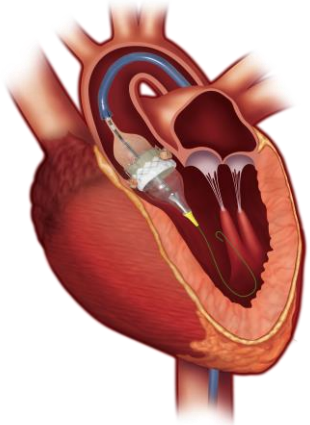
Consumer backgrounder **EMBARGOED: MONDAY, AUGUST 16, 2021**

Overview of the *Our hidden ageing: time to listen to the heart* whitepaper

Heart valve disease in Australia

- There are more than half a million Australians living with heart valve disease — a malfunctioning of one or more heart valves that disrupts blood flow through the heart.[1]
- The risk of developing the disease increases with age, older Australians (those aged 65+) are most affected.[1]
- Clinically, it is most important that heart valve disease is identified early, to avoid the patient presenting in a state of crisis.[1]
- An estimated 254,000 cases of heart valve disease will go undetected in Australia this year alone. That is more than a quarter of a million Australians with faulty heart valves at risk of severe complications.[1]
- The number of undiagnosed cases of heart valve disease is projected to spiral in the ensuing three decades, to 336,000 cases in 2031, and 435,000 in 2051, placing a heavy burden on our nation's healthcare system, ageing population, and economy.[1]
- Although serious, heart valve disease is increasingly treatable.[1]
- Increasing interventions to address heart valve disease could save both lives and money.[1]
- Previously, people living with aortic stenosis had few options to replace their unhealthy aortic valve, including open heart surgery.
- These days aortic stenosis is the most treatable valve lesion due to the development of non-surgical valve replacement, such as transcatheter aortic valve implantation (TAVI).[1-3]
- TAVI is a minimally invasive procedure that helps to improve a damaged aortic valve. During the TAVI procedure, an artificial aortic valve is placed in the heart.[2,3]
- Providing earlier intervention of heart valve replacement with TAVI is predicted to result in greater patient benefits — greater quality of life, fewer life years lost, and fewer cases of heart failure.[1]



Transcatheter aortic valve implantation (TAVI)

Cost-effectiveness of interventions for heart valve disease

- Heart valve disease is under-reported in Australia due to diagnosis and treatment challenges, placing a heavy burden on both our nation's ageing population, and

economy.

- The availability of non-surgical valve replacement, however, is providing an alternative treatment option for those aged over 65 years.[4]
- TAVI was initially offered as an alternative to surgical valve replacement in patients with high surgical risk.[3] However, the high level of safety and effectiveness of the procedure has led to its use in a wider range of patients who are younger, with low surgical risk.[4]
- TAVI has become the standard of care in many countries around the world, including the USA, UK, Canada and several nations in Europe.[5-7]
- Offering TAVI to more people under 65 years of age will likely lead to higher healthcare costs compared to the current approach of 'watchful waiting'.[1]
- However, relative to the quality of life gained, this cost increase is low from a healthcare system perspective, equating to approx. AUD 12,000 per quality-adjusted life year or QALY (the most widely used approach for estimating quality of life benefits in economic evaluations).[8] Therefore, this approach is ultimately cost-saving in the long-term, particularly for those aged under 65.[1]
- The wider adoption of TAVI in under 65s could potentially save the Australian economy AUD 117 million in a single year, while patients gain more than 384,000 QALY.[1]
- TAVI may also reduce the risk of individuals developing serious cardiovascular-related complications — one of the largest financial burdens on our nation's health system.[1]
- Offering TAVI to those under 65 has been shown to lower economic costs, due to the reduced risk of developing heart failure, which is associated with high unemployment.[1]

Cost of heart valve disease in those aged 65+ to the community and economy

- The Australian Government's 2021 Intergenerational Report projects that in 2060–2061, 23 per cent of our population will be aged over 65 years, a rise of around 7 per cent from 2020–2021.[9]
- Furthermore, an influential Productivity Commission (2013) report estimated that Government spending on pensions, healthcare and old-age care in Australia will rise over the ensuing 50 years, without offering any major benefits to the economy.[10]
- However, this view disregards the value of older people's contribution to society through non-market activities, including volunteering, childcare and informal carer support, which in turn, helps to support the nation's economy.[1]
- The value of unpaid services provided by older Australians should be recognised when developing policies for them.[1]
- Evaluating the impact of CVD, such as heart valve disease, and interventions such as TAVI, on those under 65 years of age, could influence their perceived value with regard

to work-related (market) activities and productive non-market activities (PNMA).[1]

- To determine the link between CVD and the value of the contribution made by older Australians to our economy, data from two major Australian household surveys — Household, Income and Labour Dynamics in Australia (HILDA), and the Australian Longitudinal Study on Women's Health (ALSWH) — was analysed.[11,12]
- CVD was found to compromise a person's participation in work-related activities, with the volume of hours spent on market and non-market activities decreasing as the severity of the disease grew.[1]
- According to the data:[1]
    - CVD was linked to a 3 to 27per cent reduction in the likelihood of a person participating in work.
    - Similarly, a person's ability to participate in PNMA was shown to reduce with CVD, particularly with increasing severity of disease.
    - Informal care was most affected, with a decline of up to 82 per cent in the hours contributed by older people, followed by volunteering activities (14–32 per cent), and childcare (14–57 per cent).
- The data also showed loss of earnings (from work) due to CVD ranged from around AUD 2,500 to approx. AUD 16,000 each year. From approx. AUD 4050 to a decline of AUD 19,440.

Consumer recommendations

- "If you're over 65 years of age, ask your doctor to listen to your heart."
- Heart valve disease can go unrecognised, undiagnosed, and untreated, and the complications can be devastating.
- To learn more about heart valve disease, speak to your doctor.

Policy recommendations

- Urgent political attention is required to address the nation's rising rates of undiagnosed heart valve disease, including:
- **Individual and social marketing campaigns** to increase awareness of heart valve disease and other manifestations of cardiovascular ageing, particularly amongst GPs, healthcare and health advocacy groups.
- **Strategies involving primary care**. These might include educational updates and upskilling, or targeted funding for specific assessment of valvular disease (including documenting auscultation — heart checks) as part of a wellness evaluation in older Australians.
- **Support for emerging technologies.** Development of translational research streams to more rapidly evaluate novel technologies for management of structural heart disease.

This includes additional investment to support clinical application of AI-supported and hand-held echocardiography (live imaging of the heart) adjustments in current funding arrangements.

- **Health service design**, including improving access to echocardiography.
  These steps might include early detection and out-reach echocardiography programs in rural areas.
- **Policy.** Dedicated funding for service-level interventions that improve access and equity to transcatheter valvular interventions (minimally-invasive interventions).
- This will require planning, training and resourcing, along with financial incentives to drive clinical change.
- **Guidelines.** Development of national heart valve disease guidelines to facilitate decision-making.

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