

# Submission to the Productivity Commission Inquiry into Mental Health

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*When there are complex problems, and one does not drill to the root cause to investigate, one is just playing with the symptoms*

Jurgens circa 1750, and others.

Thank you for the opportunity to respond to this inquiry. This response is in several sections:

Introduction

Response to Issues Paper

Appendices:

- 1 Alternative Terms of Reference (3 pages)
- 2 Quarantine of University Place (1 page)
- 3 NDIS rejection (2 pages)
- 4 Sanitas Villa: Proposal for a:-  
Physical and psychosocial health farm program  
for those with, or recovering from, severe mental  
illness comorbid with overweight/obesity (16 pages)
- 5 Coordinated Care system  
(submitted separately)

The Appendices are all stand-alone documents and may be read in their own right. Thus, other than 'Terms of Reference', and Sanitas Villa, no further comment will be made on these in the body of this document.

## Introduction

The Productivity Commission has been charged with the task of investigating, and reporting on, the issues of mental health in Australia.

If the Commission approaches this task within the relatively narrow confines of the current socio-economic-political paradigm, I suggest that this would limit both the identification of causal factors, and the range of responses that otherwise would be available to the Commission. As an alternative, I am suggesting that if the approach taken is (where necessary) to 'think outside the square', and (where necessary) be prepared to 'talk truth to power' then the report generated has the potential to be of significantly greater value to Australia.

The starting point for this inquiry is the Terms of Reference provided by the Treasurer in November 2018.

Whilst a lot of thought may have gone into the preparation of the terms of reference, a reading of these shows a very strong emphasis on economic participation, productivity and economic growth. The terms do include the phrase:

'Without limiting related matters on which the Commission may report...'

which allow the Commission to report in any way it sees fit.

Without disrespecting the Treasurer's approach, in the same situation, others may have adopted an approach centered on the issues of mental health itself and the optimisation of outcomes for clients, where economic benefits would be outcomes of better health, rather than drivers for, the inquiry.

The terms of reference cannot be changed. Nonetheless, to facilitate wider thinking on this matter, I have prepared what might be called an 'Alternative Terms of Reference' which sets out to:

- a) shift the focus from economic performance to well-being of the client, and
- b) open the doorway to consideration of issues that might fall outside the current paradigm.

This is shown in Appendix 1.

If these alternative terms of reference go beyond, or raise issues beyond the Commission's current thinking and approach, I believe the Commission would be doing itself a disservice in not responding to matters raised therein.

## Response to Issues Paper

The Commission has produced a comprehensive and well-written issues paper which serves as a good starting point for this inquiry. In this document I will comment on some of the issues raised in the paper. There is a lot that I agree with in the paper. My comments mostly will be about where I think there could be scope for change or enhancement. Due to limitations of time, these comments will not necessarily be referenced. However, references in most instances are easily found through a search process.

On the next page is shown an outline mental illness framework, and 'strategic areas' in which to respond to these. My comments, albeit brief, are in part related to each of: a) the chronology and sequence of the issues paper; b) the alternative terms of reference, and c) the strategic areas shown in this diagram.

### **Strategic Area 1**

#### Stress; income inequality

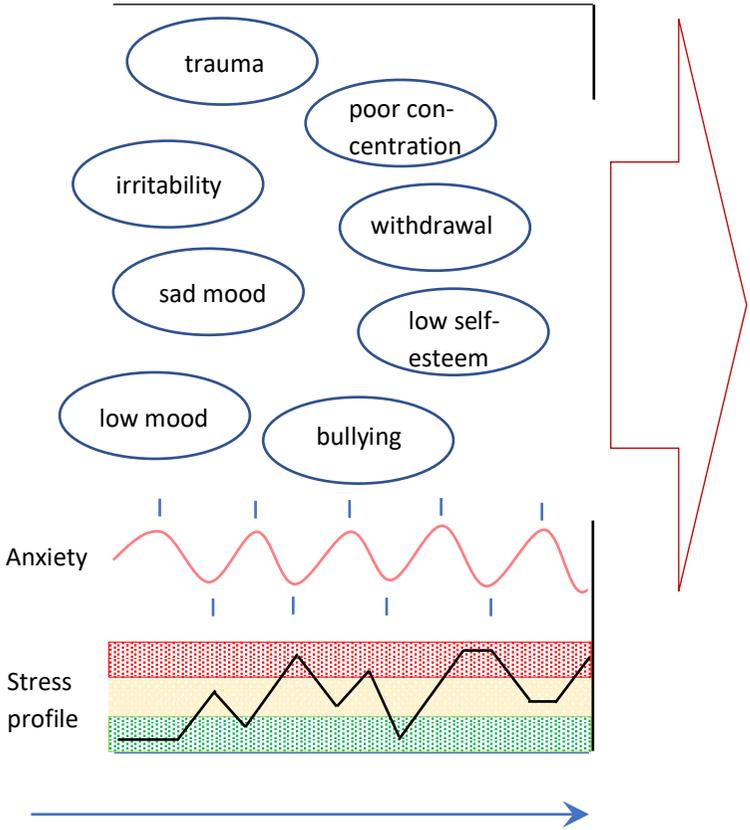
Before considering the specifics of mental illness in Australia, it is worth considering the wider picture. The book 'The Inner Level' by Wilkinson and Pickett (2018) has a sub-chapter on 'Rising Mental Illness and Stress'. Studies show that both anxiety and stress are rising in Western societies. Status anxiety is higher in countries with greater inequality of income. Status anxiety (an indicator of general anxiety), is lower for people who have high incomes and/or are wealthy; and higher for people lower in the pyramid.

This last point is not surprising, since, with increasing part-time work, and casualisation of the labour force, people in the lowest 20-30% of income deciles are likely to have day-to-day financial stress, and as a consequence, on-going insecurity.

The issues paper makes reference to 'psychological distress'. There is, however, a difference between 'distress' and 'stress'. Distress, often, is a feeling of suffering in response to a particular situation. Stress arises in response to all kinds of threatening, or



Symptoms in mental illness pipeline



Established mental illnesses and service delivery thereto

<p><u>Mental disorders</u></p> <p>Anxiety Mild/moderate depression Addictions Eating disorders etc Dementia</p>	<p><u>Severe mental illnesses</u></p> <p>Schizophrenia Psychotic illnesses Severe mood disorders</p>
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Comorbid factors

Depending on the primary mental illness, there can be many comorbid mental or physical illnesses or risk factors, for example:

- Anxiety disorders
- Depression
- Substance abuse (alcohol, smoking)
- Obesity
- Type 2 diabetes
- Viral hepatitis
- Parkinson's

perceived threatening, situations. It is not just a psychological state. It is deeply embedded in, and related to human physiology.

Stress activates the hypothalamic-pituitary-adrenalcortical axis, leading to the release of stress hormones, in particular, cortisol. There is evidence that chronic stress leads not only to anxiety, but neurological changes in the brain. Stress is certainly a precursor to anxiety, and may well be a driver of mental illness.

There is certainly evidence that the stress of parents flows through to the stress of children. If we are to reduce the pipeline of mental illness, it is essential that these matters are addressed.

In their earlier, widely acclaimed book 'The Spirit Level', Wilkinson and Pickett showed, inter alia, that countries with higher levels of inequality have higher levels of mental illness.

The recent (excellent) publication 'Inequality in Australia 2018' by ACOSS and UNSW Sydney shows:

Australia's Gini Coefficient (income inequality) was 0.34 in 2015,  
compared with an OECD average of 0.32

Australia's Gini Coefficient (wealth inequality) was 0.61 in 2016 and rising.

These are foundational issues. The general trend in inequality, along with stress, anxiety and mental illness is 'up'.

A comprehensive response to mental health in Australia cannot be achieved without addressing these matters, and the trends therein. This applies particularly to the impact on children.

If mental illness is to be addressed, one challenge for the Productivity Commission (I believe) is to develop policies through which Australia can move to become a flatter society. Some politicians will welcome this. The art will be to lead others in this direction.

A matter not addressed by the ACOSS UNSW report was the impact of international companies on the Australian economy, in particular: what do they contribute, and how much wealth do they take out of Australia. Does their presence represent value? When there is a shortage of funds in Australia, including funds for mental health, are they paying their fair share of tax? Are they transfer pricing wealth out of this country, and what can be done about that?

## Bullying

It is not possible to consider mental illness, including its origins, treatment and funding, without taking account of the structure, behaviours and norms of the society in which it occurs.

Hence, continuing from above, In this, and the next sub-section I will raise two other societal issues, in order to address two other 'elephants in the living room'.

The first is bullying.

Bullying is widely acknowledged as a problem in schools, the work place and other areas. Initiatives are in place, and are being further developed, to address this. But, if we look a little deeper, perhaps addressing the obvious:

The Australian Federal Parliament is an adversarial chamber. It's sessions are widely broadcast on television and other media. The debate, very often, is little about solving the problems of Australia, and substantially about 'point-scoring', 'putting down' or diminishing the other side.

This adversarial behaviour is only one step short of bullying, and at times the comments verge on, or could be described as verbal abuse. Calling those opposite 'liars' is just one example of this.

So here, in the land of Australia, we have our Federal Parliament modelling adversarial, if not bullying behaviour. It is any surprise, then, that bullying is widespread in schools and work places; and that domestic verbal abuse and violence is beyond what it should be?

This is a foundational issue. Until we address this inappropriate behaviour in Federal Parliament, we cannot expect to adequately reduce the incidence of bullying. And, since bullying leads to depression, anxiety, and sometimes, suicide, this is a critical issue.

To address this, the norms of Federal Parliament (which appear to have degenerated over the years) must change. If we are to address the above, then:

- a) politicians need to be aware, or made aware, of this problem and the need to address it. This needs to be embraced by all parties;
- b) the parliament needs to shift its value system from hostility to one of RESPECT for all members at all times;

- c) if there are differences, these need to be argued on content, not invective;
- d) there needs to be a means of enforcement, potentially with the Speaker having the powers and requirement to:
  - i) issue a warning any time a member makes an adversarial comment;
  - ii) order a member out of the chamber for 24 hours for a second offence;
  - iii) for persistent or repeated offenders, have the power and will to order members out of the chamber for periods of up to one month.
  - iv) if a member is ordered out of the chamber on five or more occasions in a calendar year, they lose their superannuation entitlement for that calendar year.

This may seem strident, but parliament needs to acknowledge, at present, when it comes to bullying, anxiety and suicide, it is part of the problem, not part of the solution. I believe that with the right explanation and encouragement, the Australian Parliament has the maturity to address this need, and implement measures of the type outlined here.

I'm conscious that putting this forward might represent a challenge for the Productivity Commission. But, doing so (speaking truth to power) is one way, indeed a necessary way, to address the reality of mental illness. In fact, all parliamentarians know that many people see parliament as little more than a shambles. I'm sure, given a face-saving way of making the change, the majority would embrace it.

### Tax cuts

It is fashionable in Federal Parliament to offer tax cuts, often just before an election. It is a practice of both the major parties.

Bearing in mind the Gini coefficient, and the cost of living, there may indeed be justification for tax cuts for some people, particularly those below the median income.

Others simply see tax cuts before an election as a bribe for votes. If this continues, it becomes a race to the bottom.

The question not addressed in Federal Parliament is 'what are the consequences of tax cuts to revenue, and the services that such revenue might otherwise have purchased?

This month, both major parties offered tax cuts.

By way of example, the Coalition's tax cuts were reported as costing approximately \$20 billion over four years. That averages at around \$5 billion per year.

If we assume that the cost of full time annual employment of a teacher, nurse, police officer or fireman is \$100,000 then:

funds lost through tax cuts equates to being unable to employ 50,000 such persons.

That is the consequence of these tax cuts. This is happening when Australia is already under-resourced in staffing in many areas including Centrelink, NDIA, regulatory authorities, and mental illness services.

If there was full visibility of the impact of proposed tax cuts; and the question was put to the Australian people:

“Would you agree to these tax cuts and the loss of 50,000 nurses or teachers or police officers or emergency services personnel?” The answer might be very different.

This needs to be addressed. It is a derogation of our parliamentary system and seen by many as politicians as putting their political ambitions ahead of the national interest.

Change here, no doubt, would need to come stepwise. Politicians would need to be asked, in the national interest, to implement change here on a bipartisan or multi-partisan basis, for example:

Establish a new norm that tax cuts cannot be offered in the 12 month period prior to an election; that work-arounds are not allowed.

Establish a further new norm that the impact of proposed tax cuts *must* also be represented in terms of 'Equivalent government jobs lost' as above.

It is beyond the scope of this submission to take this further. However, if national interest is to be a priority, and service levels for mental illness and other services maintained, steps along these lines need to be taken. We need a higher level of maturity, and less self-interest in our parliament. I invite the Productivity Commission to find a way of putting this forward.

## Further Strategic Area 1 initiatives

Notwithstanding the above, this submission recommends that the Productivity Commission investigates in full factors in the 'input pipeline' to mental illness, the underlying causes thereof, and ways to address these. If the input pipeline can be reduced in size or severity of onset, that would be a major gain, not only to the individuals involved, but, as a consequence, to the economy.

## **Strategic Area 2**

### Severe mental illness

As per the diagram, this refers to the area of established mental illness, and services offered to ameliorate these. For convenience, the mental illnesses are listed in two groups: mental disorders, and severe mental illnesses.

The comments here refer to people with severe, persistent and complex mental illnesses as referred to on page 6 of the issues paper.

These severe mental illnesses are often chronic, hard to treat, and may last a lifetime. Not infrequently, medications, at best, alleviate the symptoms, with little impact on the 'cause'. Very often, as pointed out in the paper, such medications are associated with unpleasant, and occasionally life threatening, side effects. This submission puts forward a proposal relating to this group:

#### Medical research:

Australia has world class medical research capabilities and a world class reputation. These major, severe mental illness are not going to be solved, and people will continue to suffer, until there is a major breakthrough.

Given that many of these people are on expensive medications month after month, year after year, and possibly for life, the pharmaceutical industry has little incentive to change. They may seek to create a 'slightly better pill' to gain market share. But, it is not in their commercial interest to find a cure. An ongoing, chronic market is highly profitable. If they found a cure, and it was deployed, they would lose their market. Notwithstanding rhetoric, they have little incentive to do this.

So, the drive for change, the drive for a cure, must come from elsewhere. This submission proposes as follows:

Australia sets up a project to be known as 'Schizophrenia 2040'. This is a headline name referring to schizophrenia and associated psychotic illnesses.

The goal of this project is to find a cure for schizophrenia and related illnesses by 2040.

The project should be large, Australian based, and funded by the government to at least \$20 million per annum, with CPI rises until 2040. Further funds may be raised by donation.

The project should link with overseas research. However, IP and/or drugs or treatments emerging from this should be owned in Australia for economic benefit in this country.

### **Strategic Area 3**

#### Sanitas Villa

The issues paper, on page 15, refers to Comorbidities. These are also shown in the diagram.

Within the severe mental illness group, the core illnesses are difficult to treat. However, one of the major consequences of these illnesses is the set of comorbidities, often physical comorbidities that arise conjointly with, or following the onset of the mental illness.

One high frequency, severe comorbidity is overweight/obesity and illnesses, physical and mental that flow from that. Whilst the core illnesses are hard to treat, there is great scope to treat (and treat far better than current practice) the comorbidities associated with these illnesses. This is described in full in the appendix included herewith referred to as 'Sanitas Villa'. (This term is explained in the appendix).

The Sanitas Villa proposal is evidence based, and offers Australia the chance to set up one or more world leading facilities to treat these comorbidities.

I trust that this will gain Productivity Commission support, and pass through in your final recommendations to government.

Notwithstanding, I am considering raising funds and setting up the first of the 'Sanitas Villa farms as a charity. I would welcome comments from any person interested this proposal.

Since the Productivity Commission requests we do not place contact details on our submissions, I would request that any comments on this proposal, or approaches by persons wishing to discuss further, are passed on to me through the Productivity Commission.

Thank you.

Peter Kent.

# Mental Health

## Alternative Terms of Reference

### Preamble

In 2014-15, four million Australians reported experiencing a common mental disorder. The government recognises that:

- those with mental health issues often have comorbidities with other mental or physical disorders, and not infrequently, higher risk factors for such things as smoking, obesity\* and substance abuse;
- stress in any form is not only a risk factor for mental illness, but potentially a driver;
- prevention of mental illness, if as possible, is highly desirable;
- improved treatments of, and outcomes for people with primary mental illness is desirable not only to reduce their suffering, but to enable them to more fully participate in social, community and economic activities;
- over and beyond this, improved treatments and outcomes for associated comorbid or risk factors is in itself well worthwhile. For example, reduction of obesity in persons with mental illness will reduce their incidence of type 2 diabetes and cardiovascular illness with consequential savings in health costs, and enhanced prospects for their employment;
- whilst genetic factors may contribute to mental illness, environmental factors affect not only the expression (or otherwise) of genes, but may themselves contribute to, or be a direct cause of, mental illness. For example, extreme trauma is known to contribute to, or cause, PTSD; bullying is known to contribute to suicide.
- for most mental illnesses, at physiological, biochemical and neurological levels, the causes are little known or understood. The DSM V describes most mental illnesses in terms of their symptoms rather than causes.

\* *Obesity is recognised in some jurisdictions as a risk factor for disease, and in others as a disease itself.*

### Request

In this context, I ..... hereby request that the Productivity Commission undertake an enquiry into the potential for improving mental health, associated physical and mental comorbidities, and reduction of risk factors so as to improve the physical and mental well-being of those so afflicted; and as a consequence, their potential for healthier and longer lives, greater social and community involvement, and participation in the workforce with resultant contribution to productivity and the economy.

### Scope of the inquiry

The Commission should consider the role of mental health, including associated physical and mental comorbidities and risk factors, seeking means in which to improve outcomes:

- a) with the primary mental illness;
- b) with any associated mental or physical comorbidities, and
- c) through the reduction of associated smoking, obesity, substance abuse and other risk factors.

all of which have potential to reduce health costs, enhance productivity and contribution to the economy.

Without limiting related matters on which the Commission may report, the Commission should:

- 1 examine drivers of mental illness including but not limited to:
  - a) stress from all sources including stress relating to financial survival, employment, education, the economic framework, and policies of government;
  - b) bullying;
  - c) exposure to trauma including childhood trauma;
  - d) domestic violence.

In so doing, the Commission should consider the extent to which stress, bullying, trauma or domestic violence increases anxiety and/or cause neurological change; and the extent to which such anxiety or neurological change may dispose to further mental illness.

- 2 examine how sectors beyond mental health, including education, employment, social services, housing and justice can contribute to improving mental health and economic participation and productivity;
- 3 examine the effectiveness of current programs and initiatives across all jurisdictions to improve mental health, suicide prevention, and participation in society, including by governments, employers and professional groups;
- 4 assess whether current investment in mental health is delivering value for money and best outcomes for individuals, their families, society and the economy;
- 5 draw on domestic and international policies and experience, where appropriate;
- 6 examine the demographics of mental illness in terms of top 10% vs bottom 10% of society, regional vs cities and such other parameters as the Commission sees fit.
- 7 review the non-economic metrics for mental health and well-being, with a view to developing further metrics, as required, to provide greater insight into, and long term monitoring of, mental health.

- 8 examine the potential for support of new initiatives or pilot programs to reduce any or all of:
  - the onset of mental illness;
  - the treatment of mental illness, comorbid illnesses and reduction of risk factors;
- 9 given that Australia is a leader in medical research, examine the potential for substantial additional funding over 10 or more years for research into severe mental illness where such funding would be directed to:
  - a) fundamental research on the functioning of healthy brains as a baseline from which to compare the brains of subjects with mental illness; and
  - b) the development of new treatments or drugs for mental illnesses where, if drugs, they are superior to existing medications, with reduced side-effects (for example, the side effects of the current generation of anti-psychotics); and
  - c) where the financial benefits of such research flow to Australian research facilities, Australian owned companies, and the Australian government.
- 10 consider whether the incidence and severity of mental illness in Australia occurs totally *within* the current socio-economic-political framework, or occurs or could occur in part as a *result of* this framework.
- 11 consider whether in some way the end-to-end prevention and treatment of mental illness in Australia should be changed or redesigned, and if so, in what way, with what transition plan, over what timeframe, and at what approximate cost.

The Commission should have regard to recent and current reviews, including the 2014 Review of National Mental Health Programmes and Services undertaken by the National Mental Health Commission and the Commission's reviews into disability services and the National Disability Insurance Scheme.

### **Process**

The Productivity Commission should undertake broad consultation, including with carers and consumers, and by holding hearings in regional Australia, inviting public submissions and releasing a draft report to the public.

The final report should be provided to the Government within 18 months.

## Quarantine of University Place

This relates to the experience of a young man at one of Australia's major universities – at an age when mental illness onset is common.

The student commenced university after Year 12 and in his first year of studies was doing exceptionally well, averaging 'Distinction' level results in his exams. Then he was struck with a major mental illness. At that time he was unable to continue his studies and sought 'leave of absence' from the university. This was granted for one year.

On medical grounds, leave of absence for one year was insufficient. He requested a further year's leave of absence. This was not granted. He was told "if you're not able to study, leave the university. You can re-apply for admission when you're better."

By default, this was expulsion from the university. It also meant he would have lost his Commonwealth Supported Place. If he left, and reapplied later to attend university, there was no guarantee of admission, nor of recovering his CSP. Looked at in aggregate, what this amounts to is:

- a) Student succumbs to mental illness. This is a 'whammy'.
- b) Student, then, by default, is expelled from the university for no fault other than having become ill. This, thereby becomes a 'double whammy'.

At that point I intervened as an advocate for the student. I had to fight extremely hard with the university administration to make ground on his behalf. Eventually they succumbed and granted him a total of three year's leave of absence, after which he returned part time.

At that time (around 2010) most universities in Australia had leave of absence provisions to a maximum of one year. I told this, and some other universities that these were unacceptable policies. What was needed in these circumstances was a provision for 'Quarantine of Place', with all rights retained for up to 10 years (supported each year by medical confirmation of the situation). Some universities expressed interest in that policy. At that point I became involved in other projects and was not able to take the matter further.

Recommendation For all situations where, through the onset of mental illness, people lose their education rights, employment rights in large companies etc, the organisations *must* have compassionate policies to address and respond to these situations. Whilst the details of the policies may vary according to the nature of the organisation, this in principle could be embodied in legislation requiring such policies to be prepared and implemented.

## NDIS Rejection

A case with which I was associated: a lady in her 20's had suffered for almost a decade from a severe psychotic mental illness with comorbid anxiety. She had been seeing her current psychiatrist for the last four years. She is an Australian citizen and lives in Australia. Her illness, almost certainly, is permanent. She was and is on relatively high doses of medication. Currently she lives with her elderly parents. Without that she would almost certainly need supported accommodation as she has limited self-management capabilities. Her ability to work is almost nil as she is unable to sustain concentration on a task for more than a few minutes. During the day she spends considerable time lying on the couch. Her lethargy is in part due to her mental illness, and in part to the neuroleptic effect of the drugs she has been prescribed. She has almost no initiative.

Her psychiatrist recommended that she apply for psychosocial support from the NDIA. In the latter part of 2018, with help, she made contact with the NDIA, obtained the forms etc. Her psychiatrist completed a detailed submission under each of the application headings: Whilst the form was descriptive (rather than numerical), if expressed numerically, on a scale of 10, her degree of impairment would have been approximately:

<u>Factor</u>	<u>Degree of impairment</u>
Communication	5
Social interaction	8
Learning	6
Mobility	1
Self care	3
Self-management	8

Her application was rejected by the NDIA. On the telephone, they told her parents that to qualify for NDIS support, she needed to be 'extremely impaired' on one of these criteria. In their view, her impairment on any of these was insufficient. They took absolutely no account of the fact that she was substantially impaired on several factors, and in aggregate, these amounted to a large degree of overall impairment.

Whilst this is only a single case study, it seemed to the family crazy that the NDIA was operating in this way with an "all the eggs in one basket" assessment strategy. As far as they are aware, there is nothing in the Act that says the legislation should be interpreted this way. The family asked: "if her psychiatrist, after extensive contact with this lady, says she needs psychosocial support, who are the NDIA to deny this...?" They then found out that the NDIA had more than \$1 billion in unspent funds, some of which could have been used for their daughter.

The following impressions were also spoken about:

- 1 The NDIA annual report 2016-17 shows that, of all the support packages issued, by category, the most frequent were: intellectual disability 36%; autism 29%.  
  
These may be worthy candidates for packages. As far as assessment goes, these may also be the 'low hanging fruit', easy to assess, possibly with a high score against a single criterion. But that, seemingly, is no reason to be dismissing more complex, multi-factor psychosocial applications such as the one above. It would seem the NDIA needs to review its assessment practices; and also provide justification as to why their views should carry more weight than those of a professional psychiatrist who has in-depth knowledge of the applicant.
- 2 It seems that these same 'category' figures were not shown in the 2017-18 annual report of the NDIA. Have these figures been withdrawn? And if so, would that amount to a reduction of transparency of a public institution?
- 3 The 2017-18 report includes data purporting to evaluate the performance of the NDIA. The results purport to show the agency is doing well. There appears to be little disclosure of how these assessments were obtained, or whether these are the result of independent, third party assessment. It would seem that both the service providers and the agency itself have a vested interest in obtaining 'good' performance reports. If the methodology simply involves an internal process, such as the service provider asking the client 'are you happy with our service?' there is going to be a strong bias towards a 'Yes' response as the clients are unlikely to be experienced in service assessment, and won't in any case, want to 'hurt the feelings' of the provider.

### Recommendations

This is a single case study. Nonetheless, the following recommendations may be appropriate:

- 1 Review NDIA assessment criteria for people with severe/complex psychiatric needs.
- 2 The NDIA should, in its reports, offer far greater transparency. As a matter of priority, the NDIA should produce a publicly available 'Reject Report' which gives a full breakdown of the number of applications received, the number successful and rejected, and percentages of each, with a full breakdown by category of both acceptances and rejections; and where rejected, clear reasons why, by category and overall.
- 3 The NDIA's performance should be subject to independent assessment, with random, unannounced external audits, carried out in private, or by arrangement with the client, in private. The auditor should then publish their own assessment report. Furthermore, there should be available to the auditor a full list of applicants rejected by the NDIA, where contact with a random sample of rejected applicants forms part of the report.

# Sanitas Villa



Working name for  
this project. Latin:  
Sanitas: *health, sanity*  
Villa: *farm, villa, village.*

## Draft Proposal

for a

Physical and Psychosocial Health Farm Program,  
deployable throughout Australia,  
for those with, or recovering from,  
severe mental illness  
with comorbid overweight/obesity

### Stage 1

Establishment of the Initial Farm  
on a Pilot Basis

to set up procedures, processes and methodologies,  
measure outcomes, and evaluate the program.

This is a not-for-profit proposal.

Peter T Kent PhD

April 2019

Regardless of government interest in this project or otherwise, the author is considering the establishment of a charity to set up such a farm. Anyone who would like to comment can contact the author via the Productivity Commission.

## The concept

Severe mental illness includes schizophrenia, other psychotic illnesses, and severe mood disorders.

Overweight/obesity is common in this group, along with smoking, leading to a range of comorbidities including insulin resistance, high blood pressure, atherosclerosis, stroke, cardiovascular disease, type 2 diabetes, gall bladder disease and some cancers. Various reports indicate that life expectancy for this group is reduced by 5-25 years.

The primary mental illnesses here are difficult to treat, and often, are chronic. However, in the right circumstances, with weight loss, and cessation of smoking, the physical comorbidities are, to a significant extent, treatable. This is where the greatest gains can be made with this group.

Most Australians live in an obesogenic environment; that is, one in which there are readily available and strongly advertised products including confectionery, high sugar breakfast cereals, burgers, 'fries', and high sugar soft drinks. People with the above mental illnesses not only tend to do too little exercise; they are frequently on medications, including anti-psychotic medications, which strongly enhance appetite. It is not surprising that most of these folk are overweight or obese.

Programs to date have failed to address this problem, and new thinking is required.

The solution proposed here is to move groups of these people totally out of the obesogenic environment in which they live; and offer them accommodation on a psychosocial health farm for up to 12 months where, out of reach of 'easy-grab' foods, they can be on a program of weight reduction, psychosocial support, and treatment of comorbid illnesses where required. The farm would be built on a foundation of respect and mutual support for all involved. An exercise program would be built in for all participants, tailored to their needs and capabilities. Additionally, this would be a working farm to the extent that it would produce most of its own fruit, vegetables eggs etc. Participants would be required to spend part of their day working under supervision on the farm, or on a roster basis, on laundry duty or assisting in the kitchen. As such, they would develop skills in these areas. Throughout the program there would be strong indoctrination and training on healthy cooking and eating practices. It is intended that on departure, every participant should have reached a BMI (basic metabolic index) within the normal range of 19-25. Prior to departure participants would begin a transition program back to normal life, with training on how to avoid obesogens<sup>1</sup>, and continue their healthy practices back home. Follow up would be part of the program.

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## The disability sector in Australia

The Australian Network on Disability provides the following information:<sup>2</sup>

- Number of people in Australia with some form of disability: > 4 million
- Number of those of working age (15-64 years): > 2 million
- Number of Australians living with Anxiety or depression (which can range from mild to severe) 3 million

The National Disability Insurance Agency (NDIA) administers the NDIS (National Disability Insurance Scheme) through which, via strict eligibility criteria, persons with severe disabilities are able to receive financial packages to pay for support services which range all the way through to full time supported residential accommodation.

The NDIA Annual Report 2017-18 indicates:

- By 30 June 2018: No. of persons being funded by NDIS 184,000
- By July 2020 (full rollout of the scheme): No. of persons to be funded 460,000 (at a cost of \$22 billion in the first full year of the scheme).

Thus, whilst the NDIS is a worthwhile initiative, it provides support to only 11-12% of persons with disabilities. Of those receiving support packages, the 2016-17 Annual Report indicates that the distribution of approved support plans by category were:

- Intellectual disability 36%
- Autism 29%

It can be seen, therefore, that these two categories of disability constituted almost two thirds of all packages issued. All other types of disability, mental and physical have been restricted to the remaining one third of support packages issued. On these figures, more than 85% of persons with a disability will receive no support from the NDIS.

## The need for psychosocial services

In 2015 the Australian Government estimated that 690,000 Australians had a severe mental illness; and that around a third (i.e. 230,000 people) have chronic, persisting illness and have a need for some form of social support. At full scheme the NDIS is expected to provide services to approximately 64,000 people with a primary psychosocial disability. Based on those numbers, there will be around 166,000 people who are not eligible for NDIS but have no certainty of access to psychosocial disability support services.<sup>3</sup>

Whilst it could be located anywhere in Australia, for planning purposes, it has been assumed that the initial (pilot) farm will be located in Victoria, some 1-2 hours drive from Melbourne. Initial contact with Victorian Shires has indicated their interest in the project. Thus:

Population Australia (approx)	25 million
Population Victoria (approx)	6.4 million (25.6%)

On this basis, it would be expected that in Victoria, there would be in excess of 40,000 people with chronic, persisting mental illness in need of such services.

Whilst there are in place some psychosocial support services, both residential and community based, it is clear from the statistics that the service availability falls well short of the need. This is currently gaining media attention, e.g. 'High-risk teens dying on mental health wait lists'.<sup>4</sup>

## Obesogenic environment and its impact

Australians live in an obesogenic environment, i.e., an environment with ready availability of:

- manufactured and fast foods with high levels of fat, sugar and salt;
- confectionery;
- soft drinks with high levels of sugar, caffeine, colouring agents etc.

Superimposed on this, there is extensive advertising of such products, including advertisements targeted at children; and marketing tactics of product upsizing, and selling "2 for the price of 1.5", thereby encouraging over-purchasing.

This situation has emerged over the last 3-4 decades. ABS reports indicate that by 2014-15 64% of Australians were overweight or obese (36% being overweight and 28% obese)<sup>5</sup>.

Over and beyond this: people with severe mental illness have tendencies towards poor diet, insufficient exercise; and in many cases the taking of medication which increases appetite. One recent scientific study investigated this and reported

"About 80% of people with serious mental illness are overweight or obese".<sup>6</sup>

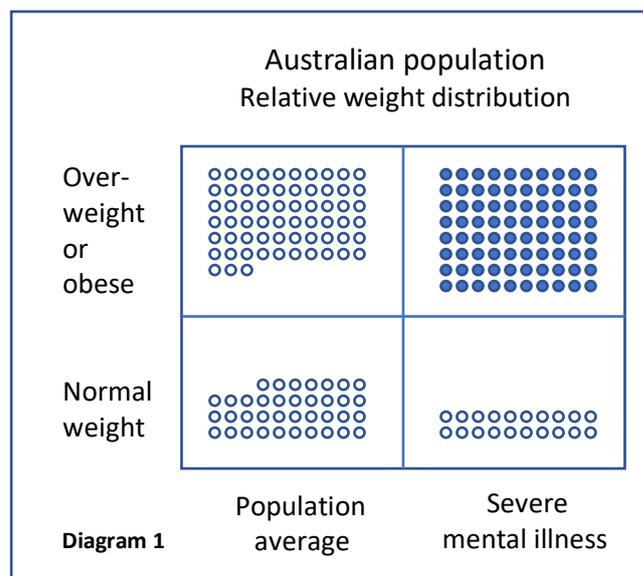
This same study investigated the effect of a weight loss/exercise intervention program on people with severe mental illness and achieved small weight losses (5% of body weight) over an 18 month period. However, in this study participants remained in their regular (obesogenic) environment throughout. Interventions were intermittent, not continuous. For effective outcomes, this underpins the need to move participants from their regular environment to a

supervised environment, free from obesogens, and with a continuous health program. Hence the ‘farm’ approach.

## Comorbidities

### Severe mental illness and excess weight/obesity

Whilst a high proportion of Australians generally are overweight or obese, diagram 1 illustrates the particularly high correlation between severe mental illness and excess weight/obesity. This is a situation of comorbidity of these issues.



### Severe mental illness and smoking

SANE Australia reports<sup>7</sup>:

- Smokers in the Australian population 18%
- People with mental illness who are smokers 32%

The incidence of smoking is higher amongst those with severe mental illness.

The Cancer Council Victoria website:

“Tobacco in Australia”

reports that amongst people living with psychotic disorders:

- Men who are smokers 70%
- Women who are smokers 60%

The NSW Mental Health Commission Report “Physical health and mental well-being” quotes the following information:<sup>7</sup>

Issue	Frequency of occurrence %	
	General population	People with psychosis
Heart or circulatory conditions	16	27
Diabetes	6	21
Metabolic syndrome		50

It is likely that the higher levels of occurrence of these issues in people with psychosis are due to the comorbidity with overweight and smoking rather than the psychosis itself.

In general: there are strong links between physical and mental health. A common problem for people with severe mental illness is the associated stigma. This, and the impact of the illness itself not infrequently leads to social isolation. Being overweight or obese contributes to poor self-image which also contributes to social isolation.

Some mental illnesses have physical effects, for example: many persons with schizophrenia have negative symptoms of 'lethargy' or lack of 'get-up-and-go'. Similarly, those with severe depression may also suffer from lethargy. Lethargy contributes to lack of exercise, which contributes to medical issues and to the patient being overweight or obese. Similarly, people who are overweight or obese find exercise challenging, and accordingly, do less. As such, they miss out on the cardiovascular benefits and the 'endorphin hit' that can come from vigorous physical exercise. As a consequence, their mood level, or affect, may drop. There is clearly a close relationship between mental and physical health. These comments are supported in the literature with evidence based research.<sup>8,9</sup>

In an ideal world one would apply effective treatments to both the mental illness and the obesity (and conditions that flow from it). However, given that treatment of severe mental illnesses is not yet advanced, there is still considerable scope to treat the physical aspects of the illness. For example if an obese person can reduce his/her weight from 105 Kg to 80 Kg, not only will that person feel much better about themselves; on a body-mass basis it is quite possible that they may be able to reduce their medication dose by 20-30% without loss of clinical effect, but with reduced risk of side effects.

## Why a farm

A farm offers the potential to build a supportive, recovery oriented community in a relaxed, outdoor environment away from the pressures of metropolitan life. In addition, in treating obesity, it is particularly important that residents are in an environment *away* from the ready availability of fast food, confectionery, soft drinks and cigarettes. A farm located at least 10km from the nearest town offers exactly that potential. Based on a farm of (say) 40 ha (100 acres), it is envisaged that:

- the farm would be a working farm in the sense of growing its own fruit and vegetables, having chickens etc, thus being partially self-sufficient;
- residents, according to capability and under supervision, would spend some of their time engaged in farming activities; and in so doing, learn useful skills;

- on a roster basis, under supervision, residents would spend some time working in the farm kitchen preparing meals for all residents; and in so doing, learn to cook healthy meals. They would also be engaged in laundry, cleaning and other activities.
- there would be space on the farm for recreational and sporting activities;
- residents could stay for up to 12 months, and in some cases, up to two years;
- residents' access to mobile phones and internet would be restricted to facilitate community interaction.
- the farm would operate on an organised basis whereby residents had a mix of structured activities, exercise, and recreational time.

One of the problems of people with severe mental illness is isolation and, in some cases, lack of social skills. The farm is intended to be designed and operated in such a way as to facilitate residents engaging with each other (and staff) in a constructive, purposeful community, and in so doing, develop not only community values, but social skills and useful life skills.

## Program activities

Programs would be tailored to individual needs, and may include:

- group counselling; individual counselling and personal development
- living skills including healthy cooking and eating; cleaning, washing
- farm work and vegetable growing
- weight loss program
- daily exercise and fitness program
- excursions
- yoga, meditation, mindfulness training
- music / choir
- group fun and entertainment
- farm based sporting activities such as rope climbing, tug-of-war and wheelbarrow races.

The onset of residents' mental illness may have been caused by both genetic and environmental factors, where the latter may have included adverse experiences during childhood and adolescence. Whilst the farm cannot change residents' genetics, it can, over a period of time, give them a stable, supportive environment in which they may be able to re-establish their personal identity, heal childhood trauma (where it has occurred) and prepare for life ahead on a new footing.

## What the farm is not:

The farm is not intended to be a hospital, nor to deal with people in the acute stages of a mental illness. It is not intended to be a drug or alcohol rehabilitation facility. It is not intended for weight loss alone. A prior condition is mental illness. If, on the farm, a resident has an acute psychotic relapse, that person would be looked after and arrangements made for their transfer to an external hospital. Once they had recovered, they would be eligible to return to the farm.

## Resident access and admission criteria

It is envisaged that:

- a) minimum age of access is 18 years.
- b) for places available on the farm:
  - 50% would be reserved (with priority access) for people aged 18-30 years;
  - 10% would be reserved (with priority access) for people in the immediate catchment area, i.e., within 50km of the farm
- c) eligibility for access is based on comorbidity of mental illness and overweight/obesity;
- d) admission procedure includes screening of applicants by a psychologist, social worker or medical practitioner. Whilst the intention would be to offer places to as many needy people as possible, the farm would reserve the right to refuse entry if the applicant is assessed at that time as clinically unstable, or likely to be excessively disruptive to the farm and its residents. People refused entry would have the right to reapply at a later stage.
- e) the farm would be a non-smoking farm. (Cigarette butts can start bush fires.) People who are smokers and seek entry would be asked first to engage in a Quit program. The farm would accept people who, as part of a quit program, are using nicotine withdrawal aids such as gums and patches. e-cigarettes would not be allowed.
- f) applicants may be referred by medical practitioners, social workers, local councils, hospitals or health departments; or by family members; or via self-referral.

To be successful, the farm would need to operate as a mix of: training farm, holiday farm, boot camp and rehabilitation facility. It's culture would be based on respect and support; working, and having fun. It would, of necessity, have an element of 'tough love'. Some residents may lose weight easily simply by switching from an obesogenic diet to a healthy diet. For others, weight loss may be a challenge, where, under the supervision of a dietician, targets may be set for weight loss (for example) of 1 Kg per week or fortnight. Recognition would be offered for achievement of goals. It is hoped that as people saw the progress they were making, they

would commit even more fully to the program. As a consequence, it is hoped the reputation of the farm would build strongly, and it be seen as a place desirable to attend.

**Mandatory referral:** There may be situations where a person does not want to attend the farm; but where their medical practitioner sees it as a vital for their health. In such cases, medical practitioners may seek to have the power of mandatory referral, as they can do for mandatory referral of such people to a hospital. This is a matter for further discussion.

Notwithstanding any mandatory referral, it is not envisaged that the farm would be a prison. It would have a strong culture of 'stay and persist', 'give it a go'. But if people were determined to leave, and became highly disruptive, in the interest of other residents, they would be let go.

## Physical health considerations

Good physical health contributes to a person's overall well-being. It is intended that the farm be run on lines that are not only healthy, but train or indoctrinate residents into healthy practices that they may take with them in their life beyond the farm. Whilst being sensitive to individual client needs, it is envisaged that the farm will have firm policies designed to achieve optimal outcomes over a client's period of residence. To this end:

- a) the farm will be alcohol-free;
- b) the farm will be soft drink free other than mineral waters or soda water;
- c) other than prescribed medication, drugs will not be allowed;
- d) food will be vegetarian oriented to facilitate health and where needed, weight loss.

Vegetarian orientation Diet, and food preparation will be based on healthy guidelines. Within this context, there are a large number of studies and publications worldwide, from the World Health Organisation down, promoting the benefits of a vegetarian oriented diet. These benefits include: reduced risk of diabetes, cardiovascular disease and some cancers; and less weight gain.<sup>10</sup>

It is envisaged that the kitchen will produce vegetarian meals seven days a week, and offer chicken, fish and meat dishes 2-4 days per week. If individuals have special dietary requirements, such as vegan or gluten-free, where possible these will be catered for.

Weight loss program A key design parameter of the farm is to offer residents healthy food, and keep the obesogens 'out of reach'. Over time it is hoped that residents will adapt to the healthy diet, their palate will normalise to this, so they come to prefer this food, and on leaving, retain these eating habits.

Persons with a healthy weight usually have a BMI (Body Mass Index) in the range 19-25. A BMI in the range 25-30 is considered overweight, and over 30, obese. Subject to medical confirmation, all residents with a BMI of 26 or more will be asked to commit to the weight loss program whilst they are resident at the farm. Weight loss programs will be tailored to individual needs, and may include intermittent fasting.<sup>11</sup>

Exercise All farm residents will be required to engage in a daily exercise program. This will be individually tailored, according to a person's health, fitness and personal goals. The program will be conservative, starting at what is a relatively low level for each individual and allowed to build up as the person progresses.

## Resident exit strategy and follow up

A central goal of the farm is to assist residents:

- a) in regard to mental health: become more stable, self-aware with enhanced, lasting life and social skills;
- b) with regard to weight (where required): reduce this to a normal BMI range, and train the resident in healthy cooking and eating practices that may be carried forward in life.

However, when a resident leaves the farm they move from a supportive, health farm culture:

- a) in regard to mental health: to their original settings, or new settings, and the need to deal with potential new stresses, and the hurly burly of life. The question is 'can they maintain their stability, equilibrium and life skills in this environment?'
- b) in regard to weight: to an obesogenic environment. The question is 'can they maintain healthy eating practices and weight control in such an environment?'

If we imagine, for example, that without an exit strategy or client follow up, 50% of residents relapse on either physical or mental health grounds; but with a well planned exit strategy, and a substantial follow up program, relapse can be reduce to 10-15%, then that would be a huge improvement. The key goal, after all, is (to the extent possible) to achieve lasting change.

It is envisaged, therefore, that for any resident attending the farm, 5-20% of the resources spent on that resident would be in exit programs and ongoing support. Such programs may include:

- i) training for transition back to the external world;
- ii) a period of time spend in a half-way house with support and further exit training
- iii) telephone support for residents in their home environment
- iv) transition to case worker support to residents in their home environment
- v) provision for former residents to return to the farm for a revision week on up to two occasions: for example, six months and two years after departure

There may also be the possibility of a resident alumni arrangement to allow former members to keep in touch or offer peer support.

## Farm development, safety and environment

It is envisaged the farm would be developed in three stages:

Stage 1	20 residents
Stage 2	40 “
Stage 3	60 “

Some of the infrastructure would be set up from the outset for 60 residents, such as office, kitchen, lounge/recreation room and laundry. Other infrastructure, such as accommodation units, would be constructed in stages. Whilst allowing quiet space and time for individuals, the farm’s overall layout would be designed to facilitate social interaction and a sense of community.

One feature of the farm would be a free-standing hall of sufficient size that it could accommodate a basketball court. This would include a gymnasium in one section; and allow plenty of space for multiple activities, including exercise classes, farm community meetings, music and social activities in all weather conditions. In addition, as far as possible, the farm needs to provide an enjoyable environment for residents. Thus, it is envisaged that recreational facilities would include table tennis and billiard tables. At a later stage, if funds permit, consideration would be given to adding a solar (or heat-pump) heated swimming pool and a tennis court. This recreational side is a vital part of the overall farm package.

Safety Safety is a prime consideration. Risks would need to be identified where such risks could include snake bite, accidents, bushfire; and resident risk of self-harm or suicide. Safety policies would be developed whereby safety awareness and practices were incorporated into all aspects of daily activities. It is likely that the facility would include a fireproof bunker in which, in the event of a bush fire, all residents could be protected for a period of up to (say) six hours.

Environment Environmental considerations will be central to the design and operation of the facility. It is envisaged that, building on the natural environment, the surrounds of the living areas would include small trees and shrubs, and areas of lawn – all of which create a relaxing and healing setting. Larger trees would be located further away from the buildings to reduce risk of bush fire.

Buildings would be designed to be fire-resistant, with many having North facing roofs suitable for deploying solar panels. Indeed, with the incorporation of batteries, the facility might generate enough electricity to become self-sufficient and go off-grid. Roofs would be designed to capture rainwater and save this in tanks where such water could be used for irrigation,

washing and, in the event of a bush fire, a backup supply of water to be deployed through roof based sprinklers.

## Record keeping

Records would be kept on all residents from the time they arrived at the farm until they left. Such records would include their medical records, progress towards their goals, and psychosocial achievements. Where possible, residents would be followed up annually after they left. Over time, in this way, the effectiveness of the program could be monitored, and program adjustments made if/as necessary. De-identified data could be available for research and policy development purposes.

## Staffing

Details are yet to be developed. However, from the outset, it is envisaged that the facility would need:

- a general manager, resident at the facility (full time)
- a chef (full time)
- a lead farm hand or agronomist to supervise farm activities (full time)
- an activities and exercise coordinator (full time)
- a psychiatric nurse (full time)
- visiting/part time staff
  - psychologist for entry assessments and to provide counselling/therapy services
  - nurse to attend to minor health matters in the onsite surgery
  - administration officer to handle enquiries, bookings, record keeping, and supplies
  - bookkeeper/accountant
  - maintenance person to attend to maintenance of equipment, buildings etc.

Visits from a GP or psychiatrist may also be required.

Over and beyond this there could be voluntary staff consisting of students on placement, for example: medical students, psychology students, or those training to be social workers or psychiatric nurses. Such volunteers could play ancillary roles in most activities of the farm, and in the process, gain valuable experience in dealing with people with mental illness. There may also be roles for volunteers from the local community.

## Legal structure

It is intended that the farm be set up as a not-for-profit entity. The facility could be publicly owned; or, subject to legal advice, be incorporated as a company limited by guarantee. The assets of the farm may be held by the company, or in a trust for which the company is trustee.

The entity may register as a charity and apply for status as a Deductible Gift Recipient so that donations to the facility are tax deductible.

## Financial structure

Detailed capital and operating costs are not yet known. However as a starting point, the following rough estimates may be considered:

Capital costs \$:	Farm purchase and initial setup	5 million
	Full development of the facility rising to	8 million
Initial operating costs: \$ p.a.	Staffing as above	650,000
	Food (not home grown)	60,000
	Supplies non food	60,000
	Vehicles, plant and equipment	30,000
	Telecommunications, insurance, utilities etc	60,000
	Sundries	50,000
	Contingencies	<u>50,000</u>
		960,000

Revenue Commercial health farms charge \$2,000 per week or more for clients who generally are pampered. That is totally out of the range of our envisaged client group.

Whilst clients will be expected to make a financial contribution, no-one should be excluded through lack of ability to pay. Residents receiving a Centrelink payment will be asked to pay a fee, indicatively 80% of the Centrelink benefit that they receive<sup>12</sup>. Thus, a person on a disability pension of (say) \$450 per week would pay \$360 per week.

If we assume that on average, the amount residents can pay is \$300 per week (\$15,000 p.a.) then the annual revenue contribution from respectively 20, 40, 60 residents would be \$300,000, \$600,000, \$900,000. The balance of operating costs would need to come from government funding, charitable donations, or both. If residents can pay nil, the external contribution would need to be higher. It is possible that the facility could register as an NDIS provider, enabling some residents to be funded through the NDIS.

It is apparent that there are likely to be significant economies of scale to be achieved by developing the facility to hold 50-80 residents.

That is why the proposed farm is of a size 40 ha (100 acres). It needs to be large enough to provide plenty of space for the physical amenities, farming activities, exercise and recreation. It

may also need to be large enough to provide a vegetation free zone around the facility as a fire break.

## Naming rights

For consideration: if this is set up as a charity, the first philanthropist to donate \$1 million or more to the facility will have naming rights, for example: “The John Smith Recovery and Rehabilitation Centre”.

## Conclusion

This paper provides evidence to show that:

- a) in Victoria, over and above persons supported by the NDIS, there are likely to be in excess of 40,000 people with severe mental illness requiring substantial psychosocial support;
- b) obesity rates in Australia are high with 64% of the population being classed as overweight or obese. Research shows that for people with severe mental illness, approximately 80% of these people are overweight or obese

That would mean, in Victoria, there would be in excess of 32,000 such persons with this comorbidity. The rural facility proposed in this paper is designed specifically for that purpose. The benefits of this ‘farm’ approach include:

- it can be a medium to large facility which becomes a community in its own right;
- there is space and scope for a wide range of support activities and outdoor exercise;
- residents on the farm are removed from the temptation of going ‘down the street’ to buy junk food, soft drinks, cigarettes and confectionery;
- as part of their psychosocial support and personal development, residents will, where capable, take part in all aspects of operating the farm, the kitchens and the household – along with therapy, exercise and recreation in a community setting. This will not only broaden their experience; it will give them valuable skills for their life ahead
- Because the farm will be partially self-sufficient, costs will be kept down. This benefit is unique to farm based facilities, not available in metropolitan areas.
- It also has the benefit of creating rural or regional employment and economic activity.

If the majority of residents who leave the farm are able to retain all or most of their weight loss, and healthy eating habits, not only will this be of great benefit to them personally in that it will increase their health, self-esteem, and potential for employment; it will significantly save on

their health costs to the nation in years to come. As far as I am aware, there is no facility like this anywhere else in the world. This project has the potential not only to succeed, but to become a model for world's best practice.

On this basis, it is recommended that the project be funded. If successful, this farm can be used as a model to be replicated in other states or regional areas.

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<sup>1</sup> Obesogen: a manufactured product, usually containing high levels of fat, sugar, salt, or combinations thereof, engineered to appeal to the palate with the intention of engendering maximum and repeated consumption.

<sup>2</sup> <https://www.and.org.au/pages/disability-statistics.html>

<sup>3</sup> Mental Health Australia: Submission to Productivity Commission Review of the National Disability Agreement.

<sup>4</sup> Sunday Age, 27 January 2019, P 4.

<sup>5</sup> <https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4364.0.55.001~2014-15~Main%20Features~Overweight%20and%20obesity~22>

<sup>6</sup> Daumit GL, Dickerson FB, Wang N-Y, Dalcin A, Jerome GJ, Anderson CAM, Young DR, Frick KD, Yu A, Gennusa III JV, Oefinger M, Crum RM, Charleston J, Casagrande SS, Guallar E, Goldberg RW, Campbell LM, Appel LJ. A behavioral weight-loss intervention in persons with serious mental illness. *New England Journal of Medicine*. 2013;368(17):1594-602.

<sup>7</sup> <https://www.sane.org/mental-health-and-illness/facts-and-guides/smoking-and-mental-illness>

<sup>8</sup> Mental Health Commission of NSW, 2016: Physical health and mental wellbeing: evidence guide.

<sup>9</sup> Mental Health Foundation UK <https://www.mentalhealth.org.uk/a-to-z/p/physical-health-and-mental-health>

<sup>10</sup> [https://www.eurekalert.org/pub\\_releases/2018-06/n2-nrr053118.php](https://www.eurekalert.org/pub_releases/2018-06/n2-nrr053118.php)

<sup>11</sup> See for example: <https://www.healthline.com/nutrition/intermittent-fasting-guide>

<sup>12</sup> A standard used by other residential accommodation services.