GOVERNMENT OF WESTERN AUSTRALIA

Sustainable Health Review

Public Submission Cover Sheet

Please complete this sheet and submit with any attachments to the Sustainable Health Review Secretariat

Your Personal Details ***This information will be used only for contacting you in relation to this submission***	
Title	Mr ☐ Miss ☐ Mrs ☐ Ms ☐ Dr **X** Other ☐
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Publication of Submissions

Please note all Public Submissions will be published unless otherwise selected below

☐ I do not want my submission published

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Submission Guidance

You are encouraged to address the following question:

In the context of the Sustainable Health Review Terms of Reference listed below, what is needed to develop a more sustainable, patient centred health system in WA?

- Leveraging existing investment in Primary, Secondary and Tertiary healthcare, as well as new initiatives to improve patient centred service delivery, pathways and transition;
- The mix of services provided across the system, including gaps in service provision, sub-acute, step-down, community and other out-of-hospital services across WA to deliver care in the most appropriate setting and to maximise health outcomes and value to the public;
- Ways to encourage and drive digital innovation, the use of new technology, research and data to support patient centred care and improved performance;
- Opportunities to drive partnerships across sectors and all levels of government to reduce duplication and to deliver integrated and coordinated care;
- Ways to drive improvements in safety and quality for patients, value and financial sustainability, including cost drivers, allocative and technical efficiencies;
- The key enablers of new efficiencies and change, including, research, productivity, teaching and training, culture, leadership development, procurement and improved performance monitoring;
- Any further opportunities concerning patient centred service delivery and the sustainability of the WA health system.

Submissions Response Field

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By definition 'sustainable' means being able to continue indefinitely. In the context of this review it describes the provision of a health service that can pre-empt or manage the changing, and increasing, demands on it resulting from

- Population growth
- Changing demographics, primarily population ageing
- Health inequality, consequent on resource inequality
- The rising prevalence of chronic disease
- The depredations of neoliberal economics on health policy and,
- Environment change due principally to air pollution and global warming related primarily to fossil fuel use.

The review documentation also notes that the health service is economically unsustainable and becoming increasingly so.

The consideration of population health and demographics identified in the terms of reference is clearly important in determining changing health needs. However, to understand future demands for health will also require more information on the determinants of ill health and need for health care in the community.

Health outcomes have improved substantially over the last two centuries. This has been driven more by public health intervention than by advances in healthcare technology. Many of the improvements resulted from advances in scientific understanding combined with engineering or built infrastructure projects or change in regulations across areas outside the health portfolio.

The importance of this is that our health has improved primarily because we have been able to recognise and modify external (environmental) factors that determine health.

A good example is chlorination of urban water supplies in the mid 1800's in response to the recognition of a large burden of ill health was mediated through contaminated drinking water. This intervention (perhaps the single most effective health intervention) clearly required a cross sector or whole of government approach. Prior to this (and the introduction of other public health measures) there was a known "urban penalty" where life expectancy and health outcomes were far worse for city dwellers.

However, whilst public health measures and healthcare have been effective in managing many acute and infectious diseases, there has been a transition to chronic, non-communicable

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diseases (NCDs) – Type 2 diabetes, obesity, cardiovascular disease and dementia.

The NCD epidemic is a product of our modern society. Rapid urbanisation, passive transportation, sedentary occupations, unhealthy food systems and unhealthy built environments create conditions that promote inactivity, poor diet, exposure to air pollution and social disconnection and inequality.

> *Whilst the nature of health challenges may have changed, the underlying principles that are required to address them have not. We will not solve ill health by treating disease but by looking upstream to the reasons why people are developing illness and preventing it.*

Recommendations:

Reducing demand for health services and costs today will similarly require cross-sector and whole of government approaches. Energy generation and motorised transport, for example, are primarily responsible for air pollution that has significant population health impacts. It is estimated that about 3000 deaths are attributable to air pollution in Australia each year at a health cost of $11-24 billion per year. https://soe.environment.gov.au/theme/ambient-air-quality/topic/2016/health-impacts-air-pollution. This does not include the costs related to morbidity from asthma, COPD exacerbations, heart disease, strokes and low birth weight related to air pollution. A 2011 cost-benefit analysis of the 1970 US clean air act calculated that for every dollar invested in reducing air pollution returned $30 of benefit.

Currently there is no mechanism to transfer these costs from the health system to the polluters and consequently no incentive or budgetary driver to reduce harmful emissions even though they are costing us in ill health, lost productivity and healthcare.

Recommendation 1: To include consideration of health impacts and costs in the planning of all new infrastructure requiring government approval and apply it retrospectively to present infrastructure that is known or thought to have major health impacts.

Climate change has been identified as the greatest challenge to human health in the 21st century. Health impacts occur through a range of pathways. They include the direct and shorter term impact of extreme temperatures and extreme weather or weather-related events (wind, flood, including inundation by the sea, and fire), which adversely affect air quality, cause mass release of aero-allergens and cause mass local displacement of and loss, both financial and personal, to affected people; and indirect and longer term effects of changing the range and behaviour of infectious and

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vector borne diseases, and locally and regionally increasing sea levels leading to the permanent displacement of large numbers of people and driving conflict between people. All of these and particularly the latter have substantial potential to increase the burden of mental ill health as well as physical health.

The health impacts have been evaluated in the Australian context in the Climate Commission 2011 report: The Critical Decade: Climate Change and Health (http://www.climatecouncil.org.au/uploads/1bb6887d6f8cacd5d844fc30b0857931.pdf).

In this they point out that the number of days in Perth with temperatures over 35℃ is projected to rise from around 28 in 2008 to 72 in 2100 (without mitigation) and this will lead to a rise in hospital admissions for heart attack, emergency department and mental health presentations and all-cause mortality.

In Melbourne, a study across 1999 to 2004 found that hospital admissions for heart attacks increased by about 10% on days when temperatures exceeded 30°C, and by almost 40% during heatwaves in which the three-day average temperature exceeded 27°C (Loughnan et al., 2010)

The number of temperature related deaths (heat and cold) across Australia is projected to increase from around 6000 to over 17,000 by the end of the century (*Bambrick et al., 2008*).

Whilst we cannot know how effective global action to mitigate climate change is going to be, we have already experienced 1℃ of warming over the Australian continent and must plan for at least 2 degrees (as this will occur even with mitigation). The current heatwave plan is a start in ensuring the provision of health care services in the near future, but should be reviewed for the longer term when temperature elevations will be higher and persist for longer. In addition this plan does not help with managing response to more extreme and physically destructive weather events or changing patterns of disease.

Without planning there is a danger we could find ourselves with a health services that cannot cope with demands or function as a result of climate impacts such as prolonged heatwaves, extreme winds, floods and disease epidemics.

Recommendation 2: the 2009 Health Impact Assessment be updated to account for new information and include how climate change will impact the security of healthcare delivery.

To this end it should be noted that health services are very energy intensive and produce large quantities of waste. Mitigation of climate change is going to be essential if we are to avoid the unmanageable impacts of climate change. This will necessarily involve all emissions intensive industries including health care reducing their use of fossil fuel and preferably also (because of air pollution issues) other combustion-based energy sources. This does however provide an opportunity. Reducing waste and energy use can deliver significant costs savings. This has been this is borne out by experience in other countries. For example, the UK NHS Sustainable

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Development Unit reduced the NHS's carbon emissions by 11% between 2007 and 2015 whilst reducing costs, gaining health co-benefits (due to increased use of active transport by staff) and increasing healthcare activity by 18% https://www.england.nhs.uk/2016/01/climate-change/.

Because this work has been done and over 10 years of experience has been evaluated and published (https://srp.digital/srp/public/macc-national.html) it would be relatively straightforward to review and implement its most cost effective measures in WA.

Recommendation 3: The Sustainable Health Review recommend creation of a WA health system Sustainability Unit to develop and oversee implementation of a Sustainability Plan fo the system's operations.

Population growth, other demographic and social trends and overly influential, self-seeking roads and urban development "lobbies" are driving urban development in WA. Our cities are growing in density and size and consequently there is pressure on green space and recreational areas, traffic congestion and commute times are increasing and occupations are becoming increasingly sedentary.

Traffic congestion has worsened, resulting in lower productivity and rising population exposure to harmful vehicle emissions. BITRE estimated the avoidable combined social cost of traffic and congestion in Perth to be $2 billion (2015), and that under a "business as usual' model these could reach as much as $5.7 by 2030. https://bitre.gov.au/publications/2015/files/is_074.pdf

Poor urban planning and development is exacerbating the "Urban Heat Island" effect. This can add several degrees to urban temperatures day and night and magnifies the effects of climate change. Green spaces provide recreational and social opportunity with very significant physical and mental health benefits. Along with street trees they also provide a buffer for noise, reduce air pollution and provide a cooling effect. Natural green space offers benefits over and above those of other green spaces.

These combined urban changes are driving the epidemic of non-communicable diseases and worsening health inequality, as the more disadvantaged communities generally have less green space and tree canopy, and are often further from the city centre resulting in longer commutes and greater inactivity and exposure to traffic related air pollution.

Recommendation 4: Urban green space and tree policies that recognises the value of conserving natural green space and maintaining its interconnections and greatly increasing urban tree coverage as ways of decreasing urban temperatures, reducing air pollution, promoting urban biodiversity and promoting physical activity and mental and physical health.

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Physical inactivity is now a leading and modifiable cause of disease and disability. Sedentary lifestyles double the risk of cardiovascular disease, diabetes and obesity and increase the risk of high blood pressure, osteoporosis, lipid disorders, depression and anxiety. http://www.who.int/mediacentre/news/releases/release23/en/

Activity is determined by occupational, environmental and social factors. Whilst we cannot make occupations more active, we can modify our built environment and change policy and legislation to promote physical activity and healthier lifestyles.

There is consistent evidence that active transport promotes good health. For example, studies done in the contrasting environments of Copenhagen and Shanghai find similar outcomes; in both cases active commuters have around one third lower 5-year mortality as compared with car commuters.

Promoting and enabling active transport can be a key part of the solution to constrain future healthcare expenditure as well gaining a range of other economic and social co-benefits.

Recommendation 5: Prioritise increased development of infrastructure that supports active transport to increase health and reduce use of combustion-based energy for urban transpor