliberate oversight. (See Section 2.3.1 below)

Eminent titles of the world's leading research journals include *Nature*, *Science*, *Nature Neuroscience*, *Neuron*, *Cell*, *Journal of Neuroscience*, and the *New England Journal of Medicine*. It is clear from the presentations to the FHS Committee that not only do the Harm Minimization lobby *not* publish in these journals, they appear to never read them - such eminent journals were never referenced in any of their published works. This demonstrates the weakness of the harm minimization evidentiary position, notwithstanding their frequently repeated mantra about "evidence based medical practice".

There is a similar absence of modern scientific data of any sort from Dr Wodak's testimony, which appears to be much more reliant on quotes as to the size of the illicit drug trade and policy reports aimed at the decriminalization objective. This must be a concern for any investigating committee focused on the welfare of the community.

2.1.18 Drug dealing in schools

It is a matter of recent history that there is substantial drug dealing occurring in schools, an appalling situation which cries out to be corrected. However, this is unlikely to occur while the dominant paradigm is one of acquiescence plus harm minimization. It is apparent that some of the suggested 'corrections' - such as drug testing, undercover operations in schools, and drug sniffing dogs - find themselves at odds with the tolerant atmosphere surrounding the harm reduction philosophy.

2.1.19 Methadone increases addiction

It is no secret that most patients continue to use heroin even on methadone programs. Usual figures quoted are a reduction from 26 times monthly to 4-5 times. However, if the total duration of the addictive habit is extended by five times, then any gain in terms of supposed reduction in injection frequency is clearly lost. This is also reflective of the lack of methadone programs holding addicts accountable for behavior and reinforcing expectations with drug screening and evaluation of arrest reports. Again, it is the atmosphere of tolerance that drives a significant part of the problem. It is also the concept of methadone as a necessary endpoint rather than a transition point that adds to the problem.

Methadone typically intensifies addiction by leaving opiate receptors permanently coated with opiates. Methadone patients frequently experience secondary side effects, especially anxiety, so that many series report 50-70% incidence rates of also putting these patients on strong benzodiazepines, particularly alprazolam - a strong drug frequently associated with fatal overdose. The exacerbation of addiction by such programs clearly needs to be factored in to any rational evaluation of them.

In contrast, naltrexone reverses all such effects non-specifically and has uniform anti-addiction effects extending beyond its purely opiate related effects.

2.2 The impact of harm minimisation programs on families

These headings in the FHS evidence are covered by statements in Section 2.1.

2.3 Ways to strengthen families who are coping with a member(s) using illicit drugs.

2.3.1 Appropriate Australian Research in Addiction in the basic sciences

The lack of "hard biological sciences" research in the toxicology of addiction and the careful avoidance of the truth has allowed the present absurd "fairyland" like situation to develop in Australia.

The decrepit and disheveled state of many drug affected persons is well known. It is known that addictive drugs impair cell growth and division. They also accelerate cell death processes. These changes, combined with the DNA toxicity (which has been previously demonstrated for cannabis and tobacco) are the cellular and molecular underpinnings of ageing at the cellular level. These findings suggest that the poor appearance of addicted persons, together with many well known features of their pathology - including poor teeth, high rate of infections, high rate of tumours and very high death rate - actually reflect an accelerated pattern of ageing at the level of the whole organism.

If these changes could be better understood, it is very possible that significant gains could be made in other related health areas. If addiction accelerates ageing, then it stands to reason that addiction-blocking agents may well slow this change down. Clearly, this needs to be quantified by further research. Similarly, if addiction accelerates the development of hardening of the arteries and of cancer, then understanding such molecular pathways may well teach us valuable lessons about the causation of these diseases, including the yielding of important new molecular targets for major drug therapies.

More research is clearly needed while the toxicology of addiction is being neglected globally. The nation which is best resourced to study these issues will lead the world in these areas. Such resourcing will need to set aside additional funding, over and above the core research budget, to allow for developments in other scientific areas which may be of relevance.

Topics such as ageing of the immune, dental, hair, psychiatric, stem cell and cervical cancer systems will be relevant. New evidence suggests that many of the changes described in brain ageing [20] are also found in addiction [21]. In turn, this suggests important ways in which the changes of addiction can be studied in the brain from an ageing perspective. Modern techniques such as PET and SPECT brain imaging are documented by such as Dr. Daniel Amen from California [22] and can be studied in 3-D colour in rotational views online [23]. Further, the Melbourne group of Professor John Currie at St. Vincent's hospital has indicated their readiness to be involved in a naltrexone implant study, with a particular focus on the toxicology and brain ageing effects.

2.3.2 Scientifically correct anti-drug education of our children and our community

Of course, for the truth to have any impact it must be substantially and sustainedly resourced. Good educational programs in addiction studies exist in several nations and include web based computer interactive learning, cartoon-like adventures of the chemical factories inside patients' brains and the inclusion of addiction in all other school subjects which have been used successfully in the USA, Sweden and New Zealand. This is in addition to fact-packed government web sites. Australia has much to do in this respect.

2.3.3 Naltrexone implant demonstration studies in each capital city

The longest lasting naltrexone implant in the world has been developed by Dr. George O'Neil in Perth. It is the best because it lasts the longest, somewhere around 5-6 months. A trial of the safety and efficacy of this device is presently being conducted in Perth.

It usually takes in the vicinity of \$1 billion to bring a drug to market, which clearly is beyond the resources of either the Perth clinic or even the West Australian Government. This is having the effect of creating long delays. The outcomes of this trial are already obvious, brilliant, and in addiction medicine, as radically superb as the HPV vaccine has proven in infectious disease. This situation might be constructively addressed by government through equipping, up-skilling and evaluating those programs which, in its six year history, have already shown promise.

Another potential return on investment lies in statistically powerful evidence by the Perth clinic that naltrexone implants also extinguish the use of all addictive drugs.

Such programs need to be supported by pre- and post- treatment facilities such as addiction medical wards where patients are cared for at the appropriate stage of treatment. Families also need support. The implants, of course, need to be supplied and funded as do the drugs which are usually administered in combination with it, in a manner analogous to the way in which methadone treatment is presently underwritten by state and federal governments. The treatment should also attract an appropriate Medicare item number. Providers will require special training and accreditation to prevent unbridled pecuniary interests from discrediting the therapy as is well known to have occurred with the oral formulation of naltrexone. It must also be accompanied by post-treatment counselling and housing where this is appropriate. The fiasco where patients emerge from detox and have nowhere to go but their dealer's house must be addressed, either by government or community agencies.

Professor Gary Hulse of the University of Western Australia presented evidence to the FHS Committee on his trial of naltrexone implants, which suggested very encouraging results. I think this is more than obvious to all the clinicians who have used naltrexone implants.

2.3.4 Rimonabant Demonstration programs in selected clinics

Rimonabant (Sanofi-Synthelabo "Accomplia") is a new CB1 cannabinoid blocker which has shown great promise in the treatment of virtually every chemical addiction including tobacco, alcohol, amphetamine, cocaine and opiate addiction, and also for food addiction and hypertension. It is presently available in eight nations in the world and is likely to be entering the Australian market in 2008.

Clearly, there is a need for its assessment in the Australian context, particularly in parallel with naltrexone implants for refractory cases where the problematic secondary addiction is either not opiates or is poly-drug related in addiction to opiates.

2.3.5 Proper protocols for stimulant abuse treatments

The irrational situation where stimulants are recommended for stimulant abuse needs to be formally redressed, if not by experts inside Australia, then by offshore expertise. It is indefensible that the Australian public continue to be held captive by ideological preferences of an ideologically-driven lobby.

2.3.6 Improved mental health facilities for acutely and chronically intoxicated patients

There is a very obvious need for the upgrading of mental health facilities to cope with unpleasant emergencies of intoxicated and threatening patients. Such programs need to be accompanied by appropriate public education.

3. Implementation systems

There are a number of basic principles which relate to this improved approach: Drug Free Australia talk about "harm prevention" assertively when people will listen. Further, several (including this writer) agree with Bronwen's Bishop's committee findings that we would do very well to leave the word "harm" in the dirt, in favour of other words such as "devastation", "destruction" and "danger".

The whole of the community has an interest in getting its people - especially the young - off drugs; therefore, the whole of the community needs to work together to get people off drugs. Given the young age of many users, taking people off drugs needs to be a high priority of our health care systems. The power of science should be mobilized with excellent standards of practice; the power of medicine should be mobilized likewise. Open access is an important design priority.

Guidelines follow from these principles:

Each major (capital) city affected by illicit drugs requires at least one access point for such patients. For practical purposes this implies an entry point, be it a clinic, a hospital, or some combination of the two; adequately resourced in terms of staff, ancillary drugs and equipment and resources. Implants and treatment must be free of charge at the time of treatment, and treatment must be timely - preferably on the day that request is made.

To achieve this new system, certain issues must be addressed with particular reference to naltrexone implants.

Scientific Agenda Setting

Appropriately-focussed units must be selected to establish the nation's research agenda in this new approach. The group in Brisbane with its affiliates in Perth and Melbourne would appear to be the most appropriate for this purpose.

3.1 Medical Standards Credentialling and Maintenance

It is well known that one of the world leaders in naltrexone medicine is in Perth and their unit, together with its links to Brisbane, would appear to be best one in which to look for leadership in this area. Melbourne also has an excellent record in this area. Other units in the addiction field are likely to be more obstructive than constructive.

3.2 Establishment and Support of Addiction Treatment Access Points

As is mentioned above, first access points would need to be established in each affected capital city. Preferably, private clinics and hospital based units would be asked to work together in this regard, as this has been found to be most successful, based on the Perth model.

3.3 Naltrexone Implant Supply

In time it is assumed that the naltrexone implants will be made readily available to all patients who need them. This process needs to be fast tracked, which appears NOT to be occurring at the present time. In view of its importance to the management of this epidemic, it would appear that some external supervision needs to be implemented to prevent unnecessary barriers and interminable delays being introduced into a system which becomes unnecessarily complicated and obtuse. Perhaps a provisional listing arrangement needs to be reached so that tests and trials etc. can be continued while the few remaining outstanding

regulatory issues are resolved. It is completely contradictory that at a time when there are strident cries for the legalization of illicit drugs, despite their well documented disastrous implications for health, and all kinds of potions and concoctions are available to almost anyone (even pregnant women) as "alternative health remedies", that a agent such as this is forced to suffer impossible and unrealistic delays while administrative hoops are completed. The most recent estimate from Perth is that a further three years will be required, given the latest requirements by our federal regulatory authority the Therapeutic Goods Administration (TGA). What is happening in practice is that the more time passes and development and testing occurs on this device, the longer (rather than the shorter) the implants become from registration. Far from important medical issues being identified in the testing process, it is trivial matters such as the need to increase the number of rooms in the "Good Manufacturing Practice" (GMP) accredited facility (which had just been specially built) from three rooms to nine! Clearly, such a non-transparent process requires increased public accountability urgently, as every indication is that the harm minimizationists/legalizers are having a party via their tightly controlled bureaucracies at the expense of the global management of these pressing addiction epidemics. It is curious that the same people who stridently argue that science be ignored and testing is not required for the illicit drugs presently scouring the globe are the very same voices who invent problems and barriers and bogey men to make the implants increasingly unavailable. One must wonder if they would do so well in other nations which are more realistic about the shortcomings and overt follies of harm minimization dogmas.

3.4 Time from TGA Registration of Naltrexone Implants to PBS listing

As noted, it is important that this be minimized.

3.5 Associated Pharmaceutical Supply

Various other drugs are routinely used in association with the prescribing of naltrexone, particularly early on when patients are commencing treatment. Clearly, these need to be made available to authorized clinics for prescribed and appropriate use.

3.6 Hospital Back-up and Support

The Perth experience demonstrates unequivocally that the most successful model for ensuring that all patients presenting receive same day treatment is to work with the close relationship of a nearby tertiary referral centre. One obvious way in which to proceed, which has been used to great effect in the USA, is to offer direct federal dollar benefits to all casualty departments dealing appropriately with such cases. Indeed, the *Medical Journal of Australia* recently featured reports from casualty departments in both Sydney and Perth of the enormous resource inputs required by such disorderly addicted patients presenting to inner city casualty departments [15, 16].

3.7 Ancillary Staff Provision

Clearly, detox units would need to be staffed appropriately, in a manner analogous to that in which methadone units are staffed at present. That said, it would be obvious that the basic thrust and ethos of units aimed at detoxification would be quite different from those aimed simply at long term addiction maintenance.

3.8 Medicare Speed Limit – The 80/20 Rule

One feature of the present Medicare arrangement is the "medical speed limit" it imposes on doctors, known as the 80/20 rule. This rule has been arrived at by government and the profession in consultation and states that a doctor may not see more than 80 patients on 20 days a year, for to do so constitutes *prima facie* evidence of over-servicing and warrants immediate referral to the PSR (Professional Services Review) system. Whilst this might be appropriate for general medical consultations, it will be hardly practicable in circumstances such as alluded to herein. Indeed, its rigid application might well potentially make quite impracticable the suggestions referred to above.

Clearly, practitioners working in point of access facilities have every likelihood of being overwhelmed by patient numbers, at least in the initial phase of the treatment roll out. For this system to be workable, it would require either that Medicare's 80/20 rule have an exemption clause written into it (i.e. "excepting drug addiction referral clinics") or that the scheme operate independently of Medicare entirely so that its activity does not raise flags on the Medicare computerized statistical warning system.

4. Conclusions

There is now ample evidence that the so-called harm reduction paradigm has been propagated across Australia with devastating impact on social order, motor vehicle accident rates and child protection issues, along with 197,000 cases of Hepatitis C infection and several sexually transmissible diseases - notably chlamydia (up from 2,500 in 1982 to over 50,000 in 2006) [2].

The underlying ethic of harm minimization can be characterized as a 'promise from society' that risky and hazardous behaviour can be regularly indulged in by people whose minds have been impaired by the chemicals they have ingested, safe in the knowledge that little or no fall out will ensue and that Government will ameliorate the consequences of such folly. This seems counterintuitive to the point of a complete breakdown of reality testing. If the harm minimization paradigm portrays a correct construct of our real world experience, then the realities of life in the environment it portrays should support the image it projects. Harm minimization fails this reality test, and dismally so. It seems all but certain that its main

architect suffers from an attitudinal problem [24, 25], whilst the field as a whole suffers from terminal conflation with drug legalization objectives which are overtly, even proudly stated [5].

The FHS report is correct to cite the vagaries of the language employed by harm minimization as a major cause for concern. The power of language in an argument is too often underrated, with fatal consequences for the opponent. As an example of harm minimization word power, one piece of dialectical ingenuity stated that the aims of harm minimization could be achieved in an environment where drug use itself rose [26].

Living in Australia, one is powerfully aware of two dominant trends, namely that the feeling amongst the general public that 'something is rotten in the state(s) of Australia' and that this may have something to do with the ceaseless flood of pro-harm minimization rhetoric, itself relying on the (relatively) lower level of HIV prevalence as a foundation. [13, 27]. This is very difficult for the lay observer to rationalize when many surveys over decades have shown that Australia's drug use indices for most classes of drugs are worse than in most other developed countries.

So, what might other rationales tell us?

Firstly, it is important to note the existence of countries with low HIV rates such as Sweden and falling HIV rates such as Uganda, where personal responsibility is the basis of social policy rather than individual irresponsibility - as is advocated by the proponents of harm minimization. This is a salutary reminder that [A] by no means necessarily follows from [B]. Whilst [A] and [B] may co-occur, one of the most basic tenets of any scientific analysis - including drug strategy - is that correlation neither implies nor proves causation.

Secondly, even the leading advocates of harm minimization themselves, have, in quoting a UN report of less triumphal times, conceded that it is not possible to proof-test their theories because of the vagaries and complexity of real world situations and the impossibility of controlling for extraneous confounding influences [24].

This, of course, prompts a very important question, namely "What other factors which obtain in Australia might reasonably be said to contribute to its low HIV infection rate?" Several may be listed:

- ▶ There was a free high quality health system for testing;
- ▶ There was a free high quality health system for treatment;
- ▶ The HIV epidemic was largely localized in Sydney amongst men who have sex with men, enabling testing and treatment to be targeted and expedited;
- ▶ Highly active, anti-viral triple therapy was instituted relatively early in the HIV epidemic and administered free to patients;
- ▶ The rise of the epidemic lagged a little behind those overseas so that there was some time to implement lessons from broad;
- ▶ It was possible to achieve early protection of the blood supply, dating to even before the availability of an HIV test, but using Hepatitis B as a surrogate marker;
- ▶ These factors implied that the epidemic began "lower and slower" than in other places and that the gap to the widespread availability of triple therapy was much less. In this sense, combined with a degree of behaviour modification in the 1990's in high risk target groups, the exposure of the at-risk population was minimized;
- ▶ The social context within which the epidemic occurred was actively managed by the target population, and a cultural shift was induced in law and media in favour of the homosexual lobby. This may well have had an impact on the behaviour of the risk group, which was and still is the primary vector [3] in terms of establishing community goodwill and a perceived degree of social cohesion of an amount sufficient to induce a degree of cultural change in relation to high risk drug and sexual practices.

All these factors imply that the nexus between harm minimization and Australia's low HIV r