

# **Victorian Prisoner Health Study**

**Department of Justice**

**Government of Victoria**

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## Part I Executive Summary

### 1 Summary

The first general health status survey of the Victorian prisoner population has now been completed. This report provides context for the survey and describes the main results. Where feasible, it draws out connections and implications that are relevant to the future of health services in Victorian prisons. The survey was conducted over the first months of 2002, with the assistance of trained health professionals, and with the cooperation of the Department of Justice, including prison management and health service providers. The survey results are vast, and constitute a trove of data for researchers and policy analysts.

While some of the findings may simply confirm what was expected or understood in a less systematic way, **there emerges from the plethora of results a picture of the prisoner population as an extraordinarily needy, unhealthy, and life-damaged cohort.** The Victorian Burden of Disease Study [2000] indicated that “the leading main disease groups contributing to the burden of disease are: cardiovascular disease (22 percent); followed by cancer (20 percent); mental disorders (13 percent); neurological and sense disorders (ten percent); chronic respiratory conditions (seven percent) and injuries (seven percent). The report notes that the “burden of many diseases in Victoria is small because of the success of ongoing prevention and treatment

activities”<sup>1</sup>. However, **what is striking about the prisoner population is that it constitutes a cohort that is exposed to or susceptible to those diseases and lifestyle factors that contribute most significantly to the burden of disease. In other words, the prisoner population, on numerous counts [described in this report] are at the very high risk end of the Victorian health spectrum.**

The way in which this survey’s findings are built upon for policy purposes is, of course, a matter for the Department of Justice and the Victorian Government. However, one cannot conduct a study such as this, observing the signs of poor health, addictive and compulsive behaviour, limited impulse control, low educational levels, and lives out of control, without being moved. A higher level interpretation of the data points towards the need for inter-departmental collaboration to address continuum of care issues, as most prisoners are both short-termers and recidivists, and spend most of their lives in transition from institutional control to location in the community. There are also grounds for suggesting that, while nothing should ever be taken at face value, and certainly not self-reports by prisoners, significant health needs remain to be satisfied in the prison system.

## **2 Participants and methods**

About 500, or 15% of the Victorian prisoner population of approximately 3,500, participated in one or more aspects of the survey (physical, mental, dental and pathology) with 450 participating in the two major portions: physical and mental.

Great effort was made in the statistical methodology to ensure the sample was representative. The statistical reliability and representativeness of the data is judged to be high, and certainly as high as comparable prison studies both in Australia and overseas. Participation rates are high enough to provide confidence that inferences from the sample to the complete prisoner population are sound. Availability problems were the main cause of non-participation among those selected and asked, and reflect the level of movement between prisons, prior commitments of prisoners, and prisoner movements in and out of the system as a whole.

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<sup>1</sup> The Women’s Health and Well Being Strategy (DHS) study contained the following wording “One of the questions raised concerning the Global Burden of Disease Study was its capacity to measure the real disease burden of diverse population groups.” Recognising that the Victorian study could be questioned on the basis of its ability to measure the disease burden of specific groups, the Victorian Government has, and will, continue to endeavour to ensure that health and well being factors specific to women, such as violence against women are considered adequately in future Victorian studies. Interpretation of the data should keep this in mind.

The selection of prisoners was based on a stratified random sampling using

- Age - old (41 or over) versus young;
- Ethnicity - aboriginal versus non-aboriginal; and
- Sex – female versus male

as segmenting variables.

The total target sample size of around 450 was allocated between the eight segments defined above so as to approximately equalize the margins of error in each segment. This generally implies higher sampling rates in the smaller population segments.

The determined sampling rates for each segment were applied to each prison. This ensured a representative cross section of prisoners and avoided for example oversampling of longer term prisoners. Care was taken to select random samples within each segment and revisits were made to different prisons in capture the required number of respondents. We thus have considerable confidence in the representativeness and unbiasedness of the sample.

### **3 Overview of results**

**Numerous indicators suggest that the prisoner population is a distinct cohort rather than a microcosm of the wider community.** Dimensions such as education, employment histories, reliance on social welfare benefits, dietary habits, height and weight, sexual history, and marital situation help to differentiate the prisoner population from the rest of Victoria. In addition, there are clear differences in the characteristics and careers of some segments. For example, the institutional and working backgrounds of aboriginal and non-aboriginal prisoners are vastly different.

Section Six summarises the features of the Victorian prisoner population and then makes comparisons with prisoner cohorts in other countries and jurisdictions, and with the wider population. It also draws out implications for the improvement of the health status of prisoners.

The Victorian Burden of Disease Study has identified ten risk factors that together may account for between one third and one half of the disease and injury burden in the community. The prisoner population exhibits the behaviours and characteristics associated with a highly risky lifestyle and differs in degree and in scope of factors from the wider community.

Consequently, it presents a picture of much greater risk and poorer health than the norm. This leads one to question whether the goal of providing prison health care that is the equivalent of the community standard can possibly be appropriate. The nature of the syndrome presented by prisoners should be considered carefully because it points to health needs, including mental health challenges, that are related to criminal conduct and incarceration in complicated ways, and that will not be satisfied by prison health services alone.

The sample, and by extrapolation, the prisoner population, exhibits considerably higher than average levels of:

- Hepatitis – A,B and C
- Asthma [more than 30% of the group]
- Depression
- Insomnia
- Tooth loss, decay, and gum disease
- Sexually transmitted disease other than HIV/AIDS
- Self-inflicted harm and injury [the exception is for older, non-aboriginal women]
- Suicidal thoughts and attempts
- Exposure to sexual, physical, and emotional abuse
- Hospitalisation – more than 25% of prisoners report hospitalisation in the last 12 months.

In addition, there is evidence that a large proportion of the prisoner population engages in behaviour that entails significant risks to health, including:

- Tattooing – almost two thirds of prisoners bear tattoos. This practice correlates to a considerable degree with hepatitis C incidence, as well as being associated behaviorally with a range of other indicators
- High/ harmful alcohol intake
- Drug consumption, with a heavy emphasis on intravenous intake
- Smoking – 15-20 cigarettes per day average
- Involvement with multiple sexual partners and in unsafe sex
- Over-consumption of analgesics and other prescription medications
- Engagement in compulsive gambling

The data indicate that a substantial part of the prisoner population displays attributes, behaviours, and symptoms consistent with anomie or detachment from social norms and values, addictive/ compulsive orientations, and low impulse control. The relevance of this profile is that the health needs of such a cohort are different from those of a community in suburban Melbourne, for example, and require both detailed understanding and specially designed service provision.

The syndrome described above is at the heart of a wide range of key results discovered in the survey, and merits further research. In addition, the report deals with many questions and issues that are relevant to all segments of the prisoner population. It provides a very substantial set of benchmarks and indicators for the consideration of the Department of Justice, and should enable reference to facts to guide policy initiatives.

#### **4 Recommendations**

The following recommendations are explained and offered in Section Seven.

Recommendation 1: The Victorian Government should repeat the prisoner health status survey periodically.

Recommendation 2: The Department of Justice, with due attention to security and privacy considerations, should make available survey data for research by legitimate researchers.

Recommendation 3: The Department of Justice and the Department of Human Services should cooperate and collaborate in the development and delivery of education and health management programs that target the most damaging behaviours and conditions of the prisoner demographic.

Recommendation 4: That the Victorian Government coordinate initiatives to address the causes of deprivation and offending behaviour that lead to the “vicious circles” of substance abuse, offence, imprisonment, and social and psychological dislocation.

Recommendation 5: Research into the post/ pre prison careers of “at risk” prisoners should be undertaken with a view to determining appropriate leverage or intervention points that might improve lifestyle choices and reduce the rate of recidivism.

Recommendation 6: That there be further exploration of the apparent relationship between early life experience of abuse and subsequent difficulties in life management among women who are imprisoned. This should include examination of the incidence of depression and chronic illnesses.

Recommendation 7: That special consideration be given to the needs of women who have suffered sexual and emotional abuse, particularly among those profiled as being at risk of criminal activity and imprisonment. This topic is both sensitive and complex, and requires close alignment of DHS and DoJ efforts.

Recommendation 8: That the Department place emphasis on the importance of mental health services for prisoners, and provide appropriate focus and resourcing in this area. Specifically:

- i. Given the prevalence of mental illness among prisoners, and the concomitant issues they experience, a comprehensive mental health service is required for Victorian prisons.
- ii. Attention must be paid to developing a model for mental health services that is attentive to the particular needs of prisoners with mental illnesses. An appropriate model would consist of six components: 1) intake screening; 2) ongoing monitoring/screening of inmates; 3) comprehensive mental health assessment of prisoners suspected to suffer from a major mental illness; 4) mental health treatment; 5) gradual/post-release monitoring/supervision and continuity of services leading back to the community; and 6) ongoing evaluation of the program.
- iii. At the very least, prisoners being admitted to Victorian prisons need to be screened for mental illness both upon reception and at each transfer. The screening needs to be performed by a mental health professional. Following intake, those prisoners identified as likely being mentally ill need to be referred for a more comprehensive mental health assessment and treatment as indicated.
- iv. Given the unique needs and concerns identified for Aboriginal prisoners, the mental health services developed need to accommodate the particular issues identified for Aboriginal prisoners.
- v. As the number of female prisoners is rising in Victoria, and the prevalence of mental illnesses and related matters is higher for female as compared to male prisoners, the mental health services developed need to accommodate the particular issues identified for female prisoners.
- vi. Although the sample sizes were small, data do suggest that the needs of young prisoners differ from those of older prisoners. As such, the mental health services developed need to accommodate the particular issues identified for younger and older prisoners.
- vii. Ongoing attempts should be made to conduct a study to more carefully identify the prevalence of the range of major mental disorders across a broad cross-section of Victorian prisoners. Attention should be paid, as well, to offenders under community supervision.

Recommendation 9: Given the prevalence of drug and alcohol use among prisoners, it is essential that the current availability of alcohol and drug treatment services is continued within the prison system. If these services are not continued it will accentuate even further the distinction between treatment options in prison and the community, increasing the harm that arises from drug use.

Recommendation 10: That the design of prison health services take account of the special needs of the prisoner population, and of particular segments of that population, as evidenced in the health status survey. In particular, this requires a shift to preventative and public health programs delivered collaboratively and at various stages in the lives of those who serve time in the Victorian Corrections system. This will not only ameliorate the condition of the current cohort of prisoners but will, over the longer term, reduce the demand for acute care.

## Part II Detailed Findings

### 1 Health survey approach and significance

#### 1.1 Summary

This is the first general health status survey of the Victorian prison population. The principal objective has been to document the health status of current Victorian prisoners. This survey now provides benchmarks for future planning and a factual foundation for provision of more focused and appropriate health services based on need.

In this report, preliminary comparisons have been made with other prison populations, particularly New South Wales and Ireland, and with the wider Victorian community. Where feasible, implications for prison health service provision and resource needs have been drawn out.

Results from this wide-scale and robust survey are best viewed as a rich resource for policy analysts and researchers. More detailed analysis and comparative research is warranted in view of the preliminary findings outlined in this report. Indeed, the survey is sufficiently robust to provide a baseline for measuring differences between generations of prisoners, and for evaluating enhancements in healthcare in the prison system.

#### 1.2 Features of the approach

The survey has been designed and executed with attention to its validity, robustness, and replicability. These qualities will give policy makers confidence in more detailed analyses of specific areas of concern, such as mental health or the health needs of the aboriginal prisoner population. Section III describes the design of the study and the survey process and findings in detail.

About 500, or 15% of the Victorian prisoner population of approximately 3,500, participated in one or more aspects of the survey (physical, mental, dental and pathology) with 450 participating in the two major portions: physical and mental. Participation rates are high enough to provide confidence that inferences from the sample to the complete prisoner population are sound. Availability problems were the main cause of non-participation among those selected and asked, and reflect the level of movement between prisons, and the prior commitments of prisoners. The level of non-participation due to rejection of the offer to participate or expressed lack of interest is low. Consequently,

when comparisons of participation are made between Victoria and NSW, it should be recognised that NSW counted only “refusers” as non-participants whereas this study counted both “refusers” and those who were unavailable due to family visits, work commitments etc.

The selection of prisoners was based on a stratified random sampling using

- **Age** - old (41 or over) versus young;
- **Ethnicity** - aboriginal versus non-aboriginal; and
- **Sex** – female versus male

as segmenting variables.

### **1.3 Main survey sections**

The questionnaire was an amended version of that used in the 1999 NSW Prisoner Health Survey. The decision to use this instrument was made by the Department prior to the engagement of consultants, and modifications were made by Departmental staff. The resulting questionnaire was divided into four parts:

- **Physical** – 27 sections covering a wide spectrum of physical health characteristics including diet, personal life style and views and use of prison health services.
- **Mental** – 15 sections covering a different aspects of mental health
- **Dental** – covering the detailed dental health profile of prisoners
- **Pathology**

Some of the sections in the survey had as many as 20 different questions. Demographic and sentence specific information that is automatically collected for all prisoners, has been appended to the survey results. All data have been suitably coded to ensure the anonymity of the survey participants. Detailed records were kept of participation and non response issues and forms an integral part of the survey data.

A copy of these sections is contained in the Appendices.

To give proper perspective to results calculated from the four parts of the sample survey, two additional data files were assembled:

- **“Census” list** - this list is a synthesized census of the prisoner population during the period of the survey. The census list is synthesized from the separate muster lists corresponding to each of the

13 facilities in the Victorian prison system. These musters occurred at different dates and hence the synthesised nature of the census. Some prisons were visited more than once and each visit led to a new muster. Only one muster for each such prison is used in the census list.

- **“Asked” list** – this is a list of all prisoners who were asked to participate in the survey. The list indicates the extent of participation in the four parts of the survey. If a target prisoner did not participate, the reasons for non participation were, as far as possible, recorded.

The census list gives a picture of the average demographic profile of prisoners during the period of the survey and can be used to gauge the extent to which participant prisoners are different from the population average profile. Both the census and asked lists are important for a proper appraisal of survey results.

Variables available on the census and asked lists are recorded for all prisoners upon entering the system and include:

- (a) Sex - male or female
- (b) Age - in years
- (c) Ethnicity – Aboriginal or Non Aboriginal.
- (d) Marital status - married, widowed, defacto, single, separated, divorced or unknown.
- (e) Height - cm
- (f) Weight - kg
- (g) Intellectually disabled or otherwise
- (h) Security classification – as per the classification used by the Victorian Department of Justice
- (i) Reception date
- (j) Release date
- (k) Offence – the offence for which the person is in gaol

Not everyone in the “asked” list is in the “census” list. This is because of the movement of prisoners both between prisons and in and out of the system as a whole, and the fact that the sampling took place over a number of months.

Every effort has been made to make the actual survey data as easily accessible as possible. This is because no single report such as this can deal with or do justice to all the different health issues and features covered by the survey data.

This report serves as a map, gives an overview of the results and their implications, and puts the survey data into an appropriate statistical perspective.

#### **1.4 Survey result data files**

All the survey results, suitably de-identified as to prisoner, are lodged with the Department of Justice. For convenience data are organized into five different files corresponding to the different components of the survey.

Four of the files contain the results of the respective four parts of the survey: physical, mental, dental and pathology. Within each file, data is organized into tables. Tables correspond to the sections within each part of the survey.

A further fifth file, called the “master” file, contains three tables. The first two of these are the census and asked list. The third table, called the sample frame, is a list of all prisoners (and associated demographic information) that came up as potential targets for the sampling. The asked list is the subset of the sample frame consisting of all those who were actually asked.

Tables in each file are organized similarly across files. Rows correspond to prisoners while columns correspond to data for those prisoners. In the case of the four files corresponding to the main parts of the survey, the data is the response to survey questions. In the master file, columns within tables contain demographic or participatory information

The first column in each table corresponds to a prisoner identification code (pid). The prisoner identification code associates rows in each table with an anonymous but specific prisoner and allows the linking of information in different tables within a file and across to tables in the files corresponding to other parts of the survey.

For example the physical and mental health questionnaires – the main parts of the survey – consist of 27 and 15 sections, respectively. The survey response data are similarly organised into 27 and 15 different data tables, one table corresponding to each section. Within each table, rows correspond to the participants in the survey and columns to the different questions in each section. For convenience, an initial extra table for both the physical and mental files contains the demographic information for each participant gleaned from the master file.

The ordering of columns within tables in the four survey files correspond to the ordering of the questions in the actual survey. Each column is named descriptively in an obvious way. Clarification, if required, on the precise form

of each question is obtained by referring to actual questionnaires which are given at the back of this report.

The collection of files is available from the Department of Justice on request.

### 1.5 Segmentation

At the start of the survey it was decided that specific information was needed for groups defined by age, ethnicity and sex. Statistical considerations led to segmentation by age, ethnicity, and sex, as described in 1.2 above

Target sample sizes for each segment were set at the start of the survey and, as far as possible, adhered to. Target sample sizes were set so as to approximately equalize margins of error in each subgroup as discussed in section 8.7. The statistical rationale for the specific form of the segmentation is further discussed in section 8.6. *As a consequence of this segmentation, the sample contains higher proportions of older, female, and aboriginal persons than the whole prisoner population.* This, of course, was true of the NSW sample, which consisted of 11% of full-time male inmates and 40% of female inmates, and also over-sampled aboriginal and older prisoners.

The first panel of Table 1.1 gives the split of the census by segment. Table 1.1 also displays target and actual sampling rates, and actual sample sizes obtained in the main physical part of the survey. The overlap between participants in the physical and mental part of the survey is nearly 100%. Consequently, entries in Table 1.1 would be the same if based on mental question participation.

**Table 1.1 – Estimated versus actual sampling rates**

Prison Population				Actual sample sizes				
<b>Female</b>		Old	Young	Total	<b>Female</b>	Old	Young	Total
Aboriginal		1	16	17	Aboriginal	1	12	13
Non Aboriginal		46	184	230	Non Aboriginal	24	79	103
<b>Total</b>		<b>47</b>	<b>200</b>	<b>247</b>	<b>Total</b>	<b>25</b>	<b>91</b>	<b>116</b>
<b>Male</b>		Old	Young	Total	<b>Male</b>	Old	Young	Total
Aboriginal		12	125	137	Aboriginal	7	56	63
Non Aboriginal		739	2337	3076	Non Aboriginal	137	133	270
<b>Total</b>		<b>751</b>	<b>2462</b>	<b>3213</b>	<b>Total</b>	<b>144</b>	<b>189</b>	<b>333</b>

Target sampling rates				Actual sampling rates					
		Old	Young	Total			Old	Young	Total
<b>Female</b>					<b>Female</b>				
Aboriginal		100.0%	92.9%	93.8%	Aboriginal	100.0%	75.0%	76.5%	
Non Aboriginal		74.1%	47.0%	53.2%	Non Aboriginal	52.2%	42.9%	44.8%	
Total		75.0%	50.3%	55.8%	Total	53.2%	45.5%	47.0%	
<b>Male</b>					<b>Male</b>				
Aboriginal		100.0%	63.6%	66.2%	Aboriginal	58.3%	44.8%	46.0%	
Non Aboriginal		15.5%	5.4%	7.9%	Non Aboriginal	18.5%	5.7%	8.8%	
Total		16.5%	8.3%	10.3%	Total	19.2%	7.7%	10.4%	

### 1.6 Survey participant profiles compared to prison population profile

**In general, the survey participants closely resembled those in the prison population.** Detailed comparison of the sample and the population was completed. To do so, the average profile of the 3459 prisoners in the “demographic” master list was compared with the profile of 449 participants in the physical portion of the survey. The main points of difference are noted below. **These differences are small enough not to invalidate extrapolations from the whole sample to the prisoner population.** Consequently, reference is made frequently to the health of the population in the descriptive and analytical sections, based on sample results.

#### Age

The average and standard deviation age in the prison population census is 33.8 and 10.9 respectively. For the survey participants the corresponding numbers are 36.5 and 12.4. The survey was consciously biased towards the older age group to ensure comparable margins of error in the two age groups. Generalisation from the survey results to the prison population needs to accommodate this skewing.

#### Sex

Seven percent of the prison population is female whereas 26% of the survey participants are female. Again this reflects the conscious effort to over-sample

females so as to achieve similar margins of error between the two groups. Aggregate survey percentages must thus be interpreted with care as the sample is over represented with females - statistics which are expected to vary with sex should be interpreted with care.

### **Ethnicity**

Four percent of the prison population is aboriginal whereas the sample proportion is 26%. This again reflects the conscious over-sampling of the aboriginal group and the need to break out statistics on the basis of ethnicity.

### **Other variables**

#### *Security ratings*

The distribution of security ratings among participants in the sample closely approximates that in the prisoner population.

#### *Height and Weight*

There is good agreement between the population and the sample in relation to weight, but the average height of the sample is lower due to over representation of females.

#### *Marital Status*

Minor discrepancies between the population and sample figures are explainable in terms of the over-sampling of females, older people and aboriginals.

#### *Intellectual disability*

Some 2% of the prison population is classified as intellectually disabled whereas 3% of the sample is so classified.

#### *Reception date*

The population and sample are closely matched in terms of the length of stay to date. The 10<sup>th</sup>, 50<sup>th</sup> and 90<sup>th</sup> percentile reception dates for the prison population are 5 December 1997, 28 May 2001 and 19 December 2001 respectively. The corresponding figures for the sample are 23 September 1997, 8 June 2001 and 15 January 2002. Thus there appears to be little evidence of “length biasing” in the sample which would have occurred if sampling had been done on the basis of admissions.

## **1.7 Segment specific participation profiles**

A vast stock of descriptive information is available by segment. This is summarised for variables such as height, weight, age, length of imprisonment, and marital status in Appendix 1.

## **1.8 Survey participation compared to target participation rates.**

Minor discrepancies occurred between targeted and actual sampling rates. The effect of the discrepancies is to marginally adjust sampling errors from approximate equality to those discussed in the next section. These have a number of sources. First, participation was voluntary and refusal meant that, especially for the smaller groups, no substitute of similar characteristics could be found. Second, the overall sample size was 450, slightly lower than the original target of 470. Third, the prison population is in a constant state of flux leading to constant changes in the counts for the different segments. The overall effect, relative to the targeted sample, is minor in relation to health indicators that are significant for policy purposes.

## **1.9 Margins of error in survey results**

Margins of error quantify the likely sampling error in results computed from the survey. They are thus necessary in order to evaluate in the significance of results and the generalisability of the results to the more general prison population. Appendix 1 gives an indication of the applicable margins of error. In general, the stratified random sampling approach with replacement has produced a robust sample with well understood margins of error.

## **1.10 Participation**

A total of 1105 prisoners were asked to participate in the survey and 491 or 44.4% actually took part in one or more parts of the survey. Target prisoners were randomly drawn from muster lists based on stratified random sampling as discussed in section 8.5.

Table 1.2 summarises the 1105 total by participation in different parts of the survey. The total number of non-participants – that is people who were targeted but could not be accessed – are in the first row of the table. The percentage of participation on every combination of the 4 parts is given in the final column.

**Table.1.2 – Participation by survey component**

physical	mental	pathology	dental	Total	Percentage
NO	NO	NO	NO	614	55.6%
			YES	4	0.4%
		YES	NO	21	1.9%
	YES		YES	9	0.8%
		NO	NO	2	0.2%
		YES	NO	4	0.4%
			YES	1	0.1%
YES	NO	NO	NO	2	0.2%
			YES	1	0.1%
		YES	NO	3	0.3%
	YES	NO	NO	20	1.8%
			YES	6	0.5%
		YES	NO	178	16.1%
		YES	239	21.6%	
Total				1105	100.0%

Reasons for non participation ranged from unavailability due to release to outright refusal. Typically, non-participation was due to logistical and availability problems occurring at short notice. A detailed analysis of participation rates across different segments, reasons for non – participation, and the likely impact of non participation on the findings of the survey is given in section 1.11 below.

### 1.11 Analysis of non participation

A record was kept of prisoners who were asked to participate and whether or not they did participate. If they did not participate an attempt was made to record the reason for non-participation. There are no obvious reasons why the health characteristics of the non-participants is different from those of the participants. After careful replacement of refusers where possible, and determination of the attributes of non-participants, **the researchers are confident that the participation rate does not pose a threat to the validity of the study.**

The potential detrimental effects of non participation have been addressed as far as possible in the survey by repeatedly going back to the same segments and the same prisons to make up sample sizes to the original targets in each segment and prison. The effectiveness of this strategy was seen when, for example, the distribution of the security classification in the sample was compared with that of the aggregate prison population – they were comparable. Despite this strategy there is the chance that the constructed sample, on which this report is

based, is “biased” in some sense. The important issue is whether this bias is health related. There is little reason to believe this to be the case.

With 449 physical survey participants (which is about the same as the number of participants on the mental part of the survey), the participation rate is  $449/1105=41\%$ . This number may appear low compared with the rate achieved in the NSW prisoner health survey but this is not actually the case [see Section 9.3 particularly].

A number of factors are relevant to the reported participation rate.

- The Victorian survey counts all people who were targeted to be included in the sampling but who could not be accessed as non-participants. That is, non-participants include prisoners who were **not available**. The NSW survey counted only “refusers” as non-participants.
- In Victoria, the asked prisoner may have participated in another part of the survey. This arose for example if a prisoner started on one part of the survey but by the time subsequent parts were administered he or she had moved on to another prison or out of the prison system as a whole.
- If a prisoner did not participate then the researchers went back into the same prison to select a person of similar age (old or young), sex and ethnicity characteristics. This strategy means that, as far as practical, a “similar” person was approached. Using similar replacements implies that it is likely that a person of roughly similar health status is obtained and hence the sample is likely to contain a composition similar to that originally targeted. The success of this strategy was confirmed by a comparison of original targets with what was actually achieved.
- Unlike the NSW study, incentives were not used.

### **1.12 The prisoner population – demographics**

Additional demographic data covered in the initial portion of the survey included:

- (a) Whether interpreter service was required
- (b) How many times the prisoner had been in prison
- (c) Whether he/she was born in Australia
- (d) Place of parents’ birth

## Interpreter service

Very little use was required of interpreter services. Out of the 449 prisoners who participated in this portion of the survey, 361 stated they were born in Australia with the next 4 most frequently cited countries being England (11), New Zealand (9), Italy (7), and Vietnam (6).

## Previous times in prison

Prisoners were asked to reveal the number of times they had previously been in an adult prison prior to their current sentence. Table 1.3 details the responses to this question broken down into the segments.

**Table 1.3 – Previous times in prison**

	old aboriginal	old non abor.	old non abor.	young aboriginal	young aboriginal	young non abor.	young non abor.
Prior imprisonments	male	female	male	female	male	female	male
<b>Segment participants</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Response rate	71%	92%	83%	92%	88%	94%	89%
0	29%	8%	17%	8%	13%	6%	11%
1 or 2	0%	91%	62%	45%	42%	64%	50%
3 or more	71%	1%	21%	47%	45%	30%	39%

**Most prisoners have been imprisoned previously.** Overall 394 prisoners responded to this question. Of these respondents, **only 47 prisoners (12%) were entering the system for the first time.** In the case of females, this figure is only 7% whereas 14% of male respondents were entering the system for the first time.

Overall, the majority of respondents, 223 prisoners (57%) had 1 or 2 prior imprisonments. In the case of females, this figure was 68% while only 53% of males had 1 or 2 prior imprisonments.

The remaining 123 prisoners (31%) had 3 or more prior imprisonments. In the case the figure for females was 26% with 53% of male counterparts with three or more prior imprisonments. **The highest number of previous imprisonments was 30 recorded by an old aboriginal male prisoner.**

### 1.13 Demographic information

Prisoners were asked first, what country they were born in. Subsequently, they were asked if they had ever lived in another country for a period of more than 6 months. Table 1.4 displays the results of these two questions.

**Table 1.4 – Country of birth**

	old	old	old	Young	young	young	young
	aboriginal	non abor.	non abor.	Aboriginal	aboriginal	non abor.	non abor.
	male	female	male	Female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Born in Australia	100%	75%	74%	100%	100%	84%	80%
Lived elsewhere	14%	29%	30%	8%	5%	19%	25%

Response to this question was uniformly high in all segments.

**The great majority of prisoners are Australian born, and have one or both parents born in Australia.** 82% of the 448 respondents were born in Australia. This figure was 84% for females and 81% for males.

Almost one in four respondents (23%) report having lived outside Australia for a period of more than six months. Aboriginal prisoners are much less likely to have lived overseas for a period of more than 6 months. This situation is highlighted in the young male category where only 5% of young aboriginal males have lived overseas versus 25% of young non-aboriginal prisoners.

**Place of parents’ birth**

The 10 most frequently cited countries of mother’s and father’s birth and their frequencies are displayed in Table 1.5. Spaces indicate blank responses.

**Table 1.5 – Place of parents’ birth**

Mother born		Father born	
Australia	286	Australia	271
England	25	England	25
Italy	16	-	15
-	9	Italy	14
Germany	8	New Zealand	12
New Zealand	8	Greece	9
Turkey	7	Scotland	9
Greece	7	Turkey	7
Scotland	7	Holland	7
Holland	7	Poland	6

## 1.14 Educational and occupation information

### School leaving age

The mean and median age are at around 15 years with a standard deviation of 2.85 years. In all segments, the average age at which respondents left high school is higher for females than males. This indicates that a large minority of students left school before completing Year 10. When graphed, the data approximate a normal distribution around the mean of 15 years. Aboriginal prisoners are characterised by earlier school leaving ages than non aboriginals.

**Table 1.6 – School leaving age, by age, ethnicity and sex**

	old				Young			
	Aboriginal		non aboriginal		aboriginal		non aboriginal	
	female	male	female	male	female	male	female	male
mean	-	14.1	15.8	15.2	15.1	14.8	15.7	15.5
standard deviation	-	1.2	1.8	2.8	1.6	3.9	1.8	3.1

### History Immediately Before Prison

#### Working prior to entering prison

Participants were asked if they were working in the six months before entering the prison system. The response to this question is detailed in Table 1.7 below, labelled as ‘working’.

Overall, 46% of prisoners were working in the six months prior to entering prisons. In the case of females, this figure is 29% whereas the figure for males was significantly higher with 52% working in the six months prior to entering prison.

Breaking this statistic down by ethnicity shows that **34% of aboriginal prisoners were working in the six months prior to entering prison while the corresponding figure for non-aboriginals is 48%.**

There is also a difference when comparing the old and young participants. In the older prisoners 52% of participants were working while only 43% of young participants were working in the six months prior to entering prison.

## Receiving a pension prior to entering prison

Participants were asked if they were receiving a pension prior to entering the prison system. Overall 75% of participants were receiving a pension prior to entering prison. At least two thirds of prisoners were receiving a pension across all segments. The highest segment was young aboriginal females where 89% of participants were receiving a pension. The figures for male and female participants was similar with 74% and 79% respectively.

## Type of pension

Prisoners were asked to nominate which type of pension they received. Seven choices were provided;

- (a) Age pension
- (b) Invalid pension
- (c) Widow's pension
- (d) Carer's pension
- (e) Supporting parent's benefit
- (f) Sickness benefit
- (g) Unemployment benefit

Overall the most common form of assistance received by participants prior to entering prison was unemployment benefits. In the case of males, this figure was 88% while for females the figure was 79%.

The most significant difference between male and female benefits was parental benefits where 84% of the female population received this payment in contrast to 21% of the male population.

The most significant difference between aboriginal and non-aboriginal participants was the payment of an invalid pension where only 17% of the aboriginal population as opposed to 55% of non-aboriginal participants received this payment.

## Job in prison

Participants were asked if they had a job/occupation in prison. Overall 77% of participants responded positively. There were no differences between male and females with 79% and 75% respectively or between aboriginal and non-aboriginal prisoners with 70% and 79% respectively.

## Married or lived as a couple

Participants were asked if they had ever been married or lived with a partner as a couple. **Overall 80% of respondents had either been married or lived**

**with a partner as a couple.** There were no differences between male and females with 79% and 81% respectively or between aboriginal and non-aboriginal prisoners with 84% and 79% respectively.

**Table 1.7– Situation prior to entering prison**

	Old aboriginal Male	old non abor. female	old non abor. male	young aboriginal female	young aboriginal male	young non abor. female	young non abor. male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Working	29%	38%	55%	8%	41%	29%	55%
Pension	75%	86%	78%	89%	78%	76%	67%
Age pension	0%	33%	33%	0%	0%	0%	0%
Invalid pension	100%	33%	95%	50%	0%	36%	29%
Widow pension	0%	50%	0%	0%	0%	0%	0%
Carer pension	0%	0%	0%	0%	33%	0%	0%
Parent benefit	0%	100%	20%	67%	0%	82%	33%
Sick benefit	0%	50%	57%	0%	83%	54%	55%
Unemploy benefit	50%	60%	82%	100%	96%	81%	94%
Prison job	71%	79%	89%	58%	72%	76%	71%
Couple	86%	88%	90%	83%	84%	78%	66%

### Previous employment

Labourer (7) was the most common previous job for those responding, followed by self employed (4), butcher (3) and chef (3). All other classifications occurred 2 or less times.

### Previous living situations

Participants were asked to classify their previous living arrangement before coming to prison as one of five categories; single, regular partner, married or defacto, separated or divorced and finally widowed. The previous living situations of respondents is summarized in Table 1.8 below, broken out according the sex of the respondents

**Table 1.8 – Previous living situations**

	female	male
<b>Respondents</b>	<b>116</b>	<b>333</b>
Single	41%	37%
Regular partner	16%	18%
Married/defacto	32%	31%
Separated/divorced	9%	13%
Widowed	0%	0%

## Living location

For “living location”, the percentages are for renting, own home or family, unsettled lodging, no fixed abode, hospital and finally other. No significant differences appear between male or female. The results of this question are summarised in Table 1.9.

**Table 1.9 – Previous living arrangements**

	female	male
<b>Respondents</b>	<b>116</b>	<b>333</b>
Renting	48%	55%
Own home	38%	35%
Unsettled lodging	8%	5%
No fixed abode	5%	5%
Hospital	1%	0%

### 1.15 Result report format

The voluminous nature of the results – 4 different parts, up to 28 sections in each part and many different questions in each section – has necessitated the application of judgement about inclusions and exclusions, based on relevance to the key stakeholders. In many places, the authors have highlighted significant implications of findings and have prioritised results in terms of salience to the policy concerns of the Department of Justice. Results are typically reported in a way that follows the survey order and in terms of the segments defined by age, ethnicity and sex. However, complete survey and test results have been saved in a secure data base, and are available for legitimate research with the permission of the Department. Other approaches to segmentation, for example, may be considered.

Raw aggregate percentages calculated from the survey should be interpreted with care. For example since older prisoners are over represented, raw percentages are biased towards the percentage of older prisoners who have the given attribute. If overall percentage estimates are required, they should be calculated as a weighted average of segment percentages, where the weights correspond to the proportion of the population in the various segments. However, in many instances, what is relevant is the trend or indicator of prevalence of a condition, and the sample data are sufficiently robust to support analysis of policy implications by the Department.

### **1.16 Provision of health services in the Victorian prison system**

A report by the Miller Consulting Group on “The Review of the Victorian Prisoner Health Service Delivery Model” [January 2002] was used as a point of reference on the current arrangements for health service provision in the prison system. The Miller report advocated adoption of a new organisational and service delivery model to overcome a range of problems in prison health management. The survey findings shed light on the health characteristics and relevant behaviour of the prisoner population. The need for greater efforts in regard to preventative healthcare and for coordination across institutional boundaries will be evident.

## 2 Mental health results

### 2.1 Introduction

This section will present the results pertaining to mental illness, self-harm/suicidal behaviour, and substance abuse of prisoners. The information presented comes from two general sources. First, the survey that was described previously in this report included a mental health section. Second, a few specific measures to assess particular aspects of prisoners' mental health and well-being were administered to prisoner. These include measures to assess general mental illness, depression, general health, and alcoholism.

There were 451 participants who participated in the mental health section of the survey. The group was substantially the same as the physical health participants – only seven participants who were surveyed for the mental health section were not participants in the physical portion of the survey and seven physical health participants were not in the mental health section of the survey. Consequently, the demographic, physical, and other attributes described in the earlier part of the report generally apply to the participants whose data are reported and discussed in this section.

This section of the report begins with information designed to assess the overall prevalence of mental illness among prisoners as well as estimates of the prevalence of prisoners with a history of depression, bipolar disorder or schizophrenia. Information is also presented to indicate the number of prisoners who have been assessed or treated for mental illness in the past, as well as their current use of medication. Next, information is presented regarding prisoners' general health across four areas: somatic concerns, anxiety-insomnia, social dysfunction, and depression. Finally, two major areas of information related to mental illness are addressed: self-harm/suicide and alcohol/drug misuse.

**The overwhelming impression conveyed by the data is that the prisoner population is far less mentally healthy than the wider Victorian population. The overall pattern of findings reflects a prevalence of all the major mental illnesses than is found in the general population. Moreover, a very high percentage of prisoners have attempted suicide or otherwise engaged in acts of self-harm. The prevalence of addictive behaviour is also extraordinarily high. This situation is serious enough to require that careful attention be paid to the provision of broad-based mental health services to prisoners.**

## 2.2 Overall Prevalence of Mental Illness

At the outset it is important to obtain an indication of the general prevalence of major mental illness among Victorian prisoners. The survey that prisoners completed contained a question pertaining to whether the prisoner had been diagnosed with a mental illness at some time in the past. In addition, a mental illness screening instrument that was developed for use in prisons, the Referral Decision Scale (RDS), was employed in this study as well. The results obtained from the survey and from the RDS are presented and discussed below.

### Psychiatric History – Survey Results

As indicated above, this portion of the mental health survey asked questions about the mental health status of the participant. One particular question of interest, question 1.7, asked “Have you ever been told by a doctor that you have a psychiatric problem?” The results to this question are presented in Table 1 below.

**Table 2.1 – Indication of Patients Who Had Been Told They Have a Mental Illness**

Responses	Males		Females	
	Aboriginal n = 66	Non- Aboriginal N = 272	Aboriginal n = 13	Non- Aboriginal n = 100
“Yes”	11 (16.7%)	78 (28.7%)	1 (7.7%)	35 (35%)
“No”	51 (77.3%)	185 (68%)	9 (69.2)	54 (54%)
Don’t Know	4 (6.1%)	9 (3.3%)	3 (23.1%)	11 (11%)

Overall, 125 (28%) of the 451 prisoners indicated that they had been told they have a mental illness. The Aboriginal prisoners – both male and female – were less likely than other prisoners to have been told they have a mental illness. Only one of the 13 Aboriginal females recalled having being told that she had a mental illness; although, almost one-quarter of them (n=3, 23.1%) did not know if they had been diagnosed as such in the past. The non-Aboriginal women were most likely to have been told they have a mental illness (n=35, 35%) – followed closely by the non-Aboriginal men (n=78, 28.7%).

Moving beyond the simple question of whether they had been told they have a mental illness, Table 2 provides a breakdown of the types of mental illnesses that prisoners recalled being told that they have. Table 2, below, presents the number and percentage of prisoners, from the total sample, indicating that they were told they had a specific mental illness.

**Table 2.2. Percentage of Prisoners Stating They Had Been Diagnosed with Each Disorder**

Diagnosis	Males		Females	
	Aboriginal n = 62	Non-Aboriginal N = 263	Aboriginal N = 10	Non-Aboriginal n = 89
<b>Depression</b>	6 (9.7%)	55 (20.9%)	0	28 (31.5%)
<b>Schizophrenia</b>	3 (4.8%)	13 (4.9%)	1 (10%)	5 (5.6%)
<b>Bipolar Disorder</b>	2 (3.2%)	9 (3.4%)	0	5 (5.6%)
<b>Other</b>	5 (8.1)	25 (9.5%)	0	14 (15.7%)

In addition to questions concerning whether prisoners had ever been told they have a mental illness, a number of other questions pertaining to prisoner's treatment history, current medication, and intervention were asked. The results for these questions are presented in Table 3 below.

**Table 2.3 – Psychiatric History**

Questionnaire Items	Males		Females	
	Aboriginal n = 66	Non Aboriginal n = 272	Aboriginal n = 13	Non-Aboriginal n = 100
<b>Treatment history</b>				
Assessed	26 (39.4%)	145 (53.5%)	6 (46.2%)	55 (57.9%)
Admitted	12 (18.2%)	53 (19.6%)	2 (15.4%)	17 (17.9%)
<b>Assessment and Medication history</b>				
Current medication	8 (12.1%)	32 (11.8%)	1 (7.7%)	24 (25.3%)
Antipsychotic tablets	3 (4.5%)	7 (2.6%)	1 (7.7%)	3 (3.2%)
Antipsychotic injections	2 (3.0%)	7 (2.6%)	0	0
Mood stabilisers	2 (3.0%)	3 (1.1%)	0	2 (2.1%)
Anti depressants	4 (6.1%)	21 (7.7%)	0	22 (23.2%)
Minor tranquillisers	2 (3.0%)	9 (3.3%)	0	2 (2.1%)
<b>Intervention</b>				
Ever received support	21 (31.8%)	113 (41.7%)	6 (46.2%)	41 (43.2%)

## Assessment and Treatment history

Prisoners were asked if they had ever been assessed or received treatment by a psychiatrist or a doctor for an emotional or mental health problem. Overall about half (n=232, 51.4%) of prisoners responded in the affirmative. These results were fairly similar across the different groups of prisoners in the study, except that Aboriginal offenders – particularly male Aboriginals – were somewhat less likely to have answered “yes.” Of course, the breadth of this question is such that a wide range of situations may be encompassed by an affirmative response.

Of those prisoners who had received treatment or assessment for an emotional or mental health problem, about a third had been admitted to a psychiatric unit or ward in a hospital as a result. This suggests that around one in six or seven prisoners would have experienced admission to a psychiatric unit or ward. The similarity in percentage across groups is rather striking.

## Medication history

Prisoners who reported that they had been treated or assessed for an emotional or mental health problem were further asked if they were currently receiving psychiatric medication. Around 15% (n=65) of the prisoners questioned reported that they were currently receiving medication. The percentage is lowest for aboriginal females and the highest for non-aboriginal females. Although still high, the overall percentage of prisoners taking medication may appear lower than is actually case given that so few (n=1, 7.7%) Aboriginal women reported taking current medication compared to non-Aboriginal women (n=24, 25.3%). The relative percentage of Aboriginal males (n=8, 12.1%) and non-Aboriginal males (n=32, 11.8%) who reported taking current medication was very similar.

The most common form of psychiatric medication that prisoners reported taking currently cited was anti-depressants. Generally speaking, Aboriginal females reported very low intake of medication. Caution must be exercised when considering this matter, though, given the small sample size of the group.

## Intervention

Around 40% (n=181) of respondents reported having received support, counselling or treatment for a mental health problem from a psychologist or “counsellor.” Fewer Aboriginal males than others reported having received some form of intervention from a psychologist or counsellor.

The most common form of psychiatric medication that prisoners reported taking currently cited was anti-depressants. Generally speaking, Aboriginal females reported very low intake of medication. Caution must be exercised when considering this matter, though, given the small sample size of the group.

## Summary

To summarise the survey results discussed above, more than one-quarter of respondents reported having been told by a doctor that they had a mental illness. Non-Aboriginal were most likely to have been told they have a mental illness while Aboriginal women were least likely to have been informed as such. Depression was the most commonly reported diagnosis by a doctor. About half of the prisoners surveyed had been assessed for emotional problems by a psychiatrist or doctor and more than 15% of prisoners had been admitted to hospital for these problems. A similar percentage of prisoners (15%) reported that they were taking medication for emotional or mental health problems at the time they were surveyed. The most common type of medication being taken was anti-depressants. Finally, approximately 40% of prisoners stated that they had received intervention from a psychologist or counsellor for emotional or mental health problems.

## The Referral Decision Scale

The **Referral Decision Scale (RDS)**<sup>2</sup> was developed as a screening instrument for psychiatric disorder in the prison setting. It was derived from a larger instrument the Diagnostic Instrument Schedule (DIS) used in a large community based epidemiological study. It is intended as a screening instrument that can be used by correctional staff. It generates diagnoses in 3 categories: Schizophrenia, Manic-Depression and Major Depression.

The RDS was designed to identify those people entering prisons who are likely to be mentally ill and who could benefit from receiving further assessment or treatment. It is not intended as a diagnostic tool for mental illness, but rather is designed to indicate whether a person possesses sufficient symptoms to be referred on to a mental health professional. The diagnostic categories are not mutually exclusive. The RDS has been criticised for producing a high rate of false positives and being of limited value in discriminating between diagnoses.<sup>3</sup> Earlier studies have recommended a

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<sup>2</sup> Teplin, L.A., & Swartz, J. (1989). Screening for severe mental illness in jails. *Law and Human Behavior*;3, 1-18.

<sup>3</sup> Hart, S. D., Roesch, R., Corrado, R., & Cox, D. N. (1993). The Referral Decision Scale: A validation study. *Law and Human Behavior*, 17, 611-623; Veysey, B. M., Steadman, H. J., Morrissey, J. P., Johnsen, M., & Beckstead, J. W. (1998). Using the Referral Decision Scale to

cut-off of 2 or 3 for the subscales. While such cut-offs might be useful for screening prisoners to be referred for further assessment and treatment, the numbers will be artificially high to indicate – with some degree of accuracy – the prevalence of mental illness among prisoners. Therefore, for the purposes of this study a cut-off of four (out of five items) was used as it was found this produced results with more face-validity and cross-validity with other measures of mental illness employed in this study.

The scores on the Referral Decision Scale (RDS) were calculated from all eligible cells in the dataset (i.e., those without missing data). The eligible sample of males included 327 for the Schizophrenia subscale, 329 for the Manic-Depressive Scale, and 325 for the Depression scale, from a total sample of 338. The eligible sample of females included 104 for Schizophrenia, 102 for Manic-Depression, and 101 for Depression, from a total sample of 113. Thus, the RDS was not overly affected by missing cells, making the results an accurate reflection of the entire sample. Table 4 indicates the percentage of prisoners from these three samples that met the modified criteria.

**Table 2.4: Percentage of Prisoners Meeting Cut-Off Score for Psychiatric Disturbance on the RDS\***

Diagnostic Category	Males		Females	
	Aboriginal n = 62	Non-Aboriginal n = 262-267	Aboriginal n = 12	Non-Aboriginal n = 88-92
<b>Schizophrenia</b>	5 (8.1%)	20 (7.5%)	3 (25%)	4 (4.3%)
<b>Manic Depression</b>	5 (8.1%)	26 (9.7%)	1 (8.3%)	3 (3.3%)
<b>Depression</b>	9 (14.5%)	54 (20.5%)	2 (16.7%)	24 (27.0%)
<b>Total with at Least One Suspected MI</b>	15 (24.2%)	72 (27.5)	4 (33.3%)	25 (28.4%)

\*calculated using cut-off scores of 4 out of 5 for each diagnostic category.

Table 4 presents results as per the RDS scoring discussed above. Overall, 116 (26%) of prisoners met the criteria for at least one of the diagnostic categories. According to the RDS criteria, schizophrenia is suspected to be present in about 32 (7%) prisoners with markedly higher rates for Aboriginal females (25%), although due to the small sample caution must be expressed in generalizing these findings.

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screen mentally ill jail detainees: Validity and implementation issues. *Law and Human Behavior*, 22, 205-215.

Similarly major depression occurs in about 47 (20%) of the prisoner population with higher rates for non-Aboriginals and, in particular, non-Aboriginal women. According to the RDS scoring, manic depression occurs in about 35 (8%).

Using the adopted cut-off criteria of 4 out of 5 tallies well with the self report data for mental illness and therefore support the use of the higher cut-off score of 4 for all 3 scales. Further they are similar to the normative data published by Hart et al. (1993)<sup>4</sup> based on data from British Columbia, Canada. For example, Hart et al. (1993) reported that 4.6% of their sample was suspected of having schizophrenia, 12.7% met the cut-off criteria for manic-depression, and 20.2% were above the cut-score for depression.

### 2.3 Beck Depression Inventory

The Beck Depression Inventory (BDI) is a self evaluating indicator of depression comprising twenty-one items<sup>5</sup>. The BDI is well-validated across a number of different settings. The instrument measures the cognitive, vegetative, mood, social, and irritability components of depression. Inmates were asked to answer the question in relation to the way they felt during the week previous to the one during which they were interviewed.

The following cut-off scores were utilised for the study (from the BDI-II manual):

**Table 2.5 BDI Score Categories**

BDI-II Score	Qualitative Range of Depression
0 – 13	Minimal Depressive Symptoms
14 – 19	Mild Depressive Symptoms
20 – 28	Moderate Depressive Symptoms
29 – 63	Severe Depressive Symptoms

The results of the BDI are presented in Table 6. For comparative purposes, data are presented in the final two rows of Table 6 to show the percentage of prisoners who were told by a doctor that they had a mental illness and the

<sup>4</sup> *Ibid.*

<sup>5</sup> Beck, A. T., Ward, C. H., Mendelson M, Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*.

percentage of prisoners who met the cut-off for a referral to a mental health professional for depression from the RDS.

**Table 2.6 Percentage of Prisoners in Each Category of Depression Based on BDI Scores, Along With RDS Percentages, and Diagnoses.**

BDI Depression Category	Males		Females	
	Aboriginal n = 66	Non-Aboriginal N = 272	Aboriginal n = 13	Non-Aboriginal n = 100
<b>Minimal</b>	40 (60.6%)	169 (62.1%)	5 (38.5%)	52 (52.0%)
<b>Mild</b>	11 (16.7%)	40 (14.7%)	4 (30.8%)	19 (19.0%)
<b>Moderate</b>	11 (16.7%)	41 (15.1%)	3 (23.1%)	20 (20.0%)
<b>Severe</b>	4 (6.1%)	22 (8.1%)	1 (7.7%)	9 (9.0%)
<b>Comparative Measures</b>				
<b>Survey Results:</b>				
<b>Diagnosed as Depressed</b>	12 (17.7%)	81 (29.7%)	13 (10.0%)	39 (39.3%)
<b>RDS Results:</b>				
<b>Suspected as Being Depressed</b>	10 (14.5%)	56 (20.5%)	3 (16.7%)	27 (27%)

These figures indicate some interesting findings. First, as noted in the earlier diagnosis section, Aboriginal people are less likely than non-Aboriginals to be diagnosed with depression. However, the BDI scores for each category were very similar for Aboriginals and non-Aboriginals. Indeed, a chi-square test of homogeneity found no significant differences across each category,  $\chi^2(3, N = 451) = 0.85, p = .84$ . This result was further supported by a very small measure of association (phi) between ethnicity and BDI scores ( $\phi = .04, p = .84$ ).<sup>6</sup>

Thus, the actual objective rates of depression are likely to be somewhat similar, but Depression has been under-diagnosed and treated in Aboriginal people. If

<sup>6</sup> The statistical tests conducted for these analyses were omnibus tests between Aboriginal and non-Aboriginal prisoners. As such, gender was collapsed.

one compares the percentage of non-Aboriginal males and females that have received a prior diagnosis, it exceeds the percentage of prisoners who had scored as moderate or severe on the BDI. Therefore, it can be surmised that some of non-Aboriginal prisoners with “mild” depression on the BDI have received a diagnosis of depression in the past. This is in contrast to Aboriginal prisoners, where the percent

Once again, due to the small sample size of Aboriginal prisoners, particularly women, caution must be used in interpreting the data.

The validity of the comparative data concerning measures of depression from the survey and the RDS is further enhanced by the BDI results. Indeed, for the most part, the percentage of prisoners with “moderate” or “severe” symptoms of depression relates well to the percentage of prisoners who have been either diagnosed with depression or who met the cut-off for suspected depression on the RDS. The exception is for Aboriginal prisoners, who, while being less likely to have been diagnosed as depressed in the past, display similar results on the BDI to non-Aboriginals, when comparing prisoners of the same gender.

## **2.4 General Health**

In this part of the survey, participants were asked how health had been in general over the previous few weeks as well as about the incidence of a range of medical complaints. The General Health Questionnaire (GHQ)<sup>7</sup> was used for this purpose. The GHQ was designed as a screening instrument to identify individuals with psychopathology at least equivalent to that seen in an out-patient psychiatric service. The GHQ consists of 28 items that assess functioning across four areas: Somatic concerns, Anxiety-insomnia, Social dysfunction, and Depression. As a screening instrument it is biased towards over detection of cases. It has no diagnostic utility but probably better identifies affective disorder than other disorders. It has been used in several studies internationally, including a prison population including a survey of women prisoners in Queensland.<sup>8</sup>

There are at least three accepted cut-off scores on the GHQ-28. The GHQ manual advocates a cut-off of 4/5. This cut-off indicates that those people who score at or below 4 fall below the cut-off, while those scoring 5 and above score above the cut-off. Other cut scores have been used in different studies. For example, a cut-off of 5/6 was used in a 1997 WHO study. Romans-Clarkson,

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<sup>7</sup> Goldberg, D. (1978). *Manual of the General Health Questionnaire*. London: Windsor Berks, NFER-Nelson.

<sup>8</sup> Hurley, W., & Dunne, M. P. (1991). Psychological distress and psychiatric morbidity in women prisoners. *Australian and New Zealand Journal of Psychiatry*, 25, 461-470.

Walton, Herbison, & Mullen (1989)<sup>9</sup> utilised a cut-off of 3/4 (i.e., 4) in a New Zealand community sample. As such, all thresholds are provided in Table 7 below for ease of comparison of caseness across studies.

**Table 2.7. Percentage of Prisoners with GHQ-28 Scores Above Three Different Threshold Points**

Cut-Off (Threshold) Criteria*	Males		Females	
	Aboriginal n = 58	Non-Aboriginal n = 256	Aboriginal n = 10	Non-Aboriginal n = 85
<b>3/4</b>	20 (34.5%)	97 (37.9%)	10 (100%)	51 (60.0%)
<b>4/5</b>	18 (31.0%)	77 (30.1%)	10 (100%)	45 (52.9%)
<b>5/6</b>	16 (27.6%)	69 (27.0%)	10 (100%)	40 (47.1%)

There are several notable findings among the GHQ-28 results. The percentages using all three cut-offs again reflect the high level of psychiatric morbidity seen in the prison population. Even using the most conservative cut-off of 5/6, over a quarter of all prisoners reached the threshold for caseness. This percentage does not dramatically rise when the cut-off is reduced, thereby strengthening the argument that these numbers are not artificially elevated by false positives. The results, which are consistent with previous research, demonstrate a particularly high level of morbidity among women. The difference between aboriginal and non-aboriginal woman at least partly will be an artefact of the low numbers of aboriginal women surveyed. Nonetheless, it is remarkable that every one of the 10 Aboriginal women who completed the GHQ-28 met even the most conservative cut-off criteria to indicate that they have likely experienced psychopathology.

<sup>9</sup> Romans-Clarkson, S., Walton, V. A., Herbison, G. P., & Mullen, P. E. (1989). Validity of the GHQ-28 in New Zealand Women. *Australian and New Zealand Journal of Psychiatry*, 23, 187-196.

## Summary

The GHQ-28 results reinforce the seemingly obvious but nevertheless critically important point that the reported and perceived overall health status of prisoners is fair to bad at best. While there may well be a tendency because of the structure of the questions to overstate the negatives, there is little support in the evidence for the benign view that prisoners are happy and well. Rather, this section of the questionnaire appears to be consistent with both self-report based and independently tested measures of well-being: taken as a population or cohort, prisoners are actually at risk and suffer to a marked degree from a range of physical, emotional, and mental ailments.

## 2.5 Related Issues

### Suicide

The questions in this part of the survey relate to suicidal thinking, or “suicidal intent”.<sup>10</sup> Table 8 displays the results from the “yes/no” questions on the suicide portion of the mental health survey.

The “attempted” question relates to whether the participant had ever attempted to suicide and was only answered by those who answered affirmatively to the question as to whether they had ever thought of suicide. A possible answer here was “decline to answer” but only one participant declined.

In substantive terms, these results are alarming as they indicate both the prevalence of suicidal thoughts and the extent of reported actual attempts at suicide.

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<sup>10</sup> Steele A.A., & McLennan, J. (1995). Suicidal and counter-suicidal thinking. *Australian Psychologist* 1995; 30:149-152.

**Table 2.8 Suicide History**

Questionnaire Items	Males		Females	
	Aboriginal n = 65	Non Aboriginal N = 270	Aboriginal n = 13	Non-Aboriginal n = 92
<b>Suicidal Thoughts and Attempts</b>				
Suicidal thoughts	30 (46.2%)	123 (45.6%)	6 (46.2%)	43 (46.7%)
Suicide attempt	19 (29.2%)	69 (25.6%)	4 (30.8%)	33 (35.9%)
<b>Method Attempted</b>				
Hanging	13 (20.0%)	17 (6.3%)	1 (7.7%)	6 (6.5%)
Tablet overdose	6 (9.2%)	33 (12.2%)	3 (23.1%)	21 (22.8%)
Injection overdose	2 (3.1%)	14 (5.2%)	2 (15.4%)	7 (7.6%)
Firearms	2 (3.1%)	4 (1.5%)	0	0
<b>Suicide Planning</b>				
Sudden	12 (18.5%)	36 (13.3%)	2 (15.4%)	26 (28.3%)
Plan but avoided	6 (9.2%)	25 (9.3%)	1 (7.7%)	8 (8.7%)

### Suicidal Thoughts and Attempts

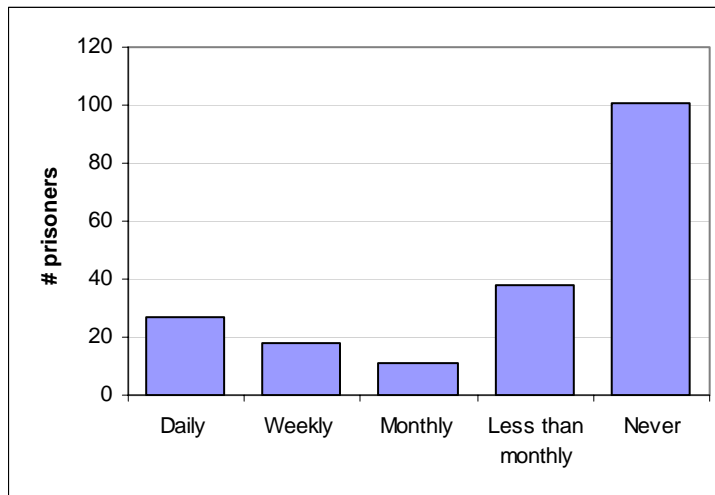
Prisoners were asked if they had ever thought about committing suicide. Just less than half (n=220, 46%) of the prisoners reported having had such thoughts. Of those who had suicidal thoughts, around 60% had actually attempted suicide. There was little difference across each of the samples.

The percentage of participants reporting that they had attempted suicide varied somewhat by race and gender. Aboriginal males and females were equally likely to have attempted suicide (about 30%); whereas, non-Aboriginal women were significantly more likely (n=33, 35.9%) to have attempted suicide than non-Aboriginal men (n=69, 25.6%). Of those prisoners who had attempted suicide the average number of attempts across all prisoners was 2.2 with the maximum number of attempts of 9.

Consistent with the literature on suicide, the method by which prisoners indicated they attempted to commit suicide varied by gender, with male non-Aboriginal prisoners being more likely to have attempted to hang themselves and female prisoners being more likely to have taken an overdose of tablets. Overall, the most common method of attempted suicide was hanging, followed closely by taking an overdose of tablets.

Prisoners were asked about the frequency of suicidal thoughts in the past 12 months (daily, weekly, monthly, less than monthly or never). Chart 2.1 illustrates that most prisoners report that they had not thought about suicide in the last 12 months.

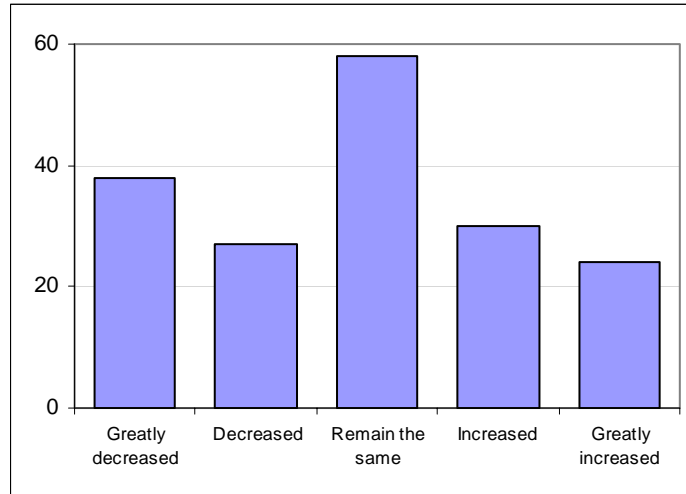
**Chart 2.1. Frequency of Suicidal Thoughts over the Past Year**



Around 10% of prisoners reported having daily thoughts of suicide in the past 12 months. These may represent the highest suicide risk group. However, it is also evident that the correlation between frequency of suicidal thoughts and reported attempts is low as the data suggest that no less than one in every three prisoners has attempted suicide – although not necessarily in prison and not necessarily within the past year.

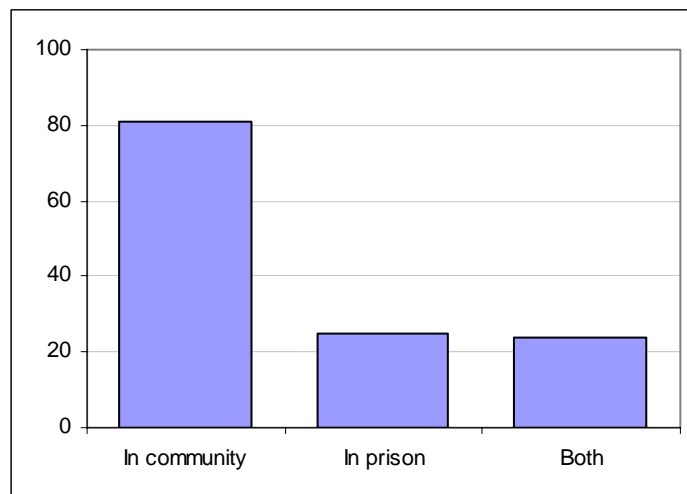
Prisoners were asked to compare their thoughts on suicide before they came into prison with their thoughts of suicide while they were in prison. Prisoners were asked to categorise their response in five ways (greatly decreased, decreased, remained the same, increased, greatly increased). The results of this question are presented in Chart 2.2 below.

**Chart 2.2 Suicidal Thoughts before Entering Prison**



The majority of respondents (69%) reported that compared with the thoughts they were having before they entered prison, their thoughts about suicide had at least stayed the same if not decreased. However, more than 25% of prisoners felt their thoughts about suicide had increased or greatly increased since entering the prison system.

**Chart 2.3 Location of Suicide Attempts**



As Chart 2.3 shows, the great majority of suicide attempts, in which prisoners engaged, were in the community. Still, approximately one-quarter of the suicide attempts occurred in prison.

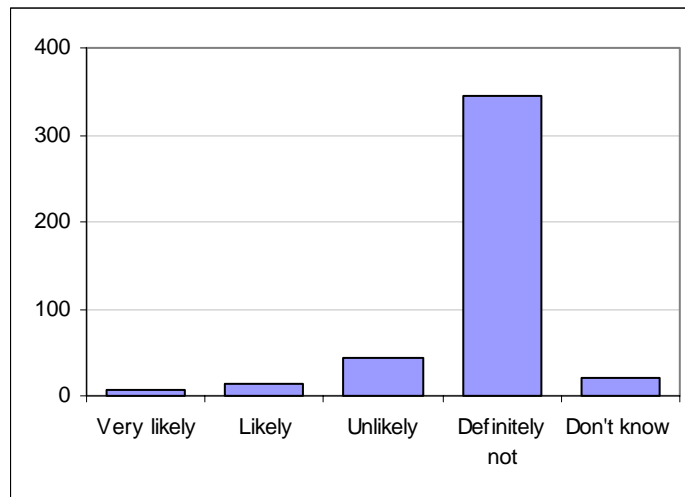
### Suicide planning

Of those who indicated that they had engaged in suicidal attempts, around 17% reported a sudden impulse or urge to do so. All segments except for non-Aboriginal women (n=26, 28.3%) were relatively equal in their responding. Non-Aboriginal women were almost twice as likely as those in the other groups to have responded to a sudden impulse to attempt suicide.

Prisoners were asked if they had ever planned a suicide attempt but not carried it out. About 9% of respondents reported in the affirmative, and the responses were similar across all of the segments. The most common reasons given for aborting the suicide attempt was either unsolicited intervention or concern for the impact on the family.

Prisoners were asked whether they were likely to attempt suicide during the current imprisonment. Results are summarised in Chart 2.4. The vast majority indicated 'definitely not' or 'unlikely'. Of concern is the small group of prisoners who responded either 'likely' (14) or 'very likely' (6).

**Chart 2.4 Suicidal intentions**



Prisoners were asked whether they would tell anybody if they were thinking of suicide. A very small number of prisoners (14) indicated that they would notify someone of their suicidal intention, with the most likely confidant being another inmate.

### Beck Depression Inventory -- Suicide Item

In addition to survey items asking prisoners about their experiences with thoughts of suicide and suicidal behaviour, the BDI contains an item pertaining

to suicide. The BDI-II manual recommends paying particular attention to the suicide item, as it is almost as predictive of suicide as the Beck Hopelessness Scale. Therefore, an additional analysis was conducted to assess the degree of suicidal ideation in the sample. Results are shown in Table 9.

**Table 2.9 Percentage of Prisoners Endorsing Each Score on the BDI Suicide Item**

Response Category*	Males		Females	
	Aboriginal n = 66	Non-Aboriginal N = 272	Aboriginal n = 13	Non-Aboriginal n = 100
<b>0</b>	56 (84.8%)	230 (84.6%)	10 (76.9%)	85 (85.0%)
<b>1</b>	9 (13.6%)	33 (12.1%)	1 (7.7%)	10 (10.0%)
<b>2</b>	1 (1.5%)	5 (1.8%)	1 (7.7%)	1 (1.0%)
<b>3</b>	0 (0.0%)	4 (1.5%)	1 (7.7%)	4 (4.0%)

\* Responses are as follows:

0 = I don't have any thoughts of killing myself

1 = I have thoughts of killing myself, but I would not carry them out

2 = I would like to kill myself

3 = I would kill myself if I had the chance

Despite the considerable amount of depression present in the sample (as estimated by both the RDS and BDI above), this depression apparently is not being manifested in suicidal ideation as far as can be assessed by this item on the BDI. The data presented should not be taken lightly, though, as they indicate that 8 of the prisoners surveyed responded that they would like to kill themselves. Even more troubling, 9 prisoners indicated that they would kill themselves if they had the chance. If it is true that almost 2% of prisoners would like to kill themselves or would kill themselves if they had the chance, the potential suicide rate from prisons would be dramatically higher than that which is found in the general population. Moreover, the overall percentages on the BDI suicide item are very similar for both Aboriginal and non-Aboriginal prisoners. As such, an omnibus chi-square test of homogeneity (with gender collapsed) found no significant differences across each category of response,  $\chi^2(3, N = 451) = 0.64, p = .89$ . This result was further supported by a very small measure of association between ethnicity and the BDI suicide item ( $\phi = .04, p = .89$ ).

## Self harm

Table 10 displays the percentage of respondents who have ever deliberately harmed or injured themselves. The second question relates to proportion who have harmed themselves in prison. The percentage in each cell consists of the “yes” responses. The sample for the following table comprises the prisoners who answered either yes or no to the opening question: “excluding suicide attempts, have you ever deliberately harmed or injured yourself, e.g., slashed up”.

**Table 2.10 Percentage of Prisoners who Indicated that, Excluding Suicide Attempts, they Ever Deliberately Harmed or Injured Themselves.**

Response	Males		Females	
	Aboriginal n = 64	Non- Aboriginal N = 264	Aboriginal n = 13	Non- Aboriginal n = 94
<b>Harmed</b>	12 (18.8%)	43 (16.3%)	3 (23.1%)	15 (16.0%)
<b>During Imprisonment</b>	1 (1.6%)	20 (7.6%)	1 (7.7%)	4 (4.3%)
<b>Confide Before</b>	0	5 (1.9%)	0	2 (2.1%)

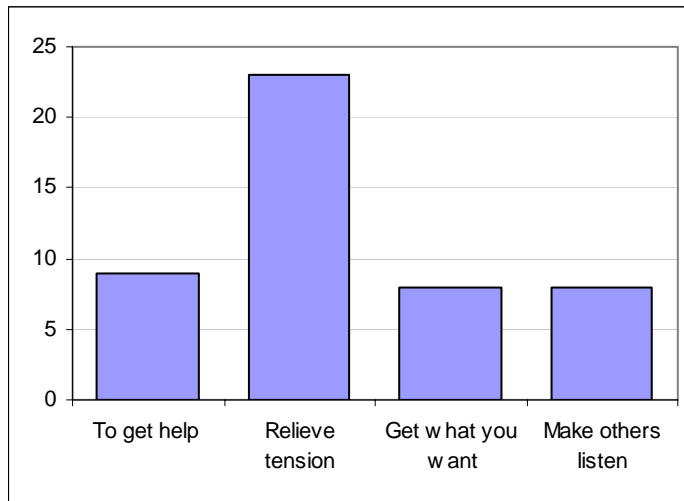
Overall, 73 (16%) prisoners reported engaging in deliberate self harm. Generally the only groups that showed significantly higher rates of self harm were Aboriginal women.

Prisoners were asked whether they would tell anybody if they were thinking of self harming. A very small number of prisoners (n=7, 2%) indicated that they would notify someone of their intention to self harm, with the most likely confidant being another inmate.

These figures indicate that self-harming behaviour is not particularly prevalent amongst the prisoners; however these percentages may be underestimated. Nevertheless, it is evident that the Aboriginal prisoners do not talk and confide to anybody prior to harming themselves, whereas a small number of non-Aboriginals do.

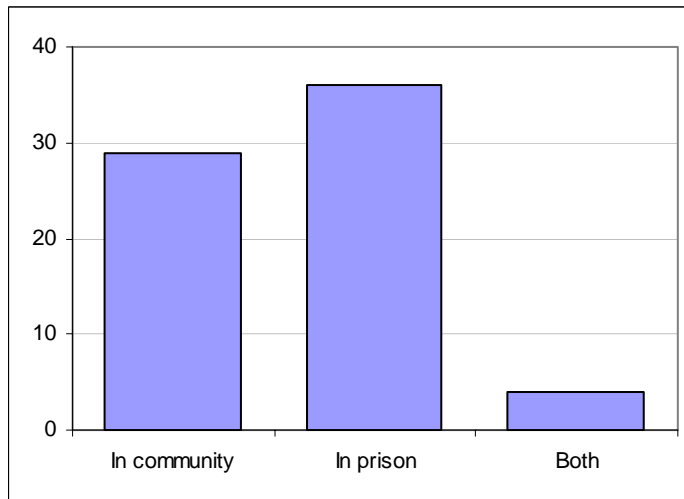
By far the most frequently cited method of self harm involved some form of slashing. The most common reason given for self harm was to relieve tension. The frequency of other reasons is reported in Chart 2.5.

### Chart 2.5. Reason for Self Harm



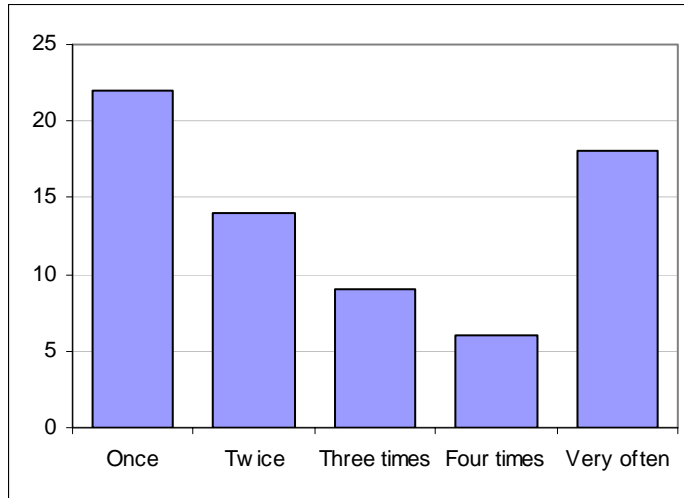
Overall of those who did inflict self harm, slightly more indicated they had done so “in prison” rather than in the community. Relative percentages are documented in Chart 2.6.

**Chart 2.6 – Location of self harm episodes**



The frequency of self harm amongst self harmers is documented in Chart 2.7. The chart indicates that most common number of self harms is one. However, a majority have self harmed more than once with a significant percentage having done so ‘very often’.

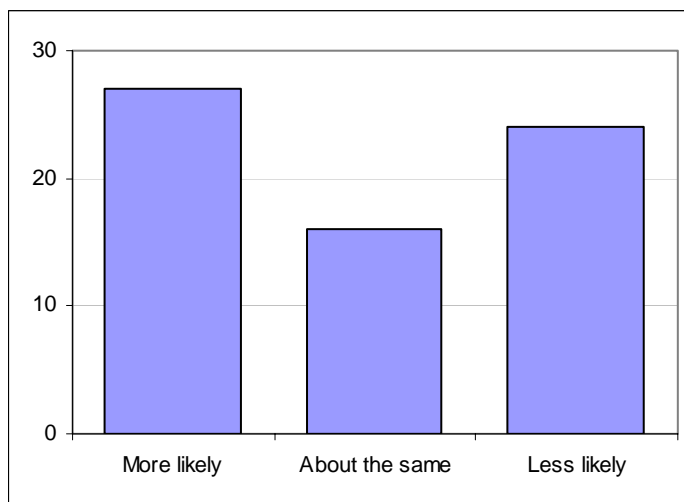
**Chart 2.7 Frequency of self harm episodes**



The average number of self harms is 2.6 and the highest number of reported self harms was 10.

Prisoners were asked whether they were more likely/inclined to self harm in prison than in the community. There was no tendency for prison sojourns to increase the tendency for self harm. This is documented in Chart 2.8.

**Chart 2.8 – Tendency for self harm**



Of those who self harmed, the majority (65%) indicated their self harm urges were always impulsive.

## Alcohol Use and Abuse

### Alcohol screening questionnaire

Prisoners were asked to respond to the World Health Organization's Drug and Alcohol Questionnaire (AUDIT).<sup>11</sup> Many of these questions relate to the frequency of events involving alcohol. In all there are ten questions in this area. The responses to those questions are tabulated in Appendix 4. A summary of these results follows.

The AUDIT allows for a determination of the prevalence of alcohol abuse or dependence among individuals. The AUDIT manual suggests two different cut scores. A score of 8+ has the highest sensitivity (i.e., not missing many cases of actual alcoholism), whilst a score of 10+ has higher specificity (i.e., not over-identifying too many cases of alcoholism). Results from the AUDIT for both the 8+ and 10+ cut-scores are presented in Table 11.

**Table 2.11 Percentage of Prisoners with AUDIT scores above two different threshold cut-points**

Cut-Off Scores	Males		Females	
	Aboriginal n = 66	Non-Aboriginal N = 272	Aboriginal n = 13	Non-Aboriginal n = 100
<b>Cut off – 8+</b>	44 (66.7%)	117 (43.0%)	6 (46.2%)	19 (19.0%)
<b>Cut off – 10+</b>	38 (57.6%)	107 (39.3%)	6 (46.2%)	15 (15.0%)

Using the cut-off of 8+, 186 (41%) of prisoners were determined to have alcohol abuse or dependence. It can be seen that there is a higher percentage of Aboriginal prisoners who score above each cut-off. This finding exists regardless of gender.

Prisoners who reported consuming alcohol were asked how many drinks they consumed on a typical day when they were drinking before entering prison. Alcohol consumption is typically divided into low risk and high risk based on the impact on health. For reporting purposes we have divided low risk drinking as 1-2 alcoholic drinks per typical drinking day and high risk as any more than

<sup>11</sup> Saunders JB, Aasland OG, Babor TF, de la Fuente JR, Grant M. Development of the Alcohol Use Disorders Identifications Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption - II. *Addiction* 1993; 88: 791-804.

this. In the general population it is reported that less than 10% are considered to be high risk drinkers, but the prison population is characterised by very high rates of high risk drinking. The issues associated with high risk drinking are well known, and while this result would surprise few policy makers, it does suggest that prisoners are characterised by high levels of addictive, compulsive, and impulsive behaviours.

Prisoners were asked if they or someone else had ever been injured as a result of their drinking. Overall, around 64% of prisoners said no. When asked if a relative, friend or health worker had been concerned about your drinking or suggested you cut down, about 65% of prisoners reported no.

### Alcohol use questions from the prisoner survey

In addition to the AUDIT, prisoners were asked two additional questions regarding alcohol. These were (a) have you ever consumed alcohol in prison and (b) how often have you consumed alcohol in prison? The results for the responses to these questions are presented in Tables 2.12 and 2.13 below.

**Table 2.12 Responses to the question, “Have you ever consumed alcohol in prison?”**

Response	Males		Females	
	Aboriginal n = 53	Non- Aboriginal N = 203	Aboriginal n = 7	Non- Aboriginal n = 49
<b>Yes</b>	14 (26.4%)	39 (19.2%)	1 (14.3%)	12 (24.5%)
<b>No</b>	38 (71.7%)	163 (80.3)	6 (85.7%)	36 (73.5%)
<b>Declined to Answer</b>	1 (1.9%)	1 (0.5%)	0	1 (2.0%)

**Table 2.13 Response to the question, “How often have you consumed alcohol in prison?”**

Response	Males		Females	
	Aboriginal n = 24	Non- Aboriginal N = 101	Aboriginal n = 4	Non- Aboriginal n = 21
<b>Never</b>	12 (50.0%)	73 (72.3%)	3 (75.0%)	14 (66.7%)
<b>Every day</b>	0	1 (1.0%)	0	0
<b>Once a week</b>	1 (4.2%)	1 (1.0%)	0	1 (4.8%)
<b>Once a month</b>	2 (8.3%)	5 (5.0)	1 (25.0%)	0
<b>&lt;once a month</b>	8 (33.3%)	20 (19.8%)	0	5 (23.8%)
<b>Declined to answer</b>	1 (4.2%)	1 (1.0%)	0	1 (4.8%)

The results to the two questions about the use of alcohol in prison suggest that approximately 20% of prisoners reported that they have used alcohol in prison. Generally speaking, their use of alcohol in prison is very infrequent.

### Drug Use

Drug use is a critical issue for prison authorities and this section of the survey attempted to elicit responses related to the issue. There were many questions in this part of the survey covering the history of drug use, drug use while in prison, and the extent to which prisoners sought help for drug use. The results to these questions are presented in Table 2.14.

**Table 2.14. Drug Use**

Questionnaire Items	Males		Females	
	Aboriginal n = 64	Non Aboriginal n = 269	Aboriginal n = 13	Non-Aboriginal n = 91
<b>History of drug use</b>				
Ever taken illegal drugs	55 (85.9%)	173 (64.3%)	10 (76.9%)	71 (78%)
Ever injected illegal drugs	33 (51.6%)	113 (42.0%)	7 (53.8%)	60 (65.9%)
<b>Drug use while in prison</b>				
Injected drugs	13 (20.3%)	36 (13.4%)	0	13 (14.3%)
Shared needles	10 (15.6%)	27 (10.0%)	0	10 (11.0%)
Clean needle	9 (14.1%)	27 (10.0%)	0	11 (12.1%)
Ever in a methadone program	7 (10.9%)	36 (13.4%)	4 (30.8%)	30 (33.0%)
In a current methadone program	1 (1.6%)	2 (0.7%)	1 (7.7%)	8 (8.8%)
<b>Whether the prisoner sought help with drug problems</b>				
Sought help	12 (18.8%)	57 (21.2%)	4 (30.8%)	35 (38.5%)
Sought help before prison	7 (10.9%)	38 (14.1%)	2 (15.4%)	24 (26.4%)
Needs help	9 (14.1%)	23 (8.6%)	4 (30.8%)	17 (18.7%)

### Drug history

Overall, 309 (71%) of prisoners reported that they had taken illegal drugs at some stage in their life. This proportion was high across all segments, but lower for non-Aboriginal males. Very few prisoners declined to answer this question.

Further questions, not reported here, elicited the usage of different drugs in the 12 months prior to coming to prison. Cannabis was the most commonly reported drug taken.

Prisoners were asked whether they had ever injected illegal drugs at some stage in their life. About 49% answered in the affirmative. There were significant variations across segments. The highest segment was non-Aboriginal females (66%) with a lower percentage reported for non-Aboriginal males (42%). The median age of first injection across all segments for those who reported having injected drugs is 17 years with the arithmetic mean of 18.8 years.

## Drug history in prison

When asked whether prisoners had injected illicit drugs in prison, response rates were around 50%. Of those responding, about 35% answered in the affirmative (this corresponds to about 70 prisoners within the sample, or about 17.5%). As expected higher proportions were reported in the younger age groups. The most commonly recorded drug used in prison across all segments was cannabis.

Around 50% of prisoners who have injected drugs in prison reported having been on a methadone program. Current attendance at such a program is significantly lower at around 3% of all prisoners in the sample. Approximately one-third of drug injectors – or about 20% of all prisoners - said they needed help in quitting drugs.

Of those prisoners who reported having injected illegal drugs in prison, a further series of questions were asked regarding needle sharing and the use of clean needles. Firstly, prisoners were asked if the last time they shot up in prison, was the needle used by someone else before or after they had used it. The younger prisoners in particular reported that needles were not used by anyone else before or after them. However, an estimated 25% of young prisoners who inject drugs within the system are sharing needles.

Alarmingly, of those prisoners who reported that they had shared a needle the last time they injected illegal drugs in prison, high percentages across all segments reported that the needle was not cleaned prior to using it. However, it must be emphasised the sample sizes that these numbers are based on are extremely low. Nonetheless, this is a serious problem that affects a small number of prisoners.

## Sought help

The majority (66%) of respondents who answered this question indicated that they had sought help for a drug problem. Overall, about one-quarter of all prisoners in the study stated that they had sought help for a drug problem. Most prisoners who had sought help had done so prior to entering the prison system. marked degree from a range of physical, emotional, and mental ailments.

## 2.6 Summary and Recommendations

The results of the information collected for this section of the report suggests that more than one-quarter of all prisoners were told by a doctor in the past that they have a mental illness. Of those who reported having been so-diagnosed,

almost 20% had been told they have depression, approximately 5% were told they have schizophrenia, and 4% were informed they had bipolar disorder. More than half of the prisoners reported that they had been assessed or received treatment by a psychiatrist or doctor for an emotional or mental health problem.

The results of the instruments designed to screen for mental illness, depression, and general health problems parallel the survey results. For example, the Referral Decision Scale (RDS) results suggest that more than one-quarter of prisoners met the criteria for one of the diagnostic categories (i.e., schizophrenia, manic depression, or depression). Similarly, data obtained to estimate the prevalence of depression from the survey results, the RDS, and the Beck Depression Inventory (BDI) were very comparable. This comparison provides support to the validity of the data obtained.

Beyond paying attention to the prevalence of mental illness and assessment or treatment experiences, information was obtained about prisoners' experiences with self-harm and suicide. Almost half of prisoners had experienced thoughts of committing suicide and 60% of those had actually attempted suicide. While the majority of prisoners' thoughts of suicide had at least stayed the same or decreased after they entered prison, 25% of prisoners indicated that their thoughts about suicide had increased or greatly increased after they were incarcerated. Perhaps not surprisingly, given the level of attention paid to reducing suicide in prison, the majority of suicide attempts had occurred in the community. Still, though, approximately 25% of the suicide attempts took place in prison.

The final matters addressed in the study pertained to prisoners' experiences with alcohol and other drugs. Almost half of prisoners were determined to have alcohol abuse or dependence and more than 70% reported having taken illegal drugs.

Given the prevalence of drug and alcohol use among prisoners, it is essential that the current availability of alcohol and drug treatment services is continued within the prison system. If these services are not continued it will accentuate even further the distinction between treatment options in prison and the community, increasing the harm that arises from drug use.

Although the figures obtained in the study are very high, they are quite consistent with the prevalence data reported in the literature.<sup>12</sup> As indicated in the text, some degree of caution is necessary in interpreting the results. Generally speaking, the measures employed in this study are screening

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<sup>12</sup> Ogloff, J. R. P. (2002). Identifying and accommodating the needs of mentally ill people in gaols and prisons. *Psychiatry, Psychology, and Law*, 9, 1-33

instruments that are designed to slightly over-identify mental illness so as not to miss individuals who might suffer from a mental illness. In interpreting the measures with flexible cut-off scores, we tended to employ more conservative measures to decrease the degree to which individuals who do not have a mental illness might be identified as having a mental illness in error. Taken together, the prevalence rate of major mental disorders among prisoners in Victoria is significantly higher than one would expect in the general population. For many of the illnesses, there is a three to fivefold increase in prevalence over what one might expect to see in the community. The results of the mental health portion of the prisoner health study lead to a number of recommendations:

- i. Given the prevalence of mental illness among prisoners, and the concomitant issues they experience, a comprehensive mental health service is required for Victorian prisons.
- ii. Attention must be paid to developing a model for mental health services that is attentive to the particular needs of prisoners with mental illnesses. An appropriate model would consist of six components: 1) intake screening; 2) ongoing monitoring/screening of inmates; 3) comprehensive mental health assessment of prisoners suspected to suffer from a major mental illness; 4) mental health treatment; 5) gradual/post-release monitoring/supervision and continuity of services leading back to the community; and 6) ongoing evaluation of the program.
- iii. At the very least, prisoners being admitted to Victorian prisons need to be screened for mental illness both upon reception and at each transfer. The screening needs to be performed by a mental health professional. Following intake, those prisoners identified as likely being mentally ill need to be referred for a more comprehensive mental health assessment and treatment as indicated.
- iv. Given the unique needs and concerns identified for Aboriginal prisoners, the mental health services developed need to accommodate the particular issues identified for Aboriginal prisoners.
- v. As the number of female prisoners is rising in Victoria, and the prevalence of mental illnesses and related matters is higher for female as compared to male prisoners, the mental health services developed need to accommodate the particular issues identified for female prisoners.
- vi. Although the sample sizes were small, data do suggest that the needs of young prisoners differ from those of older prisoners. As such, the mental health services developed need to accommodate the particular issues identified for younger and older prisoners.

- vii. Ongoing attempts should be made to conduct a study to more carefully identify the prevalence of the range of major mental disorders across a broad cross-section of Victorian prisoners. Attention should be paid, as well, to offenders under community supervision.

## 3 Physical health results

This section presents the results from the **physical health** portion of the survey, supplemented by relevant material from elsewhere, particularly in relation to two topics [i] hepatitis, and [ii] satisfaction with health services [section 3]. It begins with a detailed description of the reporting format, and then moves to relatively detailed results for each of the 27 sections of the physical survey. The following description is focused on matters relevant to the Department and the Government, but it should also encourage researchers to seek access to the data for additional analysis.

### 3.1 Result reporting format

Most questions in the physical survey were either:

- (a) Yes/No type questions with “yes” is indicated by 1 and “no” by 2. No response is indicated by 0.
- (b) Multiple choice. In this case the answers are generally ordered in a convenient way as 1, 2, ... with 0 indicating no response.
- (c) Numerical. Again 0 indicates no response, or required
- (d) Descriptive comments. Blanks indicate no response.

Response rates were usually near 100% indicating all prisoners who took part in the survey did in fact make a response. Consequently, response ranges have been indicated where appropriate, and rates are only highlighted when they are variable across segments of the prisoner sample.

### 3.2 Health status

This part of the survey dealt with the prevalence of different conditions listed in Table 3.1 below. Participants were asked if they had ever been told by a doctor that they had any of the diseases listed in Table 3.1. High response rates to this question were recorded across all segments. Responses by 25% or more of a segment to a question about a particular condition are highlighted.

A high correlation was found between self-report and independent diagnostic assessments of prisoners. Consequently, the levels of reported prevalence of conditions such as hepatitis, ulcers, asthma, and a range of chronic illnesses are likely to be a matter of serious concern for prison authorities. When compared

with data from community studies, it appears that prisoner health characteristics are significantly worse than those of the wider population.

**Table 3.1 – Self reported health conditions**

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	female	Male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
arthritis	<b>29%</b>	<b>50%</b>	<b>33%</b>	8%	4%	8%	13%
epilepsy	<b>29%</b>	8%	7%	8%	13%	8%	9%
diabetes	17%	13%	12%	0%	4%	4%	1%
insulin	<b>50%</b>	0%	15%	0%	17%	20%	6%
asthma	<b>29%</b>	<b>25%</b>	18%	<b>83%</b>	24%	<b>38%</b>	<b>31%</b>
back problems	<b>43%</b>	<b>33%</b>	<b>53%</b>	<b>50%</b>	13%	<b>38%</b>	<b>25%</b>
haemorrhoids	0%	17%	19%	0%	0%	8%	7%
Cancers	14%	21%	11%	0%	0%	6%	5%
High blood	14%	17%	<b>26%</b>	17%	11%	10%	13%
Chest	<b>29%</b>	17%	19%	17%	9%	8%	11%
heart murmur	14%	4%	4%	0%	0%	4%	8%
palpitations	14%	21%	12%	0%	4%	8%	12%
other heart	0%	4%	6%	0%	4%	4%	4%
Gallstones	<b>29%</b>	8%	4%	0%	0%	5%	2%
Prostate	14%	0%	8%	0%	0%	0%	0%
peptic ulcers	<b>29%</b>	21%	9%	<b>25%</b>	4%	8%	11%
Hepatitis	<b>57%</b>	23%	23%	<b>73%</b>	<b>42%</b>	<b>69%</b>	<b>39%</b>
Hep A	0%	<b>67%</b>	<b>67%</b>	0%	<b>25%</b>	<b>33%</b>	20%
hep B	<b>100%</b>	<b>75%</b>	<b>88%</b>	0%	<b>50%</b>	<b>83%</b>	<b>40%</b>
hep C	<b>100%</b>	<b>71%</b>	<b>92%</b>	<b>100%</b>	<b>95%</b>	<b>98%</b>	<b>93%</b>
HIV test	<b>43%</b>	<b>67%</b>	<b>68%</b>	<b>75%</b>	<b>80%</b>	<b>84%</b>	<b>79%</b>
poor eyesight	17%	<b>79%</b>	<b>60%</b>	<b>58%</b>	24%	<b>29%</b>	<b>25%</b>

## HEPATITIS

Overall, the most commonly reported disease was hepatitis: **40% of participants reported being diagnosed with this disease.** This far exceeds the community rate of between one and one and a half percent.

Respondents were then asked to identify the specific stream of hepatitis: 39% indicated hepatitis A; 65% hepatitis B; and 93% hepatitis C.

Hepatitis was more prevalent in females than males at 60% and 33% respectively. Of the specific streams of hepatitis, there appears to be a

significant difference between aboriginal and non-aboriginal prisoners, with only 19% versus 43% respectively for hepatitis A and 47% and 69% respectively for hepatitis B. On the other hand, hepatitis C figures were almost identical for these two segments.

### **General Information**

The hepatitis C virus (HCV) is a major public health challenge in Australia. The primary health concern is that chronic hepatitis C infection can lead to cirrhosis and hepatocellular carcinoma. It is estimated that over 200,000 Australians have been exposed to HCV (1% of the population), 140,000 are chronically infected and around 16,000 new infections occur each year<sup>13</sup>. The cost of HCV to the public health system and the community is enormous. In 1996-1997, estimates of the direct costs (eg. combined health related and social costs) of HCV amounted to at least \$75 million per annum while estimates of indirect costs (eg. production loss) amounted to at least \$32.5 million per annum.<sup>14</sup>

### **Previous Victorian Study into HCV prevalence in Prisons**

A seroprevalence study of prisoners entering Victorian correctional facilities was conducted between October 1991 and September 1992. Greater than 99% of all prison entrants participated in the study. The overall prevalence of hepatitis C was 39%. Forty six percent of the study participants reported ever injecting drugs; the prevalence of hepatitis C was 63.6% in men who reported injecting drugs compared with 16% in those who did not report injecting drugs; the prevalence of hepatitis C was 85% in women who reported injecting drugs compared with 26% in those who did not report injecting drugs.<sup>15</sup> A small number of injecting drug users in prison were interviewed as part of the 1991-1992 study. Almost half of these prisoners had injected drugs in the previous month, 60% had a tattoo whilst in prison and over 90% were hepatitis C antibody positive.<sup>16</sup>

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<sup>13</sup> Law, MG. Modelling the hepatitis C virus epidemic in Australia. *J Gastroenterol Hepatol* 1999; 14:1100-1107.

<sup>14</sup> Shiell, A. Economic analyses for hepatitis C: a review of Australia's response. Sydney: Commonwealth Department of Health and Family Services; 1998.

<sup>15</sup> Crofts N, Stewart T, Hearne P, Y.P. X, Breschkin AM, Locarnini SA. Spread of blood borne viruses among Australian prison entrants. *BMJ* 1995;310 (285-288).

<sup>16</sup> Crofts N, Thompson S, Wale E, Hernberger F. Risk behaviours for blood-borne viruses in a Victorian prison. *ANZ J Crim* 1996; 29:20-28.

## NSW Studies

A 1994 study conducted in New South Wales reported 37% of male prisoners entering prisons were hepatitis C antibody-positive.<sup>17</sup> Predictors of hepatitis C infection were a history of **injecting drug use** and past exposure to hepatitis B. A 1996 study by the same group reported the rates of HCV exposure remained high with a hepatitis C prevalence of 33% in males prisoners and 66% in females prisoners.<sup>18</sup> In this study twenty-one percent of men and 32% of women reported injecting drugs in prison; 18% of men and 11% of women did so in the week before the interview. Of those who had injected drugs in prison, 69% of men and 64% of women reported that they had shared needles.<sup>19</sup> A further study in 1999 that reviewed the medical files of current inmates in the NSW prison system reported that approximately half the inmates had been tested and 47% were hepatitis C antibody positive.<sup>20</sup> Another study conducted in NSW prisons reported evidence of incident cases of hepatitis C occurring within prisons.<sup>21</sup>

## HIV TEST

Participants who indicated that they had had an HIV test for AIDS were asked whether the results were positive, negative or “don’t know”. **No one reported they had received a positive result**, although about 11% of the respondents claimed they did not know the result of the test.

## OTHER CONDITIONS

Conditions with high rates of report are asthma, back problems, and poor eyesight. There are, however, significant differences between the various segments.

The most significant difference between **male and female** self reported illnesses, was asthma. While 40% of females reported having been diagnosed with asthma, only 24% of males reported this.

The areas of difference detected between the **aboriginal and the non-aboriginal prisoners** were arthritis (7% and 22% respectively) and back problems (22% and 39% respectively). In addition, significantly fewer

<sup>17</sup> Dolan K. Surveillance and prevention of hepatitis C infection in Australian prisons. A discussion paper. Sydney: National Drug and Alcohol Research Centre;2000.

<sup>18</sup> Butler TG, Dolan KA, Ferson MJ, Mc Guinness LM, Brown PR, Robertson PW. Hepatitis B and C in New South Wales prisons: prevalence and risk factors. MJA. 1997; 166(3):127-30.

<sup>19</sup> Levy MH. Australian prisons are still health risks.MJA; 1999; 171:7.

<sup>20</sup> Awofeso N, Harper SE, Levy MH. Prevalence of exposure to hepatitis C virus among prison inmates, 1999. MJA 2000;172(2):94.

<sup>21</sup> Haber PS, Parsons SJ, Harper SE, White PA, Rawlinson WD, Lloyd AR. Transmission of hepatitis C within Australian prisons. MJA 1999; 171:31-33.

aboriginal prisoners reported having poor eyesight with 29% and 42% for aboriginal and non-aboriginal prisoners respectively.

As expected, **older prisoners have higher incidence of self reported illnesses and diseases.** The old (41 and over) versus young (under 40) prisoners reported more cases of arthritis (35% to 10%), diabetes (12% to 2%), back problems (50% to 27%), haemorrhoids (18% to 6%), cancer (13% to 4%), high blood pressure (24% to 12%) and finally poor eyesight (61% to 27%). **In general, the health of the older prisoner population is reported to be severely affected by a range of chronic afflictions.** However, in relation to asthma (19% to 34%) and hepatitis (24% to 50%), the older group reported itself to be less unwell than the younger cohort.

Other medical problems were listed by 130 prisoners. Those which were reported 3 or more times were migraines (5) and cholesterol (3).

### 3.3 Symptoms check list

Participants were asked series of “yes/no” questions covering a variety of symptoms detailed in Table 3.2. The participant was asked to restrict this list to only cover health problems that they have experienced in the last four weeks.

**Table 3.2 – Reported symptoms**

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	Female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
<b>General</b>							
Tiredness	57%	79%	49%	58%	51%	67%	48%
Poor appetite	29%	29%	28%	25%	38%	41%	31%
Weight loss	14%	21%	23%	42%	19%	31%	23%
Trouble sleeping	57%	63%	54%	83%	62%	77%	54%
Fever	14%	38%	10%	25%	0%	14%	13%
Night sweats	29%	33%	16%	33%	15%	23%	21%
Swollen glands	0%	8%	10%	0%	5%	8%	10%
Jaundice	0%	4%	0%	8%	0%	4%	0%
Bleeding	14%	4%	7%	8%	4%	4%	4%
Nose bleeds	14%	13%	7%	8%	7%	15%	5%
Bruising	14%	17%	8%	25%	7%	21%	9%
Teeth problems	0%	21%	32%	33%	45%	40%	40%
Eye troubles	43%	17%	35%	42%	22%	24%	12%
Ear troubles	29%	4%	25%	8%	9%	6%	12%

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	Female	male	female	male
Stitches	0%	0%	3%	0%	2%	1%	2%
<b>Injection related</b>							
Overdose	0%	0%	1%	0%	0%	1%	4%
Skin infections	0%	4%	2%	0%	0%	0%	2%
Scarring	0%	4%	2%	8%	2%	8%	11%
<b>Cardio/respiratory</b>							
Cough persistence	<b>43%</b>	<b>29%</b>	20%	<b>25%</b>	13%	21%	19%
Cough phlegm	<b>57%</b>	21%	13%	<b>25%</b>	22%	17%	25%
Cough blood	0%	8%	3%	0%	5%	3%	2%
Wheezing	<b>43%</b>	<b>35%</b>	23%	<b>25%</b>	15%	<b>27%</b>	23%
Sore throat	14%	21%	15%	<b>25%</b>	18%	23%	16%
Breath shortness	<b>57%</b>	<b>57%</b>	<b>26%</b>	<b>67%</b>	9%	<b>29%</b>	24%
Chest pains	29%	25%	23%	8%	15%	24%	18%
Heart flutters	14%	17%	16%	0%	4%	12%	13%
Swollen ankles	14%	21%	8%	0%	2%	14%	3%
<b>Genito urinary</b>							
Painful urination	14%	8%	4%	0%	0%	8%	3%
Genital discharge	0%	0%	1%	25%	0%	8%	2%
Genital rash	0%	0%	1%	0%	2%	0%	2%
Incontinence	14%	13%	2%	8%	0%	1%	3%
<b>Musco-skeletal</b>							
Joint pains	<b>43%</b>	<b>58%</b>	<b>46%</b>	<b>25%</b>	24%	<b>33%</b>	<b>33%</b>
Broken bones	0%	0%	1%	8%	2%	3%	2%
Muscle pain	<b>71%</b>	<b>46%</b>	<b>33%</b>	<b>25%</b>	22%	<b>27%</b>	<b>30%</b>
<b>Neurological</b>							
Headaches	<b>71%</b>	<b>67%</b>	<b>38%</b>	<b>67%</b>	<b>33%</b>	<b>64%</b>	<b>40%</b>
Blackouts	14%	4%	2%	8%	2%	4%	3%
Tremors	14%	8%	7%	17%	4%	19%	11%
Numbness	14%	17%	17%	<b>25%</b>	7%	13%	21%
Dizziness	<b>57%</b>	21%	23%	42%	7%	<b>33%</b>	17%
Fits	14%	0%	2%	0%	4%	3%	5%
Head injury	14%	4%	0%	0%	0%	5%	5%
Forgetfulness	14%	17%	20%	33%	11%	15%	26%
Hearing voices	14%	4%	6%	8%	13%	4%	4%
Self harm	<b>29%</b>	0%	6%	17%	7%	13%	8%
Safety fears	14%	4%	13%	0%	16%	4%	12%
<b>Gastro Intestinal</b>							
Nausea	<b>29%</b>	21%	13%	17%	7%	21%	10%

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	Female	male	female	male
Vomiting	<b>57%</b>	21%	8%	0%	4%	15%	6%
Stomach pains	<b>29%</b>	13%	10%	<b>58%</b>	9%	<b>31%</b>	17%
constipation	0%	<b>29%</b>	13%	17%	2%	27%	10%
diarrhoea	0%	13%	13%	<b>25%</b>	4%	13%	11%
<b>Women only</b>							
Irregular period	0%	15%	0%	<b>45%</b>	0%	<b>36%</b>	0%
Period pain	0%	5%	0%	<b>58%</b>	0%	<b>45%</b>	0%
miscarriage	0%	10%	0%	18%	0%	9%	0%
Pmt	0%	5%	0%	<b>33%</b>	0%	21%	0%

The range of health problems covers 53 different varieties of issues which were categorised into 7 main areas:

1. General health problems
2. Injection related
3. Cardio/respiratory
4. Genito urinary
5. Musculo-skeletal
6. Neurological/psychiatric
7. Gastro intestinal

Across all seven categories, **old aboriginal males reported the most symptoms when asked about their general health over the past four weeks.** Old aboriginal males reported significantly more symptoms than any other segment with respect to eye troubles (43%), persistent cough (43%), coughing up phlegm (57%), wheezing (43%), muscle pain (71%), headaches (71%), dizziness (57%) and vomiting (57%).

#### **1. General health issues**

Overall, across all segments of prisoners, **the most commonly reported general health symptoms are tiredness and trouble sleeping.** While tiredness is an issue for all prisoner segments, it is particularly high for women, with young and old non-aboriginal females at 67% and 79% respectively, and young aboriginal females (58%). These results are strongly correlated with reported incidences of trouble sleeping with young and old non-aboriginal females (77% and 63% respectively) and young aboriginal females (83%).

More women than males reported poor appetite (37% to 31%), weight loss (30% to 22%) and bruising (21% to 8%), where as more males reported ear troubles (6% to 17%).

Teeth problems were reported by over a third of the prisoners with more young prisoners impacted (41% to 29%). There were no significant differences in cases of teeth problems between males and females.

## **2. Cardio/respiratory**

Not surprisingly in a population where three quarters of the people smoke, there are a high number of persistent coughs, coughing up phlegm, wheezing and breath shortness reported across all segments. As mentioned above, old aboriginal males report the highest in all four categories.

## **3. Neurological/psychiatric**

On an aggregated basis, women reported more neurological symptoms than males in most questions including headaches (65% to 39%), dizziness (31% to 19%) and tremors (16% to 8%). Males reported more fears for their safety than women with 13% compared to 4% for women.

There were no major differences in neurological symptoms between the old and young. Interestingly, even forgetfulness was reported equally by the old and young with 19% and 20% respectively.

## **4. Gastro Intestinal**

Young aboriginal females (58%) reported significantly more intestinal symptoms than any other segment of the population at nearly twice the level of young non-aboriginal females (31%).

### **3.4 Disability and Illness**

This part of the physical survey covered whether prisoners were troubled by illness or disability in about the last 6 months or more and, if so, the type of ailment and how it affects activities. Table 3.3 describes the proportion troubled across the 7 segments. The first number in each cell refers to the number of prisoners who responded to this question. The second number in the cell refers to the percentage of prisoners who responded in the affirmative. For example, 86% of old aboriginal males responded to this question with 83% of those that responded indicating that they did have a disability that has troubled them for six months or more.

**Table 3.3 – Reported disability in the past 6 months**

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	Non abor.	non abor.
	male	female	male	female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Disability	86% 83%	88% 57%	86% 50%	83% 40%	89% 28%	91% 36%	92% 42%

Overall, disabilities were reported by about (40%) of respondents. There was no pattern to the type of disability or illness reported with 142 distinct responses. Of those with a disability, almost half (48%) reported that their disability did not limit their activities.

A small percentage of prisoners listed two disabilities or illnesses (10%) while even fewer prisoners listed three different disabilities or illnesses (5%).

### 3.5 Aural history

Participants were asked about both their family history and their personal history of hearing problems. Table 3.4 gives percentage positive responses to the “yes/no” questions in the Aural history part of the survey. High response rates were achieved across all segments in this section of the survey.

**Table 3.4 – Hearing difficulties**

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Ear troubles	57%	21%	30%	17%	9%	11%	12%
hearing aid	0%	0%	3%	0%	4%	0%	3%
tinnitus	57%	25%	23%	25%	19%	15%	28%
chemicals	100%	33%	48%	8%	37%	5%	48%
noise	100%	19%	56%	17%	43%	24%	62%
head injury	100%	42%	65%	50%	64%	40%	67%

Significant differences exist between male and female hearing problems. Males as opposed to females reported significantly higher instances of tinnitus (25% to 18%), worked with chemicals (47% to 11%), worked in noisy and moderately noisy jobs (57% to 22%) and experienced a head injury resulting in unconsciousness (66% to 41%).

The level of head injuries is considered to warrant further investigation.

There were no significant differences between the aboriginal and non-aboriginal populations.

As may be expected in an older population, hearing difficulties are more common than in the younger population with respect to ear troubles (30% to 11%). The older cohort to a greater extent worked with chemicals (48% to 32%), worked in a noisy or moderately noisy job (53% to 46%), and experienced a head injury leading to unconsciousness(63% to 58%).

Table 3.5 gives the results on the multiple choice and numerical questions on the aural history part of the survey. Reported results are the percentage non zero responses, the mean response, the median response and the interquartile range of responses: the range between the 25<sup>th</sup> and 75<sup>th</sup> percentile.

**Table 3.5– Impact of hearing problems**

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	female	male	female	male
<b>Respondent</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Family deafness	100% 2 2 0	100% 2 2 0	99% 2 2 0	100% 2 2 1	96% 2 2 0	100% 2 2 0	99% 2 2 0
Ear troubles	57% 1 2 3	25% 2 2 2	32% 3 3 1	17% 2 2 1	16% 2 2 1	13% 2 3 2	15% 3 3 1
Hearing Age	0% 0 0 0	0% 0 0 0	1% 86 86 18	0% 0 0 0	2% 7 7 0	0% 0 0 0	1% 11 11 0
Tinnitus	43% 7 32 35	13% 60 51 23	16% 98 39 27	25% 6 25 14	18% 23 20 6	9% 15 18 5	25% 15 18 12
Extent of tinnitus	57% 2 3 2	21% 1 2 2	22% 1 2 3	25% 2 3 2	18% 2 2 1	11% 2 2 0	26% 1 2 2
Loud music	100% 1 1 1	96% 1 1 0	99% 1 1 0	100% 1 3 4	95% 1 1 2	99% 1 2 4	96% 1 1 2

Of the 449 survey participants, 386 (86%) did not list any kind of ear troubles. For those who did, the most frequently cited troubles were perforated ear drum (2), industrial deafness (2) and wax build up (2). All other described troubles occurred once. Ear troubles occurred in the left ear 22 times, right ear 41 times, both ears 28 times, with the remaining 4 instances “can’t remember”. Of the respondents “background noise” (6) and noise (3) were cited most frequently as affecting hearing ability.

Of those who reported tinnitus, the median problem category was 2 which was reported by 33 of those having tinnitus.

There were 44 prisoners who reported both ear troubles and working extensively with chemicals and dyes. A statistical significance test indicates

this is significantly positive. Similarly 59 respondents reported both ear troubles and having worked in a noisy environment. This is also statistically significant. Head injury did not associate positively with ear troubles, and neither did headphones or loud music.

### 3.6 Hospital inpatient visits

Table 3.6 displays the percentage of prisoners hospitalised in the last 12 months, staying overnight or longer.

**Table.6 – Hospitalisation in the past 12 months**

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	Non abor.	non abor.
	male	female	male	female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Admitted	43%	26%	21%	27%	20%	31%	23%

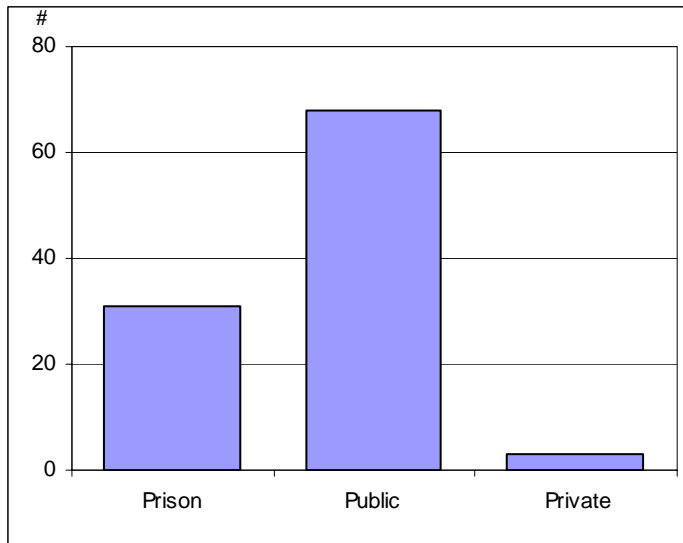
Overall **about 25% of prisoners reported that they had been admitted to hospital as an inpatient and stayed overnight or longer in the last 12 months.** This was relatively uniform across all segments with the exception of old aboriginal males (43%). Young aboriginal males reported the lowest admission rates (20%).

Of those who had been admitted to hospital in the past 12 months, the average length of stay on the first visit was seven days, but this distribution was highly skewed by a few very long stays. About 50% of visits were for three nights or less.

Again there was no pattern to the cause of hospitalisation in the past 12 months with 92 different conditions listed.

Prisoners were asked what type of hospital they were admitted to in the past 12 months. Nearly two thirds of prisoners reported admission to a public hospital as depicted in Chart 3.1.

**Chart 3.1 – Type of hospital**



A small percentage of prisoners listed two admissions to hospital in the previous 12 months (6%) and even fewer prisoners listed three different admissions to hospital in the past 12 months (2%).

This level of hospitalisation contrasts strongly with the general population.,,,

### 3.7 Outpatient and GP visits

Prisoners were asked a series of questions regarding visits to casualty or the outpatients clinic at a hospital in the last four weeks. Table 3.7 initially gives the number of times casualty or outpatients was visited while the rating is given in the next displayed question. The table reports both response rates and averages for each segment. The first percentage in each cell refers to the response rate to this question. The second figure is that average (median).

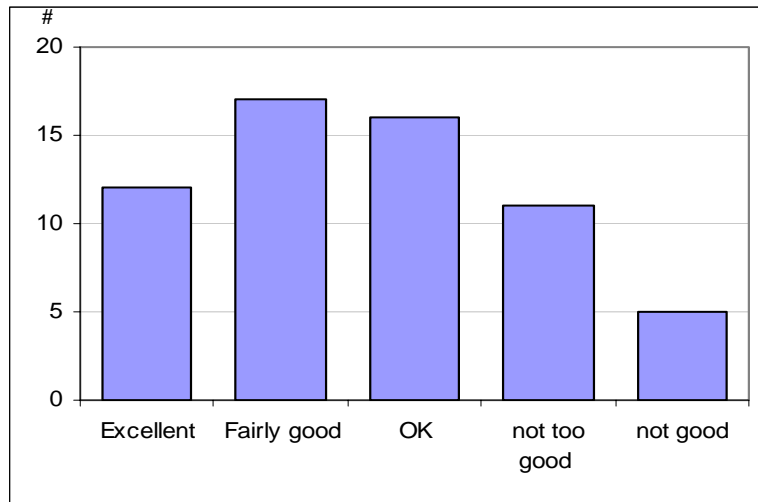
**Table 3.7 – Outpatient and GP visits**

	old	Old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	Female	male	female	Male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Times	43% 2	25% 1	30% 2	0% 0	23% 2	18% 1	22% 2

Men (median 2) appear to use casualty or outpatient clinics more often than females (median 1).

Prisoners were asked to contemplate their last visit to the outpatients and rate the health care they received. These results are summarised in Chart 3.2.

**Chart 3.2 – Rating of health care provided**



Overall the vast majority of prisoners thought the health care they received was excellent to fair with less than 10% reporting that the health care they received was not good.

### 3.8 Health service use

Prison clinic use is documented in Table 3.8. The first percentage in each cell indicates the non-zero response rate for this question. Thus for example, since 42% of young non aboriginal males gave a non zero response to the question we can assume that 58% did in fact visit the health clinic. The second figure indicates the average (median) number of times a prisoner visited the health clinic to see the nurse, excluding visits for repeat prescriptions.

**Table 3.8 – Number of visits to prison clinic**

	old	old	old	young	Young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Times visited	57% 1	46% 2	39% 2	33% 2	36% 2	46% 2	42% 2

Prisoners were asked how many times they had visited the prison clinic to see the nurse about their health (aside from picking up repeat prescriptions) in the last four weeks. Around 45% of prisoners reported they had visited the nurse in the last four weeks. On average prisoners visited the clinic twice over the past four weeks, with 75% reporting a figure less than 3. This average was relatively uniform across all segments however, some young non-aboriginal

females tended to have higher usage patterns. Headaches were by far the most common reason for visits to the prison health clinic for males and females with Panadol the most common action taken.

### 3.9 Other health services

This part of the questionnaire surveyed the use of other health professionals in the last four weeks, either in prison or out of prison. Table 3.9 documents the use of the different professionals listed in the rows of the table.

Table 3.9 is organized a little differently to previous tables. All questions in this section of the survey have 3 possible responses – 1 (yes, in prison), 2 (yes, outside prison) and 3 (no). The first percentage in each cell of the table gives the percentage respondents who gave responses 1– “yes, in prison”. The second figure in the cell gives the percentage of respondents who answered 2 - “yes, outside prison”. No responses are not explicitly stated in this table although they can be calculated through subtraction.

Response rates were high in all segments.

**Table.3.9 – Other health services**

	Old aboriginal	old non abor.	old non abor.	young aboriginal	Young Aboriginal	young non abor.	young non abor.
	Male	female	male	female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Optician	14% 29%	13% 17%	5% 15%	8% 17%	0% 7%	1% 7%	3% 21%
Physiotherapist	14% 29%	17% 17%	5% 17%	0% 25%	0% 7%	0% 10%	2% 23%
Gastroenterologist	0% 29%	4% 21%	0% 17%	0% 25%	2% 7%	0% 8%	0% 23%
Hepatologist	0% 29%	4% 21%	0% 17%	0% 25%	0% 7%	0% 8%	0% 23%
Psychologist	0% 29%	13% 17%	11% 14%	<b>25%</b> 17%	9% 11%	19% 9%	10% 20%
Psychiatrist	0% 29%	8% 17%	6% 17%	8% 17%	13% 6%	16% 7%	7% 23%
Social worker	14% 29%	21% 13%	5% 17%	8% 25%	16% 5%	8% 7%	10% 19%
Podiatrist	0% 29%	13% 21%	0% 18%	0% 25%	0% 7%	0% 8%	1% 23%
Public health nurse	14% 14%	8% 17%	4% 16%	0% 25%	2% 7%	8% 7%	3% 23%
Mental health nurse	0% 29%	13% 17%	8% 13%	<b>25%</b> 17%	9% 6%	18% 5%	7% 22%
Dental nurse	0% 29%	13% 21%	5% 15%	8% 25%	4% 7%	10% 10%	6% 23%
Drug/alcohol counsellor	<b>29%</b> 14%	8% 21%	7% 14%	<b>25%</b> 25%	11% 2%	21% 8%	10% 20%
Dentist	0% 43%	21% 21%	15% 11%	8% 25%	7% 7%	<b>30%</b> 8%	16% 19%
Financial counsellor	0% 29%	4% 25%	2% 18%	8% 25%	0% 7%	3% 10%	1% 24%

In most cases, more prisoners have seen alternative health workers outside of prison rather than in prison. There are exceptions to this. Drug/alcohol counsellors have been seen by more old aboriginal males in prison than out

(29% to 14%) as is the case for young aboriginal males (11% to 2%) and young non-aboriginal females (21% to 8%).

Significantly more young non aboriginal females had seen a dentist in prison than out of prison in the four weeks prior to the survey (30% to 8%).

In the case of young females, (aboriginal and non-aboriginal) more prisoners had seen a psychologist in prison than outside prison in the four weeks prior to the survey (25% to 17%) and (19% to 9%) respectively.

Prisoners were asked how many times they had visited the prison clinic to see the nurse about their health (aside from picking up repeat prescriptions) in the last four weeks. Around **45% of prisoners reported they had visited the nurse in the last four weeks**. On average prisoners visited the clinic twice over the past four weeks, with 75% reporting a figure less than 3. This average was relatively uniform across all segments, but some young non-aboriginal females tended to have higher usage patterns. Headaches were by far the most common reason for visits to the prison health clinic for males and females. This problem may relate both to reported sleeping disorders and indicators of attraction to addictive drugs.

Prisoners were asked about their use of health professionals (excluding doctors and nurses) in last four weeks. Relatively **high usage of in-prison health professional was reported for the following personnel**; dentist (20%), social worker (10%), psychologist (10%) and drug counsellor (10%). Young females tended to be high users of these services with relatively high usage were evident. For example, 30% of young non-aboriginal females reported using the in-prison dentist, 25% of young aboriginal females reported using in-prison drug counsellor and 25% for the mental health nurse.

23% of participants reported having been admitted to hospital as an in-patient and staying overnight or longer in the past 12 months. In turn 14% of participants rated their last admission to hospital based on the health care they received. The ratings were;

- (a) excellent (20%)
- (b) fairly good (26%)
- (c) ok (29%)
- (d) not too good (10%)
- (e) not good (15%)

Care must be taken in interpreting these figures. First, it cannot be determined whether the rating relates to a prison hospital or otherwise. Secondly, the response rate on this question is noticeably low.

Prisoner comments relating to health care were analysed, and the most common complaint concerned waiting times and associated inconvenience. A sample is included below :

*“It is necessary to travel from Ararat to Melbourne for many things ie: pain management, certain specialists”*

*“I do not like having to travel to Port Philip and await appointments”*

*“Ararat should have a full time doctor”.*

*“Health system is very slow”*

*“Too much red-tape to see a doctor. You have to play up and yell in order to be heard to get treated”*

*“There should be more doctors that know what they are doing. The doctor is too old and does not give thorough examination”*

*“Should be a female gynaecologist”*

*“It took me a week to get an appointment”*

*“It takes months to see the dentist”*

*“I had my remaining 15 teeth taken out in February 2001. I am now at Fulham and March 2002 and I have been left toothless for this whole time. I am losing weight. I need to see the dentist more quickly.”*

*“It takes too long in the queue to receive medication, especially when medication is on-going”*

*“No doctor at weekends”*

*“I put my name down three weeks ago to see a doctor and I am still waiting. Same goes for dentists”*

*“There is a 6 months waiting list to see a dentist”*

*“More access to medical services. Open more hours”*

*“I find it ludicrous to have a prison with 330 prisoners and a doctor here one time a week. It takes three to four weeks to see a doctor”.*

*“I feel the prison doctor should be more responsive to the stress prisoners are under pre and post prison dates”*

### 3.10 Dental health

Prisoners were asked a series of questions relating to dental hygiene and dental maintenance. Response rates are uniformly high for all questions and segments. The entry in each cell is the average (median) non zero response.

**Table 3.10 – Dental health details**

	old	old	old	young	young	young	young
	aboriginal	Non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Where	1	1	1	1	1	1	1
How good	3	3	2	3	3	3	3
Brushing	1	2	2	2	2	2	2

Prisoners were asked how long since the they last saw someone about their teeth, dentures or gums. Overall the average response was between 6 and 12 months ago. The only markedly different group are older aboriginal males who indicated that their last visit was more than 2 years ago.

Prisoners on average each visited a dentist once in the last year. There was no variation across the seven segments. The usual place of the last dental visit was a dental hospital or hospital service. Again, there was little variation across segments. Prisoners were asked to consider their last dental visit and rate the health care they received. The average rating recorded by the respondents as to their dental care was ‘ok’.

The average number of times respondents brushed their teeth was twice a day. The exception was old aboriginal males who reported brushing only once a day.

**Table 3.11– Dental health treatment**

	old	old	old	Young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	Female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
<b>Actual treatment received</b>							
Dental exam	71% 20%	88% 48%	53% 64%	58% 57%	52% 59%	73% 76%	77% 75%
Any teeth out	100% 86%	75% 28%	63% 50%	75% 78%	77% 70%	66% 46%	80% 46%
X-ray	71% 0%	71% 12%	48% 26%	50% 33%	48% 15%	53% 24%	71% 28%
Teeth cleaning	71% 20%	71% 6%	50% 25%	50% 17%	50% 21%	51% 28%	70% 16%
Fluoride treatment	71% 0%	71% 0%	49% 6%	50% 0%	46% 12%	51% 8%	69% 4%
Filling or crown	71% 20%	75% 33%	64% 43%	67% 63%	63% 34%	62% 47%	78% 39%

	old		old		Young		young		young					
	aboriginal		non abor.		aboriginal		aboriginal		non abor.					
	male	female	male	Female	male	female	male	female	male	female				
Gum treatment	71%	0%	67%	6%	48%	3%	50%	17%	48%	7%	51%	5%	69%	3%
Orthodontics	71%	0%	67%	6%	48%	3%	50%	0%	48%	7%	51%	8%	69%	2%
Denture treatment	57%	25%	71%	47%	62%	48%	50%	0%	48%	7%	53%	21%	71%	9%
<b>Prisoner perception of treatment required</b>														
None	57%	0%	67%	25%	55%	38%	33%	50%	50%	29%	54%	19%	62%	19%
Bands	71%	0%	58%	0%	43%	7%	50%	33%	46%	12%	48%	8%	62%	6%
Dentures	86%	83%	71%	35%	57%	49%	50%	50%	54%	40%	49%	21%	68%	30%
Fillings	71%	20%	79%	53%	56%	51%	92%	82%	70%	64%	67%	60%	75%	56%
Extractions	71%	20%	63%	20%	47%	26%	50%	50%	59%	64%	53%	33%	69%	39%
Gums	71%	20%	63%	20%	44%	15%	50%	67%	46%	27%	48%	18%	65%	18%
Check-up	86%	33%	63%	40%	50%	59%	50%	67%	54%	63%	59%	68%	74%	70%

Table 3.11 documents the type of dental treatments prisoners **received** at their last dental visit with the most common treatment being dental exam, fillings and teeth extraction.

Prisoners were then asked what dental treatment they think they **required**. All the figures in the ‘treatment required’ portion of table 2.11 were relatively high (except for bands). Dentures and dental check-ups were perceived to be required by a good proportion of respondents. The stand out feature is that relatively very few respondents thought that they did not require any treatment.

### 3.11 Medications

This section discussed medications, both prescribed and non prescribed, taken by prisoners. The frequency of reported prescribed medications is documented in List 1 which details the names and frequencies of some of the more commonly reported medications.

#### List 1 – Most common reported prescribed medications

CAN'T REMEMBER NAME	25
METHADONE	16
VENTOLIN	12
ENDEP	12
PANADEINE FORTE	12
DOXEPIN	10
ZANTAC	8
VALIUM	6
PANADOL	5

TEGRETOL	5
INSULIN	4
ANTI INFLAMATORY	4
ANTI DEPRESSANT	4
ASPIRIN	4

Aside from those prisoners who could not remember the name of the medication they were taking, methadone and Ventolin were the two most commonly reported. Over 34% of prisoners reported taking two or more different pills or medicines in the past two weeks. Over 20% of prisoners reported taking three or more different pills or medicines in the past two weeks.

The most commonly reported pill or medicine taken in the past two weeks that was *not* prescribed was Aspirin type medicines. Under 2% of prisoners reported taking two or more non prescribed pills or medicines in the past two weeks.

### 3.12 Blood Sugar

Prisoners were asked a series of questions about diabetes and blood sugar. Results are documented in Table 3.12. Response rates were from 92-100% for the first two rows and have been excluded.

**Table 3.12 – Blood sugar**

	old aboriginal	old non abor.	Old non abor.	Young Aboriginal	young aboriginal	young non abor.	young non abor.
	male	female	male	Female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Tested	71%	30%	37%	17%	31%	19%	28%
High sugar	14%	9%	13%	8%	15%	1%	3%
<b>Diabetes sufferers only</b>							
Diabetes	100% 14%	75% 17%	95% 11%	100% 17%	96% 4%	80% 2%	95% 1%
Special diet	29% 0%	13% 67%	12% 53%	0% 0%	5% 0%	1% 100%	2% 33%
Tablets	29% 0%	13% 67%	12% 69%	0% 0%	5% 0%	1% 0%	2% 0%
injections	29% 50%	13% 0%	10% 21%	0% 0%	5% 33%	1% 0%	2% 0%
Satisfied	14% 100%	13% 100%	11% 67%	0% 0%	4% 100%	3% 50%	1% 100%

The first question in Table 3.12 relates to whether or not the prisoner had been tested in the last 6 months. Around a third of prisoners had been tested with old aboriginal males being the highest (71%) and young aboriginal females being the lowest with (17%).

High blood sugar had been advised to about 7% of the prisoner population with markedly higher percentages among old males (14%) and young aboriginal males (15%). Similar rates of advice regarding diabetes were also reported.

Those who had been advised that they had diabetes were asked a further series of questions as to whether they had been prescribed special pills or injections. Results are tabulated in Table 3.12 which indicates both response rates for these questions and the proportion of respondents answering in the affirmative. Special diets, tablets and injections were most prevalent amongst the older non aboriginals.

The degree of satisfaction with the treatment for diabetes is documented in the last row of table 3.12. A high degree of satisfaction was recorded across all segments.

### **3.13 Asthma**

Prisoners were asked a series of questions about asthma. Results of these questions are compiled in table 3.13. Prisoners who did not suffer from asthma were not required to answer this part of the survey. Overall 127 respondents (29%) reported suffering from asthma.

The first percentage in each cell records the level of prisoners who currently have an asthma management plan. The second percentage in each cell refers to whether or not the asthmatics are satisfied with the treatment they receive. Of those prisoners with an asthma management plan, Table 2.20 suggests a very high degree of satisfaction.

**Table 3.13 – Asthma management plan**

	Old	Old	old	young	Young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	Male	Female	male	female	Male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Plan	29% 100%	25% 83%	20% 67%	50% 50%	23% 38%	28% 45%	26% 46%
satisfied	29% 100%	21% 100%	18% 100%	33% 100%	21% 100%	28% 82%	23% 94%

Overall, of those who reported asthma, the average number of reported asthma attacks in the last 3 months was 5. Nearly two thirds of the respondents (64%) reported no attack in the last 3 months. Of those prisoners (36%) who did report an attack the average number of attacks was 13. The prisoner population contains a small group of chronic asthma sufferers, who may be at significant risk if they are experiencing weekly asthma attacks. Indeed, a significant proportion of these reported more than 20 attacks in the last 3 months.

Of those who reported asthma, 28 (34%) reported taking no asthma medications. Of those who took medications, by far the most common was Ventolin. This suggests that there is a need to adopt a planned, preventative approach to asthma management in the prison environment.

### 3.14 Immunisation

The Victorian immunisation program is considered an important pillar in managing community health. Prisoners were asked about what vaccinations they had received. Most questions in this part of the survey have responses “yes” (1), “no” (2) or “don’t know” (3). Table 3.14 presents the proportion “yes” and the proportion “no”, respectively, for each of the segments and for the different questions. Responses for the ‘don’t know’ category are not explicitly stated in this table, however, they can be calculated through subtraction. The response rate varied from 96% to 100% and has been omitted from the table.

For example, old aboriginal males responded to this question with 86% indicating that they had received a vaccination for tetanus. Given that 0% recorded that they had not been vaccinated against tetanus, we can calculate that 14% of old aboriginal males responded that they ‘didn’t know’ if they had been vaccinated against tetanus.

**Table 3.14 – Record of immunisation**

	old	old	old	Young	young	young	young
	aboriginal	non abor.	non abor.	Aboriginal	aboriginal	non abor.	non abor.
	male	female	male	Female	Male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
<b>Vaccination received</b>							
Tetanus	86% 0%	96% 0%	86% 4%	83% 0%	83% 7%	79% 6%	92% 3%
Measles	29% 14%	57% 26%	57% 15%	75% 8%	37% 26%	64% 12%	48% 17%
Hepatitis B	29% 29%	52% 35%	18% 57%	75% 25%	45% 38%	68% 22%	35% 54%
Rubella	0% 0%	65% 22%	0% 0%	100% 0%	0% 0%	85% 9%	0% 0%

Overall the highest immunisation rates were recorded for tetanus (88%) with measles (53%) and hepatitis B at only 28%. Rubella which is only relevant to the female population recorded relatively high levels of vaccination (80%). Higher rates of immunisation appear to be recorded in the younger prisoner population and with females as opposed to males, particularly with measles (68% to 50%) and Hepatitis B (72% to 29%).

### 3.15 Tuberculosis

Prisoners were asked a series of questions on Tuberculosis. Table 3.15 reports segment specific “yes” percentages for the “yes/no” questions on this part of the survey. Response rates varied from 86% to 100% and have not been included in the table.

**Table 3.15 – Tuberculosis**

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Tuberculosis	14%	0%	5%	0%	2%	1%	0%
Mantoux test	50%	36%	28%	0%	23%	18%	32%
TB contact	14%	22%	13%	18%	6%	4%	5%

The first question indicates the proportion who answered “yes” to the question of whether they had ever had tuberculosis. A very small fraction of respondents reported ever having tuberculosis. Old aboriginal males reported the highest incidence of ever having TB (14%).

The “Mantoux test” row of Table 3.15 reports the proportion of respondents who reported having had such a test. Of those who responded to the Mantoux test, overall about a third reported yes. Again older aboriginal males reported the highest quota ‘yes’ percentage (50%).

Finally the “TB contact” question indicates the percentage of respondents who had been in close contact with persons who ever had TB. Overall a lower percentage of young people reported having had such contact (5%) whereas in the older age group this percentage rose to as high as 22% (old non-aboriginal females).

As with all self report questions, the answers to these questions must be interpreted with caution. For example respondents may have been confused about what a Mantoux test is, or uncertain whether they had had contact with a person with TB. It must be pointed out however that on those parts of the survey where self reported status could be validated, self reported status was generally accurate.

### Mantoux results

Table 3.16 first tabulates the result of the Mantoux test. The first percentage in each cell represents the fraction of non-zero responses. On this and the other questions reported in the table, there are three possibilities. For the “Mantoux result” question they are “positive”, “negative” and “don’t know”. The table explicitly states the positive and negative responses. The ‘don’t know’ category can be calculated by subtraction. This extensive reporting will serve to minimise misinterpretations that could results under a more abbreviated tabular presentation.

The “BCG” question reports the percentages of “yes” and “no” answers to the question of whether the respondent ever had vaccination against TB. The remaining category for this question is again “don’t know” which again can be calculated by subtraction.

For example, 38% of old non-aboriginal females responded in the affirmative to having had a Mantoux test. Of these, 11% indicated that their result was positive - **highlighted**. A further 78% of old non-aboriginal females indicated that their result was negative, which leaves the unreported remaining of ‘don’t know’ at 10%.

**Table 3.16 – Mantoux results**

	old	Old	old	Young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	Female	male	Female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Mantoux result	43% <b>0%</b> 100%	38% <b>11%</b> 78%	26% <b>8%</b> 72%	0% <b>0%</b> 0%	20% <b>0%</b> 55%	15% <b>8%</b> 75%	29% <b>3%</b> 82%
BCG	100% 71% 29%	88% 57% 29%	96% 34% 42%	75% 22% 44%	91% 33% 51%	90% 15% 66%	95% 36% 49%

Around 80% of those who had had the result of a Mantoux test, reported that the result was negative. Around 10% however (the unreported remaining percentage in Table 2.16) indicated they did not know the result of the test. A surprising feature is that the old Aboriginal males have reported lower rates of Mantoux positivity than some of the other groups. The sample size for this group however is small and hence has a relatively large margin of error.

Around 35% of respondents reported that they had had the BCG vaccination against TB although a large proportion did not know whether they had been so vaccinated. Vaccination was generally higher amongst older prisoners, especially aboriginal males.

### 3.16 Exercise

This portion of the survey covered exercise and sporting activities. The average (mean) for the number of times in the last four weeks and the number of minutes on each activity in the last four weeks are reported in Table 3.17.

Response rates are generally low probably indicating this part of this survey was only filled out if in fact prisoners took part in one or more of the activities. That is, response rates can be interpreted as the percentage of participants engaging in the indicated activities.

**Table 3.17 – Exercise history**

	Old aboriginal	Old non abor.	Old non abor.	young aboriginal	Young Aboriginal	young non abor.	young non abor.
	Male	female	Male	female	Male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Walk #	43% 27.3	33% 31.8	51% 24.7	42% 20.4	48% 22.8	44% 20.6	49% 21
Walk Time	43% 24.7	33% 30.4	52% 52.9	42% 23.0	48% 88.7	44% 34.7	47% 67.6
Aerobics #	14% 4.0	8% 14.5	15% 19.1	17% 15.0	27% 21.3	24% 13.4	23% 23.0
Aerobics T	14% 20.0	8% 45.0	14% 77.41	17% 90.0	27%106.3	24% 52.9	23% 70.5
Bike #	0% 0.0	8% 3.5	11% 14.4	42% 6.6	18% 16.0	23% 10.3	19% 13.6
Bike Time	0% 0.0	8% 20.0	11% 28.7	42% 18.0	18% 33.7	23% 17.9	20% 32.2
Weight #	0% 0.0	0% 0.0	19% 25.2	33% 7.5	63% 21.7	18% 9.6	53% 21.5
Weight time	0% 0.0	0% 0.0	18% 41.0	33% 27.5	63% 87.7	18% 23.2	53% 64.8
Run #	0% 0.0	0% 0.0	11% 13.1	0% 0.0	20% 13.3	4% 5.3	21% 17.1
Run time	0% 0.0	0% 0.0	11% 42.0	0% 0.0	20% 66.4	4% 20.0	20% 39.7
Foot #	0% 0.0	0% 0.0	8% 6.5	0% 0.0	34% 12.9	6% 2.4	25% 10.7
Foot time	0% 0.0	0% 0.0	8% 80.0	0% 0.0	36% 85.3	6% 52.0	25% 90.7
Tennis #	0% 0.0	0% 0.0	8% 5.6	8% 1.0	11% 15.5	8% 5.7	18% 14.3
Tennis time	0% 0.0	0% 0.0	8%117.3	8% 5.0	11%100.0	8% 42.5	19% 77.6

	Old	Old	Old	young	Young	young	young
	aboriginal	non abor.	non abor.	aboriginal	Aboriginal	non abor.	non abor.
	Male	female	Male	female	Male	female	male
Basket #	0% 0.0	4% 12.0	2% 28.7	0% 0.0	7% 10.8	6% 2.8	16% 8.9
Basket time	0% 0.0	4% 40.0	1% 60.0	8% 1.0	7%150.0	6% 55.0	16% 83.8

The walking response rate is the highest of all the activities and reasonably uniform across all segments. As expected, walking time generally decreases with age, however, frequency is uniform across all segments. Males tend to walk for longer periods.

All remaining activities tend to have low participation rates except for young males who appear to like weights and football. None of the other segments engaged to any significant extend in any of the other activities.

Prisoners were asked why they did not participate in any exercise. 89 prisoners (20%) gave a reason for not working out. Generally the reasons are either injury or lack of inclination. This appears to indicate that there is a significant portion of prisoner who would like to do more exercise if motivated or able to do so.

Prisoners were asked about how long they spent outside each day. Overall, the average number of hours spent outside each day was about 2-4 hours with young aboriginal males tending to spend more time outside (4-6 hours) and old non aboriginal males tending to spend less (1-2 hours). However the variability across segments was similar. There appear to be no differences between males and females.

The final question in this section enquired as to whether the respondents had been checked for signs of skin cancer in the past 12 months. Around 50% of prisoners responded to this question suggesting a negative response by a large percentage of the prisoner population. Of those that did respond, the most common response was ‘not at all’ saying that they had not been checked in the past 12 months. This was uniform across all segments, although the old aboriginal males and old non aboriginal female segments had a high variability in the response indicating some members in these two groups had been checked often.

### 3.17 Injury

Prisoners were asked if they had had any accidents or injuries for which they may have seen a doctor or nurse or even gone to hospital in the past 3 months. Prisoners were asked to include accidents received prior to imprisonment.

Table 3.19 reports the results of the question on whether an injury had been received. Response rates were high, from 75% to 100% and have been omitted from the table.

**Table 3.19 – History of injury**

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Injuries	29%	17%	11%	20%	18%	16%	24%

Overall around 23% of respondents reported injuries. Injury rates are higher amongst old aboriginal males (29%) and young non-aboriginal males (24%). Lower rates were recorded for young non aboriginal females (16%) and old non aboriginal males (11%). The question as posed does not enable us to differentiate between ‘in prison’ and ‘out of prison’ injuries.

The most common reported injury were generally minor such as cuts, fractures and abrasions. Sixty-four distinct causes were given for the listed injuries, ranging from assault related causes to opening a can. There did not appear to be any pattern to the causes of injuries, although about half of the places where injuries were reported to have occurred are in prisons.

Very few prisoners (2%) reported more than one injury.

### 3.18 Diet and nutrition

Prisoners were asked a series of questions relating to the food they eat. Table 3.20 displays percentage the responses to questions asked about the use of salt, happiness with food in prison, whether or not the respondent was on a special diet and if so, there had been any problems with receiving the special diet.

Response rates were high, ranging from 86% to 100% and have been omitted from the table. The number in each cell reflects the number of prisoners who responded in the affirmative. The row, “diet problems” is a little different because the figures are the percentages of those on special diets having difficulty getting appropriate food.

**Table 3.20 – Diet**

	old	Old	Old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Use of salt	86%	58%	48%	75%	54%	64%	44%
Happy	17%	63%	45%	67%	44%	54%	41%
Special diet	0%	32%	26%	8%	8%	9%	15%
Special diet problems	0%	60%	52%	100%	100%	71%	81%

Overall, there appears to be a high usage of salt across all segments with old aboriginal males the highest (86%) and young non aboriginal males the lowest (44%).

Generally around 50% of respondents are happy with the food they receive in prison. Strong dissatisfaction was recorded for old aboriginal males; only 17% stating they were happy with the food. The highest happiness with food was recorded by old non aboriginal females (63%) and young aboriginal females (67%). This suggests more satisfaction with food in the female facilities.

Around 14% of prisoners reported being on a special diet. Special diets were particularly prevalent among old non aboriginal females (32%) and old non aboriginal males (26%). Other groups had special diets for less than 10%.

Prisoners on a special diet were asked if they had any problems receiving their diet while in prison. A high proportion (70%) reported that they did encounter problems. The comments provided by prisoners were not specific to special diet issues. The majority of diet and nutrition comments related to the variety, fat content and limited range of options available.

A series of further questions were asked on diet and nutrition with multiple responses possible. Percentage responses in the first two categories of the multiple choice questions with three categories in this portion of the survey are documented in Table 3.21.

**Table 3.21 – General nutrition**

	old	old	Old	Young	young	young	young
	aboriginal	non abor.	Non abor.	Aboriginal	aboriginal	non abor.	non abor.
	male	female	male	Female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
Sweetener	71% 29%	42% 54%	71% 26%	83% 8%	87% 11%	72% 17%	81% 9%
Healthy food	0% 71%	0% 52%	2% 65%	0% 83%	8% 62%	3% 74%	4% 75%
Prison food	0% 71%	5% 55%	3% 40%	8% 25%	11% 26%	3% 32%	2% 36%
Food range	14% 71%	59% 36%	38% 56%	58% 42%	49% 45%	39% 53%	38% 60%

### Sweetener

The response rate to this series of questions was high, ranging from 88% to 100% and has been omitted from the table.

The first question relates to **sweetener use in tea or coffee** with three possible responses, “yes” being the first and “no” the second figure appearing in each cell. “Don’t drink tea or coffee” is the final category, and can be determined through subtraction.

Tea or coffee is consumed by almost 100% of the prisoner population. Sweetener in tea or coffee is used by about 76% of the prisoner population. Less sweetener is used by old non aboriginal females (40%) whereas higher percentages are recorded for young aboriginals (85%).

### Healthy food

Availability of “too many” or “too few” healthy foods on the buy-up lists is documented in the next question. Less than 5% of prisoners reported that there were too many health food available on the buy-up list. About 75% reported that there were too few with the remaining percentage not expressing an opinion. These findings are consistent across all segments and suggest more healthy foods are desired by prisoners for purchase.

### Opinion of prison food

Prisoners were asked what they thought of the prison food with three possible responses; ‘too many’, ‘about right’ and ‘too unhealthy’. Only responses of ‘too many’ and ‘about right’ are recorded in Table 2.21 with the remainder being the percentage of respondents indicating ‘too unhealthy’.

Prison food was rarely thought to be too healthy. In the older age group about 50% thought it was about right, while in the younger age group this percentage dropped to around 30%. This suggests that they younger age group believes the

prison food is not healthy enough (70%). The corresponding figure for the older age group is about 50%.

### Level of satisfaction with prison food

Prisoners were asked, in general, were they satisfied with the range of healthy foods available in prison. Health was defined as food that is low in fat, salt and sugar and high in fibre. The three possible responses were; ‘yes’, ‘no’ and ‘don’t know’. Only responses of ‘yes’ and ‘no’ are recorded in Table 3.21. The remainder are the percentage of respondents who ‘don’t know’.

Satisfaction with the food range was expressed by about 40% of respondents. This percentage was higher amongst old non aboriginal females (59%) and young aboriginal females (59%). Almost all respondents had some opinion as to the range and hence the remaining percentage not indicated in the table are (‘don’t know’) are very low.

Finally, Table 3.22 below reports the consumption of different foods by prisoners. Each of these multiple choice questions has seven possible responses:

- 1 = more than once a day
- 2 = once a day
- 3 = 3 to 6 days a week
- 4 = 1 to 2 days a week
- 5 = at least once a month
- 6 = less than once a month
- 7 = rarely/never

**Table 3.22 – Prison food**

	old aboriginal male	old non abor. female	old non abor. male	Young Aboriginal Female	young aboriginal male	young non abor. female	young non abor. male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
<b>Type of food consumed</b>							
Fruit	3	2	2	2	2	2	2
Vegetables	7	2	2	2	2	2	2
Fries	4	7	7	7	4	7	4
Bread	2	2	2	2	2	2	2
Cakes	4	7	7	4	7	7	7
Sweets	7	4	7	4	7	4	7

Table 3.22 documents the responses for the listed types of food. In all cases the response rate is near 100% and hence has not been included in the table. The number that has been reported is the most common response.

Overall these figures tend to suggest prisoners are eating reasonably well. Fruit is eaten on average about once a day or 3-6 times per week with little variation across segments. Vegetables and salads have the same consumption pattern except for old aboriginal males which report rarely eating vegetables. Bread is again consumed often across all segments. Fries are eaten less often than fruit or vegetables with most segments reporting the most common consumption of fries being rarely or never. The consumption patterns of biscuits, cakes and sweets are different for males and females. On average, males rarely eat these foods while females reported consuming these foods about one or two days a week.

The most common foods [additional to the normal prison diet] bought from the buy-up list and the frequencies with which they were mentioned is tabulated in Table 3.23 below.

**Table 3.23 – Most common food purchases**

EGGS	71
CHOCOLATE	64
TUNA	54
NOODLES	54
COFFEE	44
RICE	36
BAKED BEANS	31
CHIPS	25
BISCUITS	20
COKE	17
CORDIAL	14
LOLLIES	14
ICE CREAM	13
PASTA	12
MILO	11
SUGAR	10
TEA	9
CHEESE	9
SOFT DRINKS	8

### 3.19 Quality of life

Prisoners were asked a series of question regarding their quality of life. These questions relate primarily to their physical well being and ability to lead a physically normal life. Specific questions were also posed as to the trend in physical well being since entering prison.

Table 3.24 displays results from questions about activities done during a typical day and whether the prisoner’s current health limits these activities. There are three possible responses to these questions

- (a) “yes, limited a lot”
- (b) “yes, limited a little” and
- (c) “not limited at all”.

The reported percentages correspond to the first two alternatives. The third alternative, “not limited at all” is not explicitly stated in this table, but can be calculated through subtraction.

Response rates were high for all segments and all questions, and ranged from 92% to 100%.

**Table 3.24 – Typical daily activities**

	Old aboriginal	Old non abor.	Old non abor.	young aboriginal	young aboriginal	young non abor.	young non abor.
	Male	Female	Male	female	male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
<b>Health limitations on typical daily activities</b>							
Vigorous	71% 0%	38% 13%	24% 20%	8% 8%	5% 15%	14% 17%	16% 15%
Moderate	43% 14%	21% 21%	14% 13%	9% 0%	5% 7%	8% 9%	3% 14%
Lifting	43% 14%	25% 4%	13% 11%	0% 9%	4% 7%	6% 9%	4% 11%
Big climb	43% 0%	25% 21%	17% 11%	9% 0%	2% 9%	10% 12%	4% 11%
Small climb	14% 29%	21% 17%	9% 7%	0% 9%	0% 11%	3% 7%	3% 7%
Bending	29% 0%	21% 13%	14% 17%	9% 9%	0% 15%	5% 13%	7% 12%
Big walk	14% 29%	17% 21%	8% 13%	0% 0%	0% 13%	5% 7%	6% 8%
Small walk	14% 14%	13% 13%	5% 10%	0% 0%	0% 9%	5% 3%	4% 6%
Tiny walk	14% 14%	13% 4%	4% 8%	0% 0%	0% 5%	1% 3%	1% 5%

Not surprisingly, limitations on physical activity were recorded more frequently by older as opposed to younger respondents. For vigorous, moderate, lifting and big climbs, older aboriginal males reported being far more limited (43%) with the next highest being old non aboriginal females (25%). In the younger segments, around 10% reported limitations on these activities. Other things

being equal, females tended generally to be more limited in all activities listed in Table 3.24. In the younger segments, about 5% of respondents reported a lot of limitations with another 12% reporting little limitations thus the vast majority do not suffer from any limitations.

### Impact of physical and emotional problems

Prisoners were asked if they had had any problems with their work or other regular daily activities as a result of their physical health in the past four weeks. Results to this question are summarised in Table 3.25. The first reported results in this portion of the survey displays whether physical and emotional problems caused one of the following:

- (a) cutdown on the amount of time spent on work or other activities
- (b) accomplished less than you would like
- (c) limited in the kind of work or other activities they could do
- (d) had difficulty performing the work or other activities

Response rates were uniformly high across all segments and ranged from 92% to 100%, and are not included in the table. The figure in each cell is the proportion of respondents answering the affirmative for each of the listed questions. Only the 'yes' responses are included in this table. The remainder represents the negative responses.

**Table 3.25 – Impact of physical and emotional problems**

	old	old	old	young	young	young	young
	aboriginal	non abor.	non abor.	aboriginal	aboriginal	non abor.	non abor.
	male	female	male	female	Male	female	male
<b>Respondents</b>	<b>7</b>	<b>24</b>	<b>137</b>	<b>12</b>	<b>56</b>	<b>79</b>	<b>133</b>
<b>Physical limitation on typical daily activities</b>							
Cutdown	57%	21%	11%	17%	15%	21%	15%
Accomplished less	57%	38%	14%	27%	18%	21%	19%
Limited in type of activity	71%	38%	16%	18%	16%	18%	19%
Difficulty performing work	71%	21%	15%	92% 18%	11%	17%	22%
<b>Emotional limitation on typical daily activities</b>							
Cutdown	71%	25%	13%	9%	9%	22%	18%
Accomplished less	71%	21%	15%	18%	9%	24%	20%
Did not work as carefully	71%	17%	11%	9%	13%	17%	19%

For the physical portion, again older respondents report more impact on their daily life. Old aboriginal males are particularly prone with nearly 65% reporting some form of impact on each question. Older females (38%) tend to be more susceptible to limitations than the equivalent age group males (15%). Such a difference between sexes is not discernable in the younger age groups.

A similar picture emerges for the emotional impact on daily life. Thus older aboriginal males (71%) are more prone to limitations on daily activities due to emotional problems.

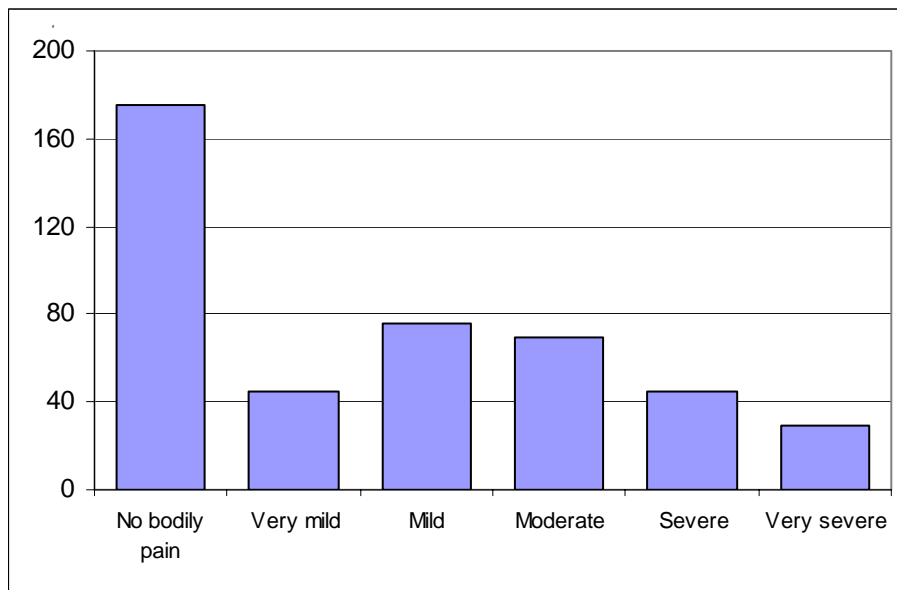
### Pain

Prisoners were asked how much bodily pain they had had during the past four weeks. There were five possible responses to this question:

- (a) no bodily pain
- (a) very mild
- (b) mild
- (c) moderate
- (d) severe and
- (e) very severe

The results of this question are summarised in Chart 3.3.

**Chart 3.3 - Pain**



Around 60% of prisoners reported suffering some degree of pain in the past four weeks. Of those reporting pain a majority reported mild to moderate pain levels. Prisoners were then asked how much pain interfered with their normal work in the past four week. Around 63% of respondents indicated that pain did not interfere with their normal work . Of those who reported that the pain interfered with their normal work, 10% indicated that the pain interfered quite a bit or extremely.

### 3.20 Men's health

This portion of the survey covered issues related to men's health and Table 3.26 below tabulates the relevant results.

The first question relates to self examination of testicles for abnormal lumps. The nonzero possibilities are "yes" and "no". Percentages are the "yes" percentages. Response rates ranged from 96% to 100%.

**Table 3.26 – Men's health**

	old aboriginal	Old non abor.	young aboriginal	young non abor.
<b>Respondents</b>	<b>7</b>	<b>137</b>	<b>56</b>	<b>133</b>
<b>Testicular examination</b>				
Self examination	71%	50%	31%	34%
<b>Physical &amp; emotional abuse</b>				
Physically hurt	0%	11%	17%	21%
Forced sex	0%	1%	0%	0%
Limit family contact	29%	17%	15%	20%
Verbal abuse	29%	26%	28%	40%
Restrict money	0%	8%	13%	16%

Male prisoners were asked whether they had ever examined their testicles for abnormal lumps and if so, how often. Around 42% reported that they had done such an examination. Generally, older males had higher affirmative response rates than the younger males. There was little evidence of differences between aboriginal and non aboriginal males. Of those prisoners who responded that they had undertaken a self examination of their testicles, over 50% reported having done so less than once a month. There are few discernible differences between the age and ethnicity segments. About 34% of prisoners indicated that they did know the right technique to undertake a proper self examination. Older aboriginals tended to report more affirmative answers.

The remaining questions all relate to activities by a partner and/or spouses and the last 12 months before coming into prison regarding physical, mental or verbal abuse:

- (e) Had been physically hurt
- (f) Had forced them to take part in sex
- (g) Tried to limit contact with family
- (h) Verbally abused the respondent
- (i) Stopped knowing about or having access to money

**Young non aboriginal males appear to be more prone to the types of abuse listed above.** The remaining three segments reported similar patterns of abuse. The most common form of abuse across all four segments was verbal abuse. In summary, abuse patterns are consistent across segments with young non aboriginal males reporting higher incidences.

### 3.21 Women's health

This section of the survey was specific to women. Table 3.27 tabulates the results, centred on five key areas. Response rates were high, ranging from 92% to 100%.

**Table 3.27 – Women's health**

	Old non abor.	Young Aboriginal	young non abor.
	Female	Female	female
<b>Respondents</b>	<b>24</b>	<b>12</b>	<b>79</b>
<b>Self examination</b>			
Self examination	79%	50%	51%
Right technique	92%	50%	61%
Want more information	17%	58%	48%
<b>Pap smear test</b>			
Ever had a pap smear	83% 8%	100% 0%	97% 0%
Pap smear result	82% 9%	75% 25%	69% 15%
<b>Pregnancy</b>			
Currently pregnant	0% 100%	8% 92%	3% 95%
<b>Weight control</b>			
Made yourself sick	0%	8%	3%
Taken diet pills	4%	0%	4%
Happy with weight	17% 78%	58% 33%	31% 68%
<b>Physical &amp; emotional abuse</b>			
Physically hurt	17%	33%	35%
Forced sex	8%	8%	11%
Limit family contact	21%	33%	18%
Verbal abuse	42%	25%	42%
Restrict money	17%	17%	23%

#### Self examination

Females prisoners were asked whether they had ever examined their breasts for abnormal lumps. There was a high response rate on this question with around

52% reporting that they had done such an examination. Generally older females had higher affirmative response rates than the younger females. There was little evidence of differences between aboriginal and non-aboriginal females.

Older females asserted more frequently that they knew how to do this examination (92%). This dropped off to around 60% for the younger females. More information was desired by a majority of the younger females. ***This is an opportunity for appropriate intervention through contractual arrangements.***

### Pap smear test

Prisoners were asked if they had ever had a PAP smear test. Three response options existed; 'yes', 'no' and 'don't know'. Only responses of 'yes' and 'no' are recorded in Table 3.27 with the remainder being the percentage of respondents who 'didn't know' if they had had a PAP smear test.

The vast majority (95%) of women reported having had a PAP smear test. The results were uniform across segments, however a significant portion (18%) reported that they did not actually know the result of the test.

### Pregnancy

Only 2 females reported being pregnant. The average number of abortions was around 1, with the highest reported number of abortions being four. Young aboriginal females were very prone to having one or more abortions. In fact, four out of the 12 young aboriginal females (33%) reported having had 2 abortions. The corresponding figure for young non-aboriginal females is 9% having two abortions. For old non-aboriginal females (16%) reported two abortions.

Females prisoners were asked how old they were when their first child was born. Of those prisoners with children, the most common age of first birth is 18-19. The lowest reported age of first birth is 14. About 13% of females prisoners had a child on or before turning 18.

### Weight control

Few women reported making themselves sick in attempt to effect weight control. The highest percentage were young aboriginal females(8%), although this is not statistically different from the percentage of other groups. Pills for weight control are also rarely taken with only 4% doing so.

A significant proportion (50%) of women inmates were not happy with their weight. Older non-aboriginal females reported (78%) not being happy with

their weight. For young aboriginal females this percentage dropped to 33%. Two thirds of young non-aboriginal females reported being unhappy with their weight. Those who did want to change their weight wanted a major change in weight (thinner or fatter).

### Physical or emotional abuse

The remaining questions all relate to activities by a partner and/or spouses and the last 12 months before coming into prison regarding physical, mental or verbal abuse:

- (a) Had been physically hurt
- (b) Had forced them to take part in sex
- (c) Tried to limit contact with family
- (d) Verbally abused the respondent
- (e) Stopped knowing about or having access to money

Women report physical and emotional abuse at only slightly higher rates than male prisoners, but at a level that appears to be well above the community norm. With respect to forced sex, women prisoners reported a higher percentage – indicating that one in ten had recent experience. Generally patterns in the type of abuse are similar across the female segments. As with males, younger group reported slightly higher incidences of abuse. The most common type of abuse was listed as verbal abuse(40%).

## 4 Pathology results

A total of 456 prisoners took part in one or more aspects of the pathology survey. This part of the survey tested blood specimens for a variety of conditions. Again, only one older female aboriginal participated in this part of the survey and hence results for her are not reported. The pathology survey also provided an opportunity to compare diagnoses with self-reports. Generally, there was a strong correlation between prisoners' recollections of their conditions and the measures taken in respect of a limited range of diseases.

### 4.1 Self reported versus diagnosed

Prisoners were tested for:

- (a) Chlamydia
- (b) Syphilis
- (c) Hepatitis
- (d) Gonorrhoea
- (e) HIV
- (f) Mantoux

Particular care is required in comparing the actual and self-reported instances of TB and gonorrhoea, due to timing differences between completion of survey questions and pathology testing [up to 4 months], and the curability of both diseases.

In the sub-sections below, information available from various sources is summarised, and where feasible, comparisons are made between self reported occurrences and the results of pathology tests.

#### **Infectious diseases - positive or negative conditions**

Conditions with either a "positive" or "negative" are listed in Table 4.1. Entries in each cell of the table indicate [1] the percentage of the respondents in the segment who took the particular tests; and [2] the second entry in the cell is the percentage of positive results out of those who took the test. All tests in this table were administered to both male and females.

Table 4.1

	old aboriginal male	old non abor. female	old non abor. male	young aboriginal female	young aboriginal male	young non abor. female	young non abor. male
<b>Respondents</b>	<b>9</b>	<b>27</b>	<b>144</b>	<b>14</b>	<b>56</b>	<b>71</b>	<b>134</b>
<b>Infectious diseases</b>							
Chlamydia	100% 0%	96% 0%	97% 0%	100% 0%	95% 4%	96% 1%	97% 1%
Syphilis	100% 0%	93% 0%	100% 1%	93% 0%	100% 2%	96% 0%	98% 0%
Gonorrhoea	100% 0%	100% 0%	96% 1%	100% 0%	95% 0%	99% 0%	98% 1%
Hepatitis A	100% 89%	81% 68%	99% 58%	93% 46%	98% 58%	90% 37%	94% 30%
Hepatitis B core	100% 56%	89% 36%	99% 26%	93% 31%	98% 30%	93% 42%	97% 37%
Hep B Antigens	56% 0%	37% 20%	28% 3%	29% 0%	30% 0%	44% 13%	37% 6%
Hepatitis C	100% 78%	93% 24%	99% 21%	93% 77%	98% 56%	94% 64%	97% 57%
Herpes 1	67% 100%	19% 100%	71% 96%	50% 100%	55% 94%	56% 95%	80% 84%
Herpes 2	67% 0%	19% 0%	71% 1%	50% 0%	55% 0%	55% 0%	80% 0%
HIV	56% 0%	59% 0%	64% 1%	64% 0%	64% 3%	65% 2%	70% 0%
Mantoux	56% 0%	15% 50%	58% 16%	43% 33%	66% 5%	37% 23%	44% 5%

The reported response rates for each question (first entry in each cell) is important from the point of view of indicating the confidence in the reported (second entry) positive percentages. A surprising feature is that the old Aboriginal males have reported lower rates of Mantoux positivity than some of the other groups. The sample size for this group however is small and hence has a relatively large margin of error.

### Chlamydia

No chlamydia was diagnosed amongst any of the older survey participants. In the younger age group, no aboriginal females were diagnosed, while 4% of aboriginal males had the condition, and around 1% of the non aboriginal group. Actual numbers are low, however, being only 4 individuals out of the whole sample.

The above figures are lower than what is reported in the general population. While the prevalence is not known in Victoria, it has been estimated at 2-5% among sexually active younger women. An analysis of notifications suggests significant under reporting and under diagnosis. Women account for 62% of the 1998 notifications, the latest year for which data are available in Victoria. The prison statistics suggest that the prevalence of chlamydia is certainly no higher in the prisoner population than in the general population.

The rates of self reported chlamydia closely follows the actual diagnoses.

## **Gonorrhoea and Syphilis**

There were 2 diagnosed cases of syphilis (older non aboriginal male and young aboriginal male), and 2 diagnosed cases of gonorrhoea (an old and a young non aboriginal male). In summary there was little evidence of widespread syphilis or gonorrhoea infection within the prison system.

Much higher self reported rates of gonorrhoea were noted, especially for the older non aboriginal male and female groups. However, the rate of self reported syphilis was similar to the diagnosis rate.

In the population, diagnoses of gonorrhoea and syphilis in 2000 were 31.3 and 10.3 per 100,000 respectively. Indigenous people continue to be diagnosed with these infections at much higher rates than non-indigenous people.

## **Hepatitis A**

### **Pathology results**

**A high proportion (50%) of the prisoner population tested positive for Hepatitis A.** Older prisoners reported higher rates of hepatitis A (62%) as compared to younger prisoners( 36%). Old aboriginal men reported the highest rate of hepatitis A (89%) while young non aboriginal males reported the lowest rate (30%). The difference in the prevalence of Hepatitis A across segments is statistically significant.

### **Causes**

Those most likely to be infected by Hepatitis A include: those who travel to less developed areas of the world where hepatitis A is common. These areas include Africa, Asia (except Japan), the Mediterranean basin, Eastern Europe, the Middle East, Central and South American, Mexico and parts of the Caribbean.

- military personnel
- individuals living in areas where hepatitis A is endemic
- certain ethnic and geographic populations that experience cyclic epidemics
- male homosexuals and others who engage in high-risk sexual activity
- hemophiliacs and other recipients of therapeutic blood products
- youngsters in child-care facilities, their families, and facility staff
- food handlers
- healthcare workers who treat patients infected with the virus
- institutionalized persons and their caregivers
- laboratory workers who handle live hepatitis A virus

- handlers of primates that may harbor hepatitis A.

Also at risk are people who live in communities in which hepatitis A is already rife, and with poor sanitation or overcrowded living conditions.

There is currently no treatment for hepatitis A, although rest and proper nutrition can relieve some symptoms. The most important factor affecting the severity of the disease is age. The hepatitis A virus is transmitted by the fecal-oral route, through close person-to-person contact, or by ingesting contaminated food or water. Infection has been shown to be spread by:

- close personal contact with someone infected with hepatitis A.
- eating foods contaminated by infected food handlers.
- contact with infected children (who do not usually show symptoms), who can then infect non-immune children or adults at home or in child-care centers.
- ingesting raw or undercooked shellfish (e.g. oysters, clams, mussels) from waters contaminated with the hepatitis A virus.
- ingesting contaminated food or water during travel to underdeveloped areas
- transmission through blood transfusions or sharing needles with infected people using injectable drugs.

Historically, the most common preventative has been immune globulin administration, which is effective for about three to six months. Now, however, there are two vaccines that provide longer-term protection and eliminate the need for repeated shots. These vaccines typically are administered as one initial shot followed by a booster shot in about six to 18 months.

Prior infection with hepatitis A confers lifetime protection against a second attack. If in doubt, a blood test can determine if an individual has had hepatitis A in the past or needs protection.

## **Hepatitis B**

Participants were tested for hepatitis B core-antibodies. Positive subjects were further tested for hepatitis B surface-antigen to indicate current infectiousness. Hepatitis B core antibodies were detected in about one third of the population. Of those who tested positive to this test, less than 10% then tested positive for hepatitis B surface-antigens. This overall average is highly skewed by two relatively high segments. The highest segment testing positive for hepatitis B surface antigens was old non aboriginal females (20%) with the next highest category young non aboriginal females (13%). There were very few positive results in the remaining segments.

## Hepatitis C

Hepatitis is the most frequently reported notifiable infection in Australia. In the decade since antibody testing became available in 1990, there have been more than 160,000 notified cases of hepatitis C in Australia. In addition, it is likely that many people with hepatitis C infection remain undiagnosed.

### Pathology results

Participants were tested for hepatitis C antibodies. **The prevalence of Hepatitis C is high among prisoners in general with slightly higher rates recorded for women (60%) as opposed to men (52%).**

The highest incidence of hepatitis C was found in old aboriginal males (78%) and young aboriginal females (77%) with the lowest rates recorded by old non aboriginal females (24%) and old non aboriginal males (21%).

### Self-report

**Fifty seven percent of responding older aboriginal males reported having been told they had hepatitis, and of these 100% were told they had hepatitis C.** Since the participation rate for this group was also 100%, this means that 57% of older aboriginals reported they had been told they had hepatitis C. This compares to an actual rate of 78% based on testing. For the older non aboriginal females the equivalent percentage is 16% (24%) where the number in brackets indicates the actual percentage as per the testing. The results for the remaining groups are: older non aboriginal males 20% (21%); young aboriginal females 100% (77%); young aboriginal males: around 35% (56%); non aboriginal females 65% (64%) and non aboriginal males 50% (57%). While the figures are generally in line, there appears to be self under-reporting, except for young aboriginal females.

### Causes

The most common route of transmission is **intravenous drug use**. Currently, 43% of acute cases of hepatitis C are related to illicit drug use. Intravenous drug use is a highly efficient method of acquiring HCV infection, with 60% to 90% of current users being HCV-positive, many of them becoming so within months of beginning a drug habit. Drug transmission is not limited to intravenous needles; sharing of cocaine straws, in cocaine users who frequently have nasal erosions and ulcers, is becoming more common as a cause of HCV transmission. Transfusion-related acute hepatitis C is now very rare.

Among other possible modes of transmission is sexual transmission. This accounts for roughly 15% of acute cases, although the efficiency of sexual transmission is low, and infection is rare in long-term, steady partners.

Some skin piercing practices, notably tattooing, body piercing, and acupuncture, have contributed significantly to the spread of HCV. Note that 68% of respondents to the “mental health” section of the survey had tattoos. Tattooing in particular poses a serious risk. Even in the presence of good sterilization, studies have suggested that the ink used in tattooing can become contaminated and transmit the virus.

High-risk behaviors for transmission of HIV and HBV (ie, intravenous drug abuse and unprotected sex) appear to be widespread in prisons and young offenders' institutions. It is not surprising, therefore, that the risk of HCV infection is also increased among prisoners. In a study of intravenous drug abusers in Wales, there was a significantly greater anti-HCV positivity rate among those with a history of imprisonment compared to those without such a history (46% versus 29%, respectively;  $p < 0.05$ ).

### Hepatitis C and associated risk behaviour

In the survey, Hepatitis C is very significantly related to whether a person has tattoos or not. In general, it has been found that there is also a substantial correlation with intravenous drug-taking and unsafe sex, although the self-reports suggest that both these practices are not commonplace within prison walls. However, the only question relating to unsafe sex asked whether or not the respondent had sex without using a condom in the 12 months prior to coming into prison. The question did not distinguish between the type of partner. Similarly the question on the use of unclean needles only related to prison injection. Very few prisoners (17) in fact reported having injected illegal drugs while in prison. This may contrast to some degree with evidence from prisons in other countries, including Canada, the USA, and Ireland.

### Conclusions

**Hepatitis C prevalence is extraordinarily high among prisoners in general, and particularly among aboriginal prisoners.** The estimated prevalence of hepatitis C infection in the Australian population is about 1.3%, although the rate is increasing. In the general population, among people who had injected drugs for less than three years, hepatitis C prevalence was reported to be around 26% in the year 2000. Blood donors and entrants into the Australian Defence Force are considered to be at lower risk for hepatitis C infection. Hepatitis C prevalence in 2000 was vastly lower among blood donors (15.9 per 100,000

donations) and entrants into the Australian Defence Force (91 per 100,000 entrants).

The high rates of hepatitis C evident in the Victorian prison are not surprising – although extremely serious – when considered in the light of international findings, and are consistent with the extent of tattooing, drug use, and addictive and compulsive behaviour identified in this survey among sections of the prisoner population.

## **HIV**

Pathology tests were carried out on participants for HIV. As the test for HIV was voluntary, participation rates on this test were generally low, around 65%. There was 1 reported positive in the older age group (a non aboriginal male). Amongst the younger age group there was 1 young aboriginal male and 1 young non aboriginal female who tested positive. Thus in a sample of 297, there were 3 positives equating to a rate of about 1%. This is slightly higher than that reported elsewhere for admissions, although given the small counts, the sampling error associated with this percentage is relatively large. Since participation was voluntary it is probably safe to assume that the non respondents were no less prone to HIV positive results and hence the 1% figure would not have been lower if participation had been compulsory.

## **Mantoux**

Mantoux tests for Mycobacterium and is used to diagnose latent TB infection. A small dose of tuberculin, a product obtained from *Mycobacterium tuberculosis* cells, is injected into the superficial layers of the skin. Reddening and inflammation of the skin will occur if the individual has been exposed to *M. tuberculosis*. This reaction does not confirm that the individual is suffering from active tuberculosis.

Tuberculosis is an infectious disease caused by the bacillus *Mycobacterium tuberculosis*. It takes several forms, of which pulmonary [in the lungs] tuberculosis is by far the most common. The bacterium is mostly kept in check by the body's immune system; about 5% of those infected develop the disease. However, there are 7 million new cases of TB annually worldwide (1998) and 3 million deaths.

In pulmonary TB, a patch of inflammation develops in the lung, with formation of an abscess. Often, this heals spontaneously, leaving only scar tissue. The dangers are of rapid spread through both lungs (what used to be called 'galloping consumption') or the development of miliary tuberculosis (spreading in the bloodstream to other sites) or tuberculous meningitis.

Over the last 15 years there has been a sharp resurgence in countries where the disease was in decline.

TB is spread from one person to another in microscopic, moist droplets produced during talking, coughing, sneezing or singing. Large particles fall to the ground. The smaller ones evaporate, leaving "droplet nuclei" small enough to be carried by air currents. Infection occurs when a susceptible person inhales droplet nuclei containing MTB, and bacilli enter the lungs. Once in the lungs, the organisms can spread throughout the body. Usually within 2 to 10 weeks the immune system limits further multiplication and spread; however, some of the bacilli remain dormant. This is known as latent TB. Such people will have a positive Mantoux skin test; they have no symptoms, and are not infectious. Only 1/20 healthy persons will develop active disease in the first year following exposure; and about 1/10 in a lifetime.

Tuberculosis is not a highly infectious disease, and transmission usually requires close, frequent, or prolonged exposure to a source. Persons who share the same air space with persons with infectious TB disease are at greatest risk for infection.

About 50% of prisoners were given a Mantoux test. Of those who received this test, **positive responses as reported in Table 4.1 appear to be very high for some segments.** These data need to be interpreted with caution. In some segments only a small percentage of prisoners actually took the test, therefore while the rate of positive results appears high, it only relates to a small number of prisoners. The variation in the rate of positive test results across segments appears significant with **higher rates evident for females(30%)** as opposed to males (8%).

### **Blood results with a numerical score**

The blood tests with a numerical score are listed in Table 4.2. The first number in each cell is the percentage of nonzero responses. The second figure is the average (mean).

**Table 4.2 – Blood results with numeric score**

	Old aboriginal male		old not abor. female		old not abor. male		young aboriginal female		Young aboriginal male		Young not abor. Female		young not abor. male	
	<b>9</b>		<b>27</b>		<b>144</b>		<b>14</b>		<b>56</b>		<b>71</b>		<b>134</b>	
Glucose	100%	5.8	93%	5.0	100%	6.2	93%	5.0	100%	5.1	94%	4.8	98%	4.8
Lipid studies	100%	5.6	63%	5.8	99%	5.5	57%	5.6	100%	5.6	52%	5.3	98%	5.6
Rubella	0%	0.0	93%	108	0%	0.0	93%	111	0%	0.0	94%	156	0%	0.0
Iron studies	0%	0.0	93%	17.1	0%	0.0	93%	15.0	0%	0.0	92%	18.4	0%	0.0

Glucose and lipid study tests were administered for both male and female. Rubella and iron are administered for women only. There are no discernible differences across segments. The only exceptions to this are the slightly higher scores for older as opposed to younger age groups for glucose and lipids.

## 5 Dental health results

A total of 283 prisoners took part in the dental portion of the survey. Of these, 87 prisoners were not identified and their characteristics such as age, sex or ethnicity could not be determined. This was a result of operators not recording the prisoner identification number. In the discussion below, all 283 results are considered. The 87 unidentified dental results are omitted where necessary, for example, when discussing differences between long term or shorter term prisoners.

### Oral Mucosa

The first question on the survey surveyed the presence Oral Mucosa. Only 10 prisoners were reported as having the condition of which 3 were indicated as not requiring treatment. Seven distinct associated descriptions were given as listed below

- fungal infection
- sinus from dead tooth
- white patches
- possible biopsy
- biopsy
- fungal infection under full upper
- fungal infection under dentures

### Denture status

The second set of questions related to denture wearing and whether the respondent needed the same. Results for this question for the 283 are reported in the Table 5.1 below. Thus, for example, 23% of the 283 prisoners were reported as wearing upper dentures with a further 4% wearing partial dentures. As indicated in Table 5.1, full upper dentures were more common than lower dentures.

**TABLE 5.1 : Denture status**

	None	Full	Partial
Upper_wearing	73%	23%	4%
Upper_needing	65%	22%	13%
Lower_wearing	85%	13%	2%
Lower_needing	73%	14%	13%

Forty eight out of the 283 respondents (17%) were reported as being edentulous [lacking teeth]. The final question in this part of the dental survey dealt with the reason teeth were missing. Of the 66 nonzero responses, 55 (83%) were indicated as “caries” and the remaining 11 (17%) were given as “other reason”.

### **Periodontal Status : gum health**

This portion of the dental survey covered periodontal status. Six tooth sites were examined as indicated in Appendix 1. Healthy gums were rated as being between 26% and 62% depending on the site assessed, with bleeding ranging from 7% to 16% of instances.

### **Malocclusion : bad bites**

Participants in the 18 through to 44 age group were examined for malocclusion and yielded 283 responses. Twenty eight (10%) of participants had slight indications of malocclusion with a further 13 (5%) having a “moderate to severe” condition. The remaining 85% respondents did not have the condition.

In all but one case, the dental inspection indicated that “no treatment was needed” , out of a range of six possible treatment requirements. The single other response was given as “treatment needed”

### **Dentition status and treatment of teeth**

#### **Upper teeth status**

Details of dentition status are contained in Appendix One. The main findings are [1] between 30% and 70% of upper teeth are sound, the rest being either missing – between 13% and 55% of upper teeth are missing – or decayed, with

or without subsequent fillings. The picture presented is one of relatively poor dentition, due to the incidence of caries [the demineralisation of teeth caused by bacteria] and the wider impact of lifestyle, as commented upon elsewhere.

### **Upper teeth – treatment needs**

The treatment needs of these same teeth were assessed. In summary, it was considered that between 3% and 12% of teeth needed to be extracted, and that between 6% and 12% needed fillings or crowns. Although there were only 283 respondents, there is strong reason to suggest that the dentitional needs identified in this survey are to be found in the wider prison population.

### **Lower teeth – status**

There appeared to be a significantly higher proportion of sound lower teeth than higher teeth. Dental assessments rated various lower teeth at between 23% and 88% sound. Missing teeth ranged from 2% to 56% depending on the tooth location.

### **Lower teeth – treatment needs**

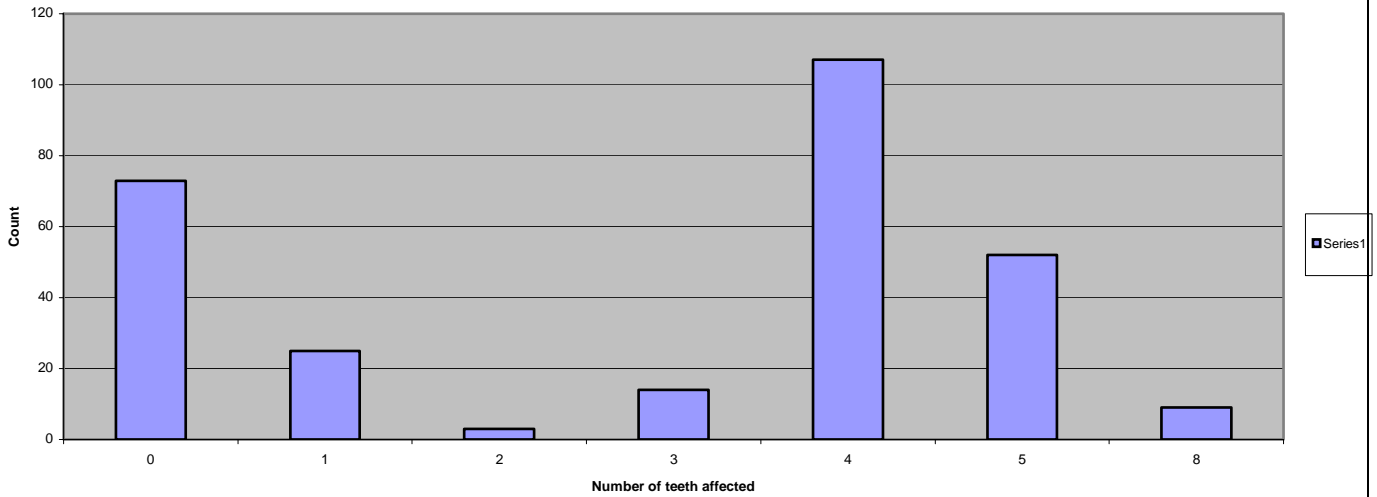
Proposed treatment needs for lower teeth ranged from extraction [between 3% and 9% of teeth] to crowns [1% to 2%] and fillings [1% to 9%]. These suggest that lower teeth generally are less ravaged than the upper teeth of prisoners.

### **Root caries experience**

Chart 5.1 indicates the root caries experience for the 283 respondents in the dental portion of the survey. The horizontal axis displays the number of teeth affected by caries: 0 through to 5 inclusive, and 8. These were the only counts recorded.

The median number of teeth affected by caries is 5 with the next most significant group of respondents not having any caries.

### Root caries experience



### Other Clinical Conditions

A total of 201 respondents (71%) of prisoners reported an absence of other clinical conditions. A further 8 (3%) reported other clinical conditions but for which no treatment was required. The remaining 74 (26%) of respondents had other clinical conditions for which treatment was required.

## 6 Discussion

This section addresses four major issues:

- the main characteristics of the prisoner population;
- similarities and contrasts between the Victorian prisoner population and that of other jurisdictions;
- comparisons between the prisoner population and the wider community of Victoria; and
- implications for improving the health of prisoners in Victoria.

### 6.1 The main characteristics of the prisoner population

The sample surveyed in this study comprised approximately 500 men and women, with women, persons over 41 [referred to as “older” in the report], and aboriginals over-represented relative to the prisoner population over all. Differences between segments [that is, based on gender, age, and ethnicity] are significant in some obvious instances and in relation to the prevalence of certain conditions, and these have been noted and explored. In relation to many indicators of health and well-being, however, the segment differences are overshadowed by the contrast between the prisoner cohort and the wider population.

The average age of the prisoner population is 33.8 years, close to that of the Victorian community. The survey sample is also predominantly Australian born [more than 80%] and speaking English as their first language, but this is likely to be lower in the complete prisoner population because of the over-representation of aboriginal inmates among the respondents.

However, other features in the demography of prisoners sets them apart from the wider population.

- Most prisoners had been in jail before. Only 12% of those surveyed were first-timers. Almost one third had three or more prior imprisonments. The record was 30 previous jail terms. At the same time, most prisoners were serving relatively short sentences [less than one year]. This suggests that the career of Victorian prisoners is likely, on average, to contain a number of imprisonments, perhaps some other institutional arrangements, and periods of transition to and from prison. Such careers are unlikely to be accompanied by stability of social and familial relationships – and some of the survey evidence, such as loss of contact with family members, points to this. While not surprising in the light of sociological research, **the survey highlights the potential for personal detachment, dislocation, and alienation among recidivist prisoners.** In turn, this constitutes a challenge to the provision of

health services, particularly in relation to prevention and personal health, that are suggested by the pattern of needs discerned in this study.

- Only seven percent of Victoria's 3459 prisoners [as at 1 January 2002] are women [although 26% of the survey participants were female].
- Educationally, prisoners tend to be early school leavers, with an average school leaving age of 15 years. The average was somewhat lower for aboriginal men and women. The survey did not address the quality of education or prisoners' experience of schooling.
- Limited education may be linked to another indicator: only 29% of females and 52% of males were in full-time work in the six months prior to prison. Among aboriginal prisoners, the figure is 34%.
- Welfare support features prominently – 75% of prisoners were in receipt of pensions before imprisonment. Unemployment benefits were the main form of support.

A range of indicators supports the proposition that Victoria's prison population is characterised by poor health and limited capacity for dramatic improvement. These include:

- Evidence of high levels of addiction – smoking, gambling, intravenous and other drug taking, alcoholism – which points to a complex of social and psychological factors. When linked to other characteristics such as high levels of unemployment and welfare reliance, these indicators are suggestive of vicious circles of dependency that are well known to health professionals and social workers.
- Indicators of poor mental health, encompassing extensive depression, and associated behavioural and physical consequences; schizophrenia [as much as 30% of the prisoner group]; evidence of widespread thoughts about suicide [half of the population], leading to actual suicide attempts [one third of the population]; considerable levels of self-harm and attention-seeking or tension-relieving behaviour; evidence of emotional and sexual abuse, both in early family life and to a degree in current or recent relationships; and loss of important bonds. The survey did not directly measure self-esteem or other dimensions of perceived worth. Nevertheless, the fact that 25% of prisoners are on psychiatric medication [principally anti-depressants and mood stabilisers] indicates a level of perturbation that lies far beyond the norm.
- Evidence that diseases transmitted by injecting drugs, and exacerbated through associated behaviours [including tattooing] and lifestyle practices, are rife, particularly hepatitis C. Hepatitis A and B are also prevalent. Low levels of HIV/AIDS reflect the low incidence in the wider Australian population. Other sexually transmitted diseases such as chlamydia, gonorrhoea, syphilis, and genital herpes are indicated at low levels.
- Asthma occurs at rates far above those expected in the wider population [it is reported by almost one third of prisoners]. While its causes are many and

complex, it is widely recognised that asthma results from an over-reaction of the immune system to allergens and irritants. Other diseases such as herpes simplex, which was reported in 95% of respondents, also point towards immune system issues. These indicators reflect a range of causes, including but not limited to non-prison lifestyle, exposure to other diseases, inadequate diet and exercise regimes, and so on.

Attention should also be drawn to a wide range of other issues that are apparent in the health of prisoners. Some of these appear relatively minor, for example, the incidence of caries and tooth loss, unbalanced dietary intake, or exposure to verbal abuse. While these indicators and issues may be regarded as distinct and separate measures, there is merit in seeing the pattern behind all these clues and symptoms. From a slight distance, it would seem that many prisoners display signs of deep psychological and social deprivation and disturbance that in turn link to addictive and compulsive behaviours, that consequently threaten the health, and indeed the lives, of those caught in this vicious circle. That at least appears to be a reasonable working hypothesis to guide the interpretation of the survey results. The signs suggest that **many prisoners appear to be members of a social and cultural group, formed by circumstances rather than design, that operates outside the mainstream of society.** It relies on welfare more than employment, lives dangerously by doing drugs, and suffers from serious mental and physical health problems. And its members find themselves doing time in prison on occasion.

## 6.2 Prison populations compared

In general, the threats and challenges in health management in prison systems relate to communicable diseases [e.g. hepatitis]; drug use; mental health issues; unsafe sex; addictions; and the effects of deprivation. Correctional institutions in other countries may encompass a wide range of functions and sub-groups. Nevertheless, what is striking is that **the Victorian prison population displays similar syndromes and health indicators to those identified in other advanced Western economies.**

For example, the UK prison population exhibits a higher rate of drug use and mental disorders than the wider society. According to sources quoted in the Miller Group Report, *“up to 30% of prisoners in the UK have a mental illness that should be treated”*. Similarly, *“at least 70% of prisoners have significant health problems...and ..at least 90% of prisoners are from what are classified as deprived communities”*. The difference between prisoners and the general population in relation to, for example, psychotic illnesses is approximately 20 to 30 times greater.

Some authorities have expressed the view that imprisonment may offer a small window of opportunity within which to reach and assist a part of a seriously deprived and damaged sub-group of the population. Consequently, **it is proposed by these authorities that particular attention should be given to preventative and remedial programs for prisoners.** This is certainly logical, but would appear to be more powerful if positioned within a genuine continuum of care that tracks and supports ex-prisoners.

Similar indicators apply for New Zealand, Canada, and the US. For instance, as the Miller Group Report noted, *“the New Zealand experience is similar to that of both the US and UK in that there is a higher morbidity in the area of mental health than in the general population. 90% of both male and female inmates with major mental health disorders also have substance abuse disorder”*.

The Healthcare Study of the Irish Prison Population [HIPP] of August 2000 surveyed 777 prisoners [only three percent of whom were female] and addressed physical, mental, and other health questions. HIPP concluded that the health status of prisoners is far worse than that of the wider Irish population. It revealed high levels of substance abuse, and highly adverse lifestyles. Almost one quarter of prisoners had a chronic illness or disability which impacted on their activities. Psychological distress was widespread, manifested, as is the case in Victoria, in extensive depression and associated behaviours.

The New South Wales Corrections Health Service Study of 1996 found that 30% of males and 60% of females tested positive for hepatitis C. Other indicators of exposure to risk factors were reported. For example, more than half the prisoners consumed alcohol at what the WHO considers to be “harmful” levels. More than 70% were current smokers. More than 20% reported heroin use while in prison. Indicators of mental and emotional distress included substantial levels of depression.

### **6.3 Comparing the Victorian prisoner population with the wider population**

The Victorian Burden of Disease Study – Morbidity [2000] examines the causes and consequences of disability [or the “non-fatal burden”] in the Victorian population. The causes of disability are similar to the morbidity factors highlighted in the prisoner survey. Mental disorders are the main contributor, particularly depression, followed by nervous system and sensory disorders, and chronic respiratory diseases. The prisoner population appears highly exposed to the risk factors identified in the Burden of Disease Study – “risk factors,

including lifestyle factors (such as tobacco smoking, physical inactivity, alcohol consumption, diet, unsafe sex), physiological states (such as obesity, high blood pressure, high cholesterol) and societal conditions (such as occupational exposures) are responsible for a sizeable proportion of the total burden of disease in Victoria”.

The prisoner population displays high rates of tobacco and alcohol consumption, drug use, and tattooing. It has hepatitis rates that are 30 times the community average. Respiratory problems are widespread. Mental health disorders affect between one quarter [on medications] and one half of the prisoner population. Half of the prisoner population have expressed a need and desire for assistance to break addictive patterns of behaviour in regard to gambling, drugs, drinking, and smoking. All of these indicators place the prisoner population at the high risk end of the health continuum.

#### **6.4 Implications for the improvement of prisoner health**

In view of the distinctive characteristics of the prisoner population relative to the wider community and the similarities between the Victorian prisoner population and those of other jurisdictions, it is self-evident that the prisoner population has special needs. Clearly, it is not appropriate to set the standard of health care provision for prisoners at the “community equivalent”. However, it is by no means merely a matter of “more resources” either, as the answer requires consideration of prisoners in their broader social contexts. In particular, it needs to be recognised that their tenure in prison is, generally, a brief but often repeated interlude in a trajectory through life that tends to be marked by social dislocation, unemployment, substance dependence, and reliance on welfare.

This study has shown that the health status of Victorian prisoners is poor compared with the wider community. To a considerable degree, the social origins and linkages of the prisoner cohort shape their lifestyle, values, and behaviours. While there are prisoners who will be one termers only, and who may have better education and other resources, they constitute a minority. The policy challenge for the Victorian Government is to find the leverage to address the vicious circle of deprivation, risky living, and health damage that is captured in the findings of this study.

The identified health needs of the Victorian prisoner population cannot be dealt with adequately through prison-based programs alone, important though it is to design and resource these appropriately. The factors that appear to contribute

significantly to the current health status of the Victorian prisoner population include:

- Early family instability and mistreatment of children, including emotional, physical, and sexual abuse;
- Limited schooling;
- Difficulties in maintaining stable employment;
- Reliance on social benefits;
- Early introduction to smoking, drugs, alcohol, and gambling;
- Continuing loss of self-esteem and onset of depressive conditions;
- Minimal exposure to health management and disease prevention education;
- General instability in social relationships;
- Repeat offending and recidivism.

Continuity of care is a well-accepted concept in health integration. It implies that those providing health services will recognise the recipient's current position in the chain of treatment and will communicate with each other to optimise understanding and benefit. There is a similar need in relation to the at-risk segments of the population that feed disproportionately into prisons.

Coordination of activities is essential among government departments and agencies with responsibilities for various parts of the life path of would-be offenders. Lack of resources can never be an acceptable excuse. Nor can arguments about boundaries, whether they be Commonwealth/State or between specialisations or agencies. Without better tracking and case management of at-risk individuals and families, better prevention programs, and better health and medical access, it is difficult to anticipate any significant improvement in the health status of prisoners.

## 7 Recommendations

This study has consumed more time and resources than had been anticipated by any of those involved. This derives from two factors [a] the logistical and other difficulties in conducting such a large-scale survey in prisons, and [b] the richness of the data encourages speculation about effects and causes, and ultimately generates more questions than can be answered. Nevertheless, it should be said forcefully that this has been a significant undertaking, and one which, having been accomplished, should be undertaken regularly as an aid to better decision-making about both prison-based and post-prison health care and management challenges. This first survey is valuable both to policy makers and the Government now, but it may also be regarded as a baseline against which further trends and developments may be measured.

### **Recommendation 1: The Victorian Government should repeat the prisoner health status survey periodically.**

The consultants are also aware of the fertile material for health researchers that is to be found in the survey data. There is benefit to the State in encouraging legitimate researchers to examine the data and use the extensive data base for research. The Department of Justice will need to have appropriate protocols and security measures in place to ensure that the survey data are not misused.

### **Recommendation 2: The Department of Justice, with due attention to security and privacy considerations, should make available survey data for research by legitimate researchers.**

The relatively short tenure of most prisoners combined with their recidivist tendencies creates some serious dilemmas for prison health policy. On the one hand, the prisoner population is clearly part of a very needy group, and tenure in prison may be one of the few stable periods in a prisoner's career. Consequently, imprisonment may provide a window of opportunity during which to direct preventative and remedial services to prisoners in the hope that this will have a more enduring effect.

However, the "revolving door" effect works against sustained programs of health education and disease prevention, although the Department obviously attempts to make such programs as effective as circumstances permit. Lifestyle change is a complex matter, and all the indicators from this study suggest that a large proportion, and perhaps a majority, of prisoners struggle with the consequences of poor impulse control and addictive tendencies. These forces

are genuinely destructive of self-esteem, personal capability, and will, but prison programs alone can have limited effect. There can be little doubt that there is a need to address the continuum of care beyond prison walls and the relatively brief but frequent stays that characterise much of the prisoner group.

The consultants suggest that the nature and prevalence of lifestyle issues and disease among the prisoner population point to the need for systematic cooperation and collaboration between the Department of Justice and the Department of Human Services in designing and delivering public health, educational and community based programs targeted at the prisoner demographic. The role of the Corrections Health Board is a matter for the Department of Justice, and is beyond the scope of this study.

**Recommendation 3: The Department of Justice and the Department of Human Services should cooperate and collaborate in the development and delivery of educational and health management programs that target the most damaging behaviours and conditions of the prisoner demographic.**

Section Six reviews the characteristics of the Victorian prisoner population and then makes comparisons with other jurisdictions and with the wider community. A pattern stands out – the prisoner population resembles the socially and economically disadvantaged stratum of society, but appears to be caught in vicious circles of deprivation, substance abuse, social and psychological dislocation, and alienation from the values of the wider society.

**Recommendation 4: That the Victorian Government coordinate initiatives to address the causes of deprivation and offending behaviour that lead to the “vicious circles” of substance abuse, offence, imprisonment, and social and psychological dislocation.**

A substantial proportion of prisoners are “at risk” as a result of their lifestyles outside prison. The notion of “at risk” should not be trivialised. It refers to the potential loss of years of life and amenity, primarily due to intravenous drug-taking, alcoholism, and problem gambling, as well as associated behaviours to fund or hide the habit. What is not known – and was not sought because of time and cost constraints – is the part played by prison stays in the overall career of “at risk” prisoners. The consultants would encourage further research to examine how prisoners deal with behavioral and health issues post-prison, and how they can avoid returning to jail.

**Recommendation 5: Research into the post/ pre prison careers of “at risk” prisoners should be undertaken with a view to determining appropriate leverage or intervention points that might improve lifestyle choices and reduce the rate of recidivism.**

One issue that demands both further study and remedial support is the relationship between early life [and particularly familial] sexual and emotional abuse of women who are imprisoned, and the incidence of depression and a range of illness indicators. The consultants suggest that this is an area that the Department might wish to act upon. The first steps may be to invite further research.

**Recommendation 6: That there be further exploration of the apparent relationship between early life experience of abuse and subsequent difficulties in life management among women who are imprisoned. This should include examination of the incidence of depression and chronic illnesses.**

**Recommendation 7: That special consideration be given to the needs of women who have suffered sexual and emotional abuse, particularly among those profiled as being at risk of criminal activity and imprisonment. This topic is both sensitive and complex, and requires close alignment of DHS and DoJ efforts.**

The evidence on depression, rates of suicidal thoughts, and actual self-harm supports provision of appropriate mental health services in prisons. The Department should note the extraordinary level of need in relation to mental health services, and ensure that these are appropriately focused upon and resourced.

**Recommendation 8: That the Department place emphasis on the importance of mental health services for prisoners, and provide appropriate focus and resourcing in this area.**

- i. Given the prevalence of mental illness among prisoners, and the concomitant issues they experience, a comprehensive mental health service is required for Victorian prisons.
- ii. Attention must be paid to developing a model for mental health services that is attentive to the particular needs of prisoners with mental illnesses. An appropriate model would consist of six components: 1) intake screening; 2) ongoing monitoring/screening of inmates; 3) comprehensive

mental health assessment of prisoners suspected to suffer from a major mental illness; 4) mental health treatment; 5) gradual/post-release monitoring/supervision and continuity of services leading back to the community; and 6) ongoing evaluation of the program.

- iii. At the very least, prisoners being admitted to Victorian prisons need to be screened for mental illness both upon reception and at each transfer. The screening needs to be performed by a mental health professional. Following intake, those prisoners identified as likely being mentally ill need to be referred for a more comprehensive mental health assessment and treatment as indicated.
- iv. Given the unique needs and concerns identified for Aboriginal prisoners, the mental health services developed need to accommodate the particular issues identified for Aboriginal prisoners.
- v. As the number of female prisoners is rising in Victoria, and the prevalence of mental illnesses and related matters is higher for female as compared to male prisoners, the mental health services developed need to accommodate the particular issues identified for female prisoners.
- vi. Although the sample sizes were small, data do suggest that the needs of young prisoners differ from those of older prisoners. As such, the mental health services developed need to accommodate the particular issues identified for younger and older prisoners.
- vii. Ongoing attempts should be made to conduct a study to more carefully identify the prevalence of the range of major mental disorders across a broad cross-section of Victorian prisoners. Attention should be paid, as well, to offenders under community supervision.

Prisoner characteristics identified in the survey point to the cohort as being higher risk and having different needs from the wider community.

The sample, and by extrapolation, the prisoner population, exhibits considerably higher than average levels of:

- Hepatitis – A,B and C
- Asthma [more than 30% of the group]
- Depression
- Insomnia
- Tooth loss, decay, and gum disease
- Sexually transmitted disease other than HIV/AIDS
- Self-inflicted harm and injury [the exception is for older, non-aboriginal women]
- Suicidal thoughts and attempts
- Exposure to sexual, physical, and emotional abuse

- Hospitalisation – more than 25% of prisoners report hospitalisation in the last 12 months.

While this has not been explicitly tested, it is also likely that this divergence occurs segment by segment and is not simply a feature of, for example, imprisoned women. This suggests that the current practice of approximating prison health care to “prevailing community standards” cannot be adequate. The survey points to different, and in many instances, greater, needs among prisoners. The standards of health care, including preventative and mental health services, that should be available to prisoners ought to reflect a clear understanding of their profiles, lifestyles, and consequent health care needs.

**Recommendation 9: Given the prevalence of drug and alcohol use among prisoners, it is essential that the current availability of alcohol and drug treatment services is continued within the prison system. If these services are not continued it will accentuate even further the distinction between treatment options in prison and the community, increasing the harm that arises from drug use.**

**Recommendation 10: That the design of prison health services take account of the special needs of the prisoner population, and of particular segments of that population, as evidenced in the health status survey. In particular, this requires a shift to preventative and public health programs delivered collaboratively and at various stages in the lives of those who serve time in the Victorian Corrections system. This will not only ameliorate the condition of the current cohort of prisoners but will, over the longer term, reduce the demand for acute care.**