Case Study on Inequitable Patient Access to Non-implantable Cardiac Technologies in Australia: Issues Relating to Reimbursement for Catheter Ablation for Patients with Atrial Fibrillation

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BACKGROUND

Atrial fibrillation (AF) causes irregular heart rhythm and is the most common cardiac condition. It is estimated to affect 1-2% of the Australian population (around 460,000 Australians).[1,2] However, prevalence and incidence of AF increases with age (Figure 1).[3] AF prevalence in Australia is predicted to double by 2030.

Health Burden

People with AF have a significantly poorer quality of life (QOL) than the general population.[4,5] The presence of AF results in lower general health, physical activity, emotional health and vitality. AF symptoms include palpitations, dizziness, fatigue, chest pain and breathlessness. These symptoms can be disabling and affect a person's work, diet, lifestyle and mental health.

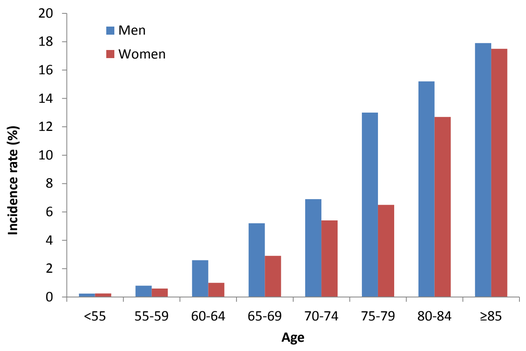
People with AF have a higher risk of:[6,7]

- Stroke: about 2.5-7 times higher
- Heart failure: up to 3 times higher
- Death: 1.5-1.9 times higher.

Economic Burden[8]

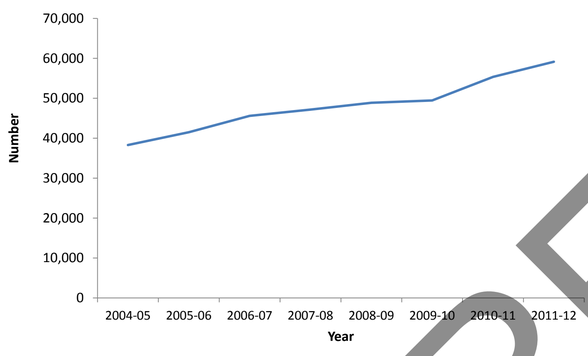
AF generates a significant economic burden - costing the Australian healthcare system **at least $1.25 billion per annum** through medical costs, disability care and lost productivity output. Approximately 35% of these costs resulted from stroke and heart failure. The total cost for AF pharmaceuticals was $74.7 million in 2010. The economic burden is expected to increase with an estimated 7.9% annual rise in the incidence of AF-related hospitalisation and healthcare costs (Figure 2).

Figure 1. AF incidence increases with age



Sources: Ball et al., 2015, AIHW

Figure 2. Increasing AF-related hospitalisation



Source: AIHW

CATHETER ABLATION FOR THE TREATMENT OF AF

The therapeutic aim in treating AF is to restore and maintain the normal sinus rhythm, thus relieving symptoms, improving QOL and reducing the risk of potentially severe complications such as stroke or death. Symptoms of AF may be managed with ongoing pharmacological treatment, or permanently treated with catheter ablation. Catheter ablation is a proven treatment for managing AF (Table 1) that has been shown to be superior to anti-arrhythmic drugs (AADs).[9] Catheter ablation also allows patients to achieve freedom from AF.

Treatment of AF using catheter ablation is associated with substantial cost-savings that can be gained through:[10,11]

- Reduction in hospitalisations (in-patient hospitalisation and emergency), GP visits, medication use and costs, specialist consultations and other AF-associated costs such as carer duties
- Increased QOL and productivity (quicker recovery and ability to return to work)
- Reduction in the risk of AF-associated comorbidities such as stroke and heart failure

Table 1. Clinical guidelines recommend the use of catheter ablation for AF patients

Cardiac Society of Australia and New Zealand (CSANZ) Position Statement 2013[12]	"The Cardiac Society of Australia and New Zealand supports catheter ablation in selected patients as a Class 1 indication for paroxysmal atrial fibrillation and a Class 2A indication for more persistent forms"
UK National Institute for Health and Care Excellence (NICE) Clinical Guideline 2014[13]	"If drug treatment has failed to control symptoms of atrial fibrillation or is unsuitable: • offer left atrial catheter ablation to people with paroxysmal atrial fibrillation • consider left atrial catheter or surgical ablation for people with persistent atrial fibrillation"
European Society of Cardiology (ESC) Guideline 2012[14]	"Catheter ablation of symptomatic paroxysmal AF is recommended in patients who have symptomatic recurrences of AF on anti-arrhythmic drug therapy and who prefer further rhythm control therapy, when performed by an electrophysiologist who has received appropriate training and is performing the procedure in an experienced centre. Catheter ablation of AF should be considered as first-line therapy in selected patients with symptomatic paroxysmal AF as an alternative to anti-arrhythmic drug therapy, considering patient choice, benefit, and risk."

COST SAVINGS: AVOIDABLE AF-RELATED STROKE AND COSTS

AF implicates around 15-25% of all ischaemic strokes and increases to 35% of strokes for those over 80 years old.[15] Stroke is one of the leading cause of death in Australia.[16] Avoidance of an AF-related stroke is likely to save the Australian healthcare system **at least $30,000 per patient for the first year**.[17]

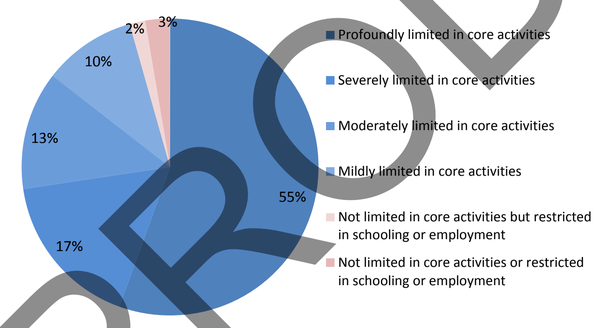
Evidence shows that the risk of stroke after catheter ablation for AF can be reduced to that of the general population.[6,7]

Table 2. Characteristics of stroke hospitalisation

Number of hospitalisations in 2013-14	37,043
Cost of hospitalisation	at least $10,000 per patient (public)
Median hospital stay	6 days
Mean hospital stay	9.4 days
Acute episodes of care	95%
Public vs Private	89% vs 11%
Hospitalisation of stroke - associated with AF	15-25%
With complication(s) or comorbidity	80%

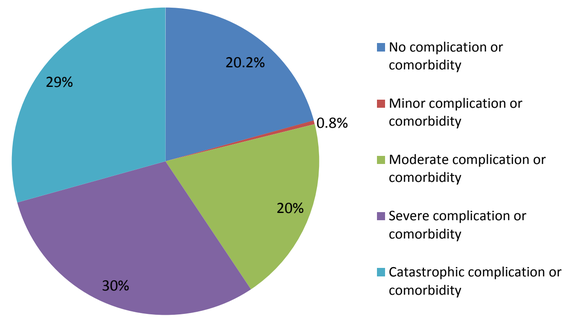
Sources: AIHW and NSW Health

Figure 3. Disability resulting from stroke – restricts schooling or employment



Source: AIHW

Figure 4. Complication or comorbidity from stroke



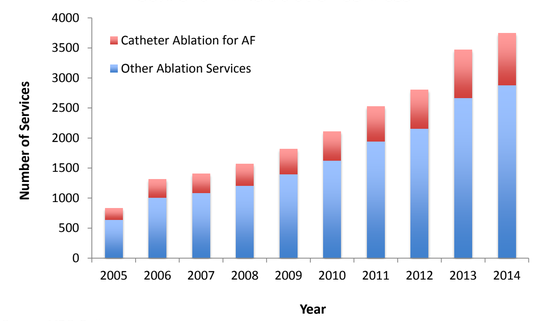
Source: AIHW

ACCESS ISSUE: INEQUITABLE PATIENT ACCESS TO CATHETER ABLATION FOR THE TREATMENT OF AF

Catheter ablation procedures receive funding from the Australian Government through the Medicare Benefits Schedule (MBS) – through a non-specific MBS item to cover all ablation procedures, whereby catheter ablation procedures for AF makes up only 30% of this item (Figure 5). With the current Prostheses List (PL) criteria, ablation catheters are not included on the PL and private health insurance covers only the patient's hospital stay, theatre time and professional fees but not ablation catheter – leading to inconsistent funding required to perform these procedures.

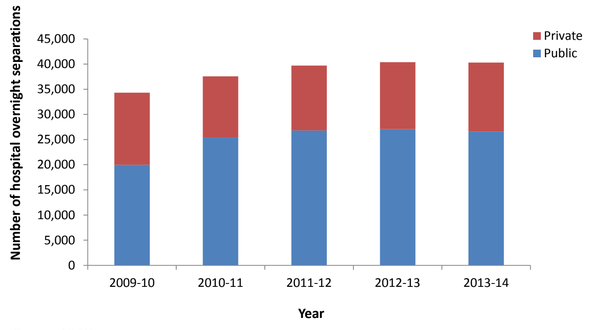
Therefore, if private patients are denied access to these procedures, they may be forced to seek treatment in the public health system. This will invariably add to the existing burden on public hospital waiting lists (Figure 6).

Figure 5. Catheter ablation for AF – 30% of all MBS ablation services



Source: MBS Online

Figure 6. Hospital overnight admission for AF



Source: AIHW

Patient perspectives: "Finding out that you have AF can be a sobering experience, but it needn't necessarily be a life sentence. AF can be fixed in many of us."

"AF was beginning to seriously affect my life to the point where I felt compelled to retire several years early. Sometime after that I finally heard about and underwent a completely successful ablation procedure, after which my quality of life was completely restored. Had I known about ablation before I retired, I would have been able to continue working for some years."

"AF was beginning to seriously affect my life until I finally heard about and underwent ablation, after which my AF completely disappeared."

REFERENCES

1. Kalman et al. Med J Aust. 2013.198(1):27-8.
2. Australian Bureau of Statistics (ABS). 3101.0 - Australian Demographic Statistics, Dec 2014.
3. Ball et al. Med J Aust. 2015. 202(1):32-5.
4. Dorian et al. J Am Coll Cardiol. 2000. 36(4):1303-9.
5. Thrall et al. Am J Med. 2006.119:448e1-19.
6. Hunter et al. Heart. 2012.98(1):48-53.
7. Bunch et al. J Cardiovasc Electrophysiol. 2011. 22(8):839-45.
8. Price Waterhouse Coopers (2010). Economic costs of atrial fibrillation in Australia.
9. Chen et al. Cochrane Database of Systematic Reviews 2012.4:CD007101.
10. Dewland et al. PLoS One. 2014. 9(7):e100509.
11. Kautzner et al. Eurospace. 2011.13(Suppl 2):ii39-ii43.
12. Calkins et al. Heart Rhythm 2012. 9(4):632-96
13. NICE Clinical Guideline 180: Atrial fibrillation: the management of atrial fibrillation. Issued June 2014.
14. Camm et al. Eur Heart J. 2012. 33(21):2719-47.
15. Gattellari et al. Cerebrovasc Dis. 2011. 32(4):370–82.
16. ABS 3303.0 - Causes of Death, Australia, 2013.
17. Cadilhac et al. Stroke 2009. 40(3):915-21.

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Acknowledgements

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