

# Heart Health Pathways for Women: Screening and Risk Assessment of Cardiovascular Disease in Women Scoping Paper

Women's Health NSW & Heart Foundation



"Hi Denele, I was thinking of you today and your comments re women and heart disease when I took myself off to the Emergency Department with burning in the upper chest, knowing it was probably reflux, but needing to rule out a heart attack. I had an ECG within minutes even before they had taken the details, followed by the works. I'm ok, just tired and sore and taking it easy.

Both the triage nurse and the doctor said it was good I knew women's cardiac symptoms could be atypical, which you had reinforced. Thank you!"

Women's Health NSW and the Heart Foundation commissioned Person Centred Leadership to create this scoping paper. Debra Pittam, Director, Person Centred Leadership was responsible for the report.

This project was overseen by an advisory group with representation from the Australian Women's Health Network, Women's Health NSW and the Heart Foundation. The project would not have been possible without the dedication and support of the following women and organisations:

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The Australian Women's Health Network	

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## List of Abbreviations

<b>AWHN</b>	Australian Women's Health Network
<b>BCE</b>	Bilingual Community Educators
<b>CEO</b>	Chief Executive Officer
<b>CVD</b>	Cardiovascular disease
<b>GP</b>	General Practitioner
<b>HCW</b>	Health Care Worker
<b>HF</b>	Heart Foundation
<b>IHD</b>	Ischaemic Heart Disease
<b>LHD</b>	Local Health District
<b>MO</b>	Medical Officer
<b>NSW</b>	New South Wales
<b>NVDPA</b>	National Vascular Disease Prevention Alliance
<b>PHC</b>	Primary Health Care
<b>PHN</b>	Primary Health Network
<b>PN</b>	Practice Nurse
<b>RACGP</b>	Royal Australian College of General Practitioners
<b>SWSLHD</b>	South Western Sydney Local Health District
<b>WH</b>	Women's Health
<b>WHC</b>	Women's Health Centre
<b>WHN</b>	Women's Health Nurse (includes WHNRN & WHNP)
<b>WHNRN</b>	Women's Health Nurse Registered Nurse
<b>WHNP</b>	Women's Health Nurse Practitioner
<b>WHNSW</b>	Women's Health NSW

# Heart Health Pathways for Women: Screening and Risk Assessment of Cardiovascular Disease in Women

## Scoping Paper

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### Executive Summary

#### Background

A recent paper from *The George Institute for Global Health* on women's health identifies that ischaemic heart disease (IHD) is a leading cause of both death and disability among women globally (Norton, Peters, Vivekanand, Kennedy and Woodward, 2016). In Australia, cardiovascular disease (CVD) is also a leading cause of death for women. Despite this, the health care expenditure for women who have heart disease in Australia is less than half of that spent on men and the health outcomes for women are poorer (Heart Foundation, 2018). Also, emerging evidence indicates that biological sex and gender significantly influences CVD risk in a range of ways and for a range of reasons across women's lives (O'Neil, Scovelle, Milner and Kavanagh, 2018). In order to improve the cardiovascular health of women therefore, a gendered approach is needed that "involves identifying sex differences and the biological explanations for these differences, as well as gender disparities" and associated social determinants of health (Norton et al., 2016, p.14).

In response to this, the Heart Foundation (HF), the Australian Women's Health Network (AWHN) and Women's Health NSW (WHNSW) collaborated to review cardiovascular screening, risk assessment and health promotion/prevention for women both in WHNSW and more broadly and to develop a scoping document that addresses how CVD risk and prevention could best be addressed through WHNSW services.

#### Introduction

The services provided by WHNSW meet the health needs of disadvantaged, underserved and marginalised women who are unlikely to access services elsewhere. Pre-existing disease, comorbidity and secondary prevention presents in everyday clinical practice for clinicians who work in Women's Health Centres (WHC). Women's Health (WH) clinicians therefore, see heart health as part of broader chronic disease risk assessment and management rather than a stand-alone intervention. As a result, WHNSW are both well placed and have a unique opportunity to promote cardiovascular health and prevent CVD by incorporating CVD screening, risk assessment, education and referral into their existing services.

This document presents a review of CVD screening and risk assessment for women and makes recommendations for how CVD risk and prevention could be best addressed through WHNSW services. It is anticipated that the recommendations made as a result of this review could also be applied to other public and private community settings.

## Methodology

Information for this paper has been gathered via both literature review, including grey literature and through a consultation process with key stakeholders both within WHNSW and externally.

## Key Findings

The literature clearly identifies CVD screening as a priority for women and that it aligns well with Primary Health Care. It also identifies that women have different risks to men. In addition, many women do not access health care when they need it and some will only access services specifically for women where they feel more comfortable. Both locally and globally, there have been some innovative and flexible models of service delivery around CVD screening and risk assessment for women that illustrate the importance of a tailored approach. The literature therefore, clearly indicates that women require a tailored CVD screen and risk assessment that meets both their clinical, lifestyle and psychosocial needs and some women will only access this at a women specific health service.

In the WHNSW context, clinicians have traditionally undertaken screening with women that have clear parameters and guidelines, often in the context of a National Screening Program (Note: reference to traditional screening in this context is separate to the clinical investigations that may be undertaken in relation to clients presenting to Medical Officers (MO) in WHC with complex co-morbidity and/or chronic illness). Traditional screening undertaken by Women's Health Nurses (WHN) is related to a specific body system, for example cervical, breast and sexual health screening. In contrast, CVD in women affects and is potentially affected by a range of factors such as family history, pregnancy, menopause and modifiable behaviours, as well as impacting and being impacted by other chronic diseases such as diabetes. Despite the impact of these differences on traditional WH service delivery and models of care, it is clear from this stakeholder engagement that CVD risk in women is seen as a priority and that this shift is already in progress. Similarly to other women's specific services across the world some clinicians in WHNSW have already begun to incorporate CVD screening and risk assessment into their traditional women's health services.

What is less clear is how CVD screening, risk assessment and education should or could be incorporated as part of core business for WHNSW. In terms of WHNSW service provision and CVD screening and risk assessment, there are no national or state endorsed guidelines for screening, risk assessment and management of patients at risk of CVD. Of the tools and guidelines that do exist, biological sex and gender related differences between men and women in relation to heart disease risk and outcomes has not as yet been incorporated. In addition, various guidelines use different terminology, definitions and recommendations for clinical practice (see Section 3).

## Recommendations

The following recommendations have been made as a result of the findings from this scoping paper:

1. Development of a *Heart Health Pathway for Women* guide for screening, risk assessment and management of CVD risk for women.
2. That a tiered approach to screening is adopted within this pathway. This could comprise of a short screen, a full screen and a community event to cater for differing contexts as well as providing an opportunity to reach women in the community.

### **Short Screen**

This would be a brief screen guided by a tool that includes specific risk history questions, simple clinical screening activities and education messages for the purpose of identifying potential CVD risk, followed by a referral for a full screen if required. It is anticipated that a short screen could be undertaken by both clinical and non-clinical staff.

It is envisaged that this screen could occur:

- Opportunistically as part of a consultation about something else
- As part of a workshop (opportunistically or specifically)
- During outreach services.

### **Full screen**

This would be a validated comprehensive screen and risk assessment for CVD that incorporates heart health risks and prevention strategies that are specific to women. A full screen would be conducted by a clinician or team of clinicians who have the scope of practice required to assess and manage CVD risk. It is envisaged that should a woman be identified as requiring secondary prevention, having co-morbidities, requiring preventative medication or more in depth investigations than can be conducted through a WHC, she would be referred to appropriate services.

### **Heart Health for Women Event**

This would be a day held in a community by a WHC or group of WHC to promote heart health and provide the opportunity for women to access CVD screening and health promotion information.

As it is likely to take some time to develop and implement across these three tiers, it is recommended that a staged approach be taken, beginning with developing and implementing the short screen first, followed by the full screen and then the community event.

## **Conclusion**

The findings through this scoping paper indicate that WHNSW, in collaboration with the Heart Foundation, have an opportunity to continue to lead the way for Women in NSW and beyond, by developing a *Heart Health Pathway for Women*, focusing on screening and risk assessment for CVD. Pilot testing a tiered approach to screening and facilitating its use in Women's Health Centres is likely to improve health outcomes for women with or at risk of CVD.

# Heart Health Pathways for Women: Screening and Risk Assessment of Cardiovascular Disease in Women Scoping Paper

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## 1 Introduction

The purpose of this document is to review cardiovascular screening and risk assessment for women and inform decision making by the Australian Women's Health Network (AWHN), Women's Health NSW (WHNSW) and the Heart Foundation (HF) about how cardiovascular disease (CVD) risk and prevention could be best addressed through WHNSW services. It is anticipated that the recommendations made as a result of this review could ultimately be applied to other community settings, both public and private.

A recent paper from *The George Institute for Global Health* on women's health identifies that ischaemic heart disease (IHD) is a leading cause of both death and disability among women globally (Norton et al., 2016). The paper presented two factors that have a direct impact on health outcomes for women in relation to non-communicable diseases such as IHD. These are firstly, that health outcomes for women are negatively impacted by them not seeking health care when they need it and receiving suboptimal care when they do (Norton et al., 2016). Secondly in order to improve the health of women, a gendered approach is needed that "involves identifying sex differences and the biological explanations for these differences, as well as gender disparities" (Norton et al., 2016, p.14). This is further illustrated in a paper by O'Neil et al. (2018), which posits that gender in and of itself is a political and social determinant of health that influences the onset and progression of CVD. It is from this perspective of women's health that this scoping paper explores CVD screening and risk assessment for women in the Australian context.

### 1.1 Background

Australian women are not a homogenous group. There are variations in age, where women live, family structure, gender diversity and sexual orientation, economic security, discrimination, education, safety, cultural background, disability and work, paid and unpaid (Australian Human Rights Commission, 2017; Women's Health NSW, 2017). These differences influence the social and political determinants of women's health for each individual woman in the context of her family, her community, her culture and her environment (Australian Institute of Health and Welfare [AIHW], 2016; NACCHO, 2018). Each woman's location, environment, social and political determinants of health in turn impact her health literacy. These factors together influence where, how and how often she will access healthcare and what her experience of care will be (Australian Department of Health, 2010; Australian Department of Health, 2013; AIHW, 2016; Norton et al., 2016; NACCHO, 2018; NSW Health, 2018; O'Neil et al., 2018).



Further to this, the physical health issues women experience and the health interventions they need, both to maintain wellness and prevent ill health, are in many ways, different to that of men (NSW Health, 2013). These combined factors result in differences in health status across Australian women, with some groups of women experiencing poorer health and health outcomes than others (NSW Health, 2013). This is well illustrated by the gap in morbidity and mortality between Indigenous and Non-Indigenous Australians. For example, Aboriginal and Torres Strait Islander people are more likely to be affected by cardiovascular disease than non-Indigenous Australians and more likely to die as a result, with more women than men reported to have CVD (Australian Indigenous HealthInfoNet, 2018; Heart Research Institute, 2018).

Women's health therefore, is clearly complex and can be best understood when viewed from the perspective of biological sex and gender differences, within a psycho-social context, through the lens of gender inequality and its subsequent impact on health and well-being (Schroeder, 2017). This perspective is extremely pertinent to women's experience of CVD, the focus of this document, in that the majority of Australian women have one or more risk factors and more women than men either die or suffer significant morbidity from CVD annually (Jarvie and Foody, 2010; Schot, 2015). In addition, between genders there are differences in risk profile and a disparity in both risk assessment for CVD and the prescription of therapies to prevent it across mainstream clinical services. For example, preventative therapies are recommended to women at risk of CVD less often than men (Jarvie and Foody, 2010; Heart Foundation, 2011; Hyun et al., 2017; NSW Health, 2017). If however, modifiable risk factors are addressed early, CVD is preventable for most women (NWHN, 2013; Chen et al., 2016).

In response to this, chronic disease screening and management, including CVD has been identified as a key area of focus for women by the Australian Government in both the *2010 National Women's Health Policy* and in the *NSW Health Framework for Women's Health* (2013). Further to that, The Heart Foundation (2018a) focuses on women and heart disease screening and risk assessment in its *Making the Invisible Visible Campaign* and CVD screening, risk assessment and prevention is also seen as important in the Women's Health sector itself (Schroeder, 2017). This is reflected in the *Australian Women's Health Network Charter* (2018) and the *WHNSW Annual Report* (2017). As a result, some Women's Health Centres (WHC) in NSW are incorporating CVD screening and/or education into their practice. Some have also successfully secured grants from the Heart Foundation to run heart health promotion projects. This is significant because WHNSW serve a large number of women with complex needs, across a range of population groups and social determinants of health, who otherwise may not access services at all (NSW Ministry of Health, 2017). It is timely therefore, to review current practices in CVD screening and risk assessment across WHNSW.

## **1.2 Project Aim**

The aim of this project is to review cardiovascular screening, risk assessment and health promotion/prevention for women both in WHNSW and more broadly and to develop a scoping document that addresses how CVD risk and prevention could best be addressed through WHNSW services.

### 1.3 Project Objectives

- Describe current status of heart health screening, risk assessment and education conducted in Women's Health Centres in NSW, along with the policy context
- Review existing heart health screening, risk assessment and education programs, and in particular Heart Smart developed by South West Sydney Local Health District, in relation to their potential to impact on women's cardiovascular health
- Make recommendations for how the promotion of women's cardiovascular health could best be incorporated into the clinical and educational practices of Women's Health NSW.

## 2 Methodology

The scoping paper direction and content has been overseen by an advisory group comprising the CEO, WHNSW; the Manager, Women's Health, Child, Youth & Family, Southern NSW Local Health District (LHD) representing the Australian Women's Health Network (AWHN); and the Manager, Women and Heart Disease, Heart Foundation. The Data collection for this scoping paper comprised the following:

- Literature Review including both peer reviewed and grey literature and relevant policy documents including:
  - Australian Government Department of Health and Ageing, National Women's Health Policy, 2010
  - Australian Department of Health, National Aboriginal and Torres Strait Islander Health Plan, 2012 – 2023
  - NSW Ministry of Health Women's Health Framework, 2013
  - Australian Women's Health Network Strategic Framework, 2013-2016
  - Australian Women's Health Network Annual Report, 2014-15
  - Women's Health NSW Annual Report, 2017
  - The Australian Women's Health Network Charter
- Consultation with WHC Managers via questionnaire
- Consultation with key stakeholders via interview with:
  - Two Centre Managers and two Women's Health Nurse Practitioners (WHNP) from WHNSW (utilising the same questionnaire as with the broader Manager consultation)
  - The National Director of Prevention, and Manager, Women and Heart Disease, Heart Foundation
  - The Manager, Women and Heart Disease, Heart Foundation
  - The Senior Women's Health Promotion Manager, South Western Sydney Local Health District: Heart Smart Program
  - A local General Practitioner (GP).

## 3 Literature Review

### 3.1 Women's Health NSW

There are twenty WHC across NSW, supported by their peak body WHNSW. These centres offer a range of health services to women who otherwise may find accessing

mainstream health care challenging (NSW Ministry of Health, 2017). Services offered by WHC in response to this are “unique” (NSW Ministry of Health, 2017, p.28) and encompass a number of health related disciplines including, but not limited to:

- Clinical: medical/nursing
- Crisis support
- Counselling
- Complementary medicine/nutritional medicine/dietary and lifestyle advice
- Groups: therapeutic, support, educational and physical activity

(NSW Ministry of Health, 2017; Schroeder, 2017)

Types of issues that women present with include:

- Violence, abuse, trauma, crisis
- Mental and emotional health e.g. mental health, social isolation, stress, relationships, grief, suicide
- Physical/medical issues e.g. anxiety, pain, musculoskeletal, digestive, gynecological, metabolic disorders/diabetes
- Health screening and health promotion focused e.g. sexual and reproductive health and chronic disease.

(NSW Ministry of Health, 2017; Schroeder, 2017)

All 20 centres offer both information and referral, 18 of them offer health education and 13 offer clinical services (Schroeder, 2017).

Six strategic priorities for the future have been identified in the *WHNSW Annual Report 2017* in the context of increasing the capacity of the women’s health sector to respond.

These are:

1. Advocating for improved outcomes for women
2. Networking and research
3. Reorienting the health system
4. Good governance
5. Training and development
6. Women’s health priority issues

(WHNSW, 2017, p.5)

### **3.2 Cardiovascular Disease in Women**

CVD is the cause of premature death for around 11 per cent of Australian Women, (AIHW, 2018) and worldwide it is the biggest killer of women, followed by stroke (WHO, 2016). Despite this, the health care expenditure for women who have heart disease in Australia is much less than that spent on men (Heart Foundation, 2018) and the health outcomes for women are poorer (Norton et al., 2016; Khan et al., 2018). Also, women are less likely to undergo procedures to diagnose and treat their heart disease and less likely to be prescribed medications following a cardiovascular event (Khan et al., 2018). They are also less likely to attend rehabilitation after a CVD related event (Chen et al., 2016; Heart Foundation 2018b). As a result many women are disabled by their experience of CVD and experience considerable morbidity (Chen et al., 2016).

One reason for such disparity, is that the current and emerging evidence about the biological sex differences between men and women in relation to heart disease risk and outcomes has not yet been commonly incorporated into clinical guidelines and clinical practice (Jarvie and Foody, 2010; Norton et al., 2016). These include for example, risks related to diabetes, hypertension, pregnancy and menopause as well as those related to the social determinants of health (Harvey, Coffman and Miller, 2015; Chen et al 2016; Norton et al., 2016).

As a result, both health professionals and the general public are likely to perceive heart disease to be an issue for middle aged men (Chen et al., 2016), with most Australian women and their families unaware of their potential risk, what the symptoms of CVD are in women and what they can do to prevent CVD (Heart Foundation, 2018b). Many of the factors that contribute to CVD risk, however are modifiable, with as much as 80percent of heart disease being preventable through lifestyle changes (NWHN, 2013). This has implications for 90 percent of Australian women who have at least one risk factor for CVD (Schot, 2015) and highlights the importance of CVD screening, risk assessment and prevention programs for women as a priority issue (Chen et al, 2016; WHNSW, 2017).

### **3.3 The Global Cardiovascular Disease Prevention Landscape**

There is an abundance of literature worldwide that discusses heart disease risk and advises how to identify it and how to prevent or modify it. While there are many similarities across this literature, there are also differences in both terminology and recommendations for clinical practice. For example, the terminology used to describe the identification and both primary and secondary prevention of CVD is not consistent. The terms risk assessment and screening are commonly used, often interchangeably across the literature and there is no single definition of either term. It is important to clarify at this point therefore, that within this paper the term *CVD Screening and Risk Assessment* refers to the identification, management and prevention of medical, familial, psychosocial and lifestyle risks for CVD in the context of biological sex and gender.

In relation to recommendations for clinical practice, globally there are a number of guidelines and frameworks available to guide clinicians practice around risk history taking, investigations, and risk classification for CVD as well as recommendations for health promotion (Mosca et al., 2011; Artac, Dalton, Azeem, Car and Millett, 2013; NVDPA, 2018). Some of the information available refers to primary prevention such as those developed by the Australian National Vascular Disease Prevention Alliance (NVDPA, 2012) and some of it to secondary prevention (Heart Foundation, 2012). Increasingly the literature reflects that there are a number of differences in CVD risk factors and symptoms between men and women. CVD screening and risk assessment for women therefore, requires a different approach to that of men (Jones, Granger, Short, and Taylor, 2004; Mosca et al., 2013; Smith, Pudwell, and Roddy, 2013).

### **3.4 CVD Prevention Programs for Women Globally**

A large number of innovative CVD screening programs have been implemented worldwide and in Australia across populations and communities, mainly in the Primary Health Care context, too many to mention here (Gupta, Stocks, and Broadbent, 2009; Burgess et al., 2015; Chen et al., 2016). Because the focus of this paper is women, the

examples cited below have been chosen to highlight the CVD screening programs that have been integrated into services that cater specifically to women or that have appealed to a large percentage of women. These programs are a good representation of the innovation and flexibility that is possible within and across such services in both the Primary Health Care (PHC) context and beyond.

**Heart Smart for Women** (Jogia, Fisher and Beer, 2011)

This was a pilot project introducing a comprehensive CVD screening and risk assessment program into a Women's Health Service at Warwick Farm in South Western Sydney. This program successfully accessed a number of women who would not otherwise have engaged with mainstream services and conducted comprehensive screening and risk assessment for CVD. See 4.4. for more information about this project.

**Cardiovascular Disease Prevention for Women Attending Breast and Cervical Screening Programs: The WISEWOMAN Projects** (The WISEWOMAN Workgroup, 1999).

This program recognised a unique opportunity to use an existing screening program as an opportunity to offer additional CVD screening and risk assessment to a population of women who otherwise would be hard to reach.

**A Pilot Project Offering Cardiovascular Screening to at Risk Women Attending Obstetrics and Gynecology Services** (Yu, et al., 2012),

This focus of this program was to screen women for CVD who had both traditional and gestational risk factors for CVD in a specialist health care setting.

**1 Deadly Step Program, NSW Health and the Australian Rugby League** (Peiris, Wright, Corcoran, News and Turnbull, 2018)

This program sought to address the high prevalence of chronic diseases, including CVD in Aboriginal communities across NSW through a community based approach. It used sport to encourage participation and targeted both men and women. Overall more than 60 percent of those screened were women, indicating that women were comfortable this approach.

### **3.5 Cardiovascular Disease Screening and Risk Assessment in Australia**

Cardiovascular Disease screening and risk assessment in Australia predominantly occurs and is well suited to the PHC, setting (Gupta et al., 2009; Heart Foundation, 2011; RACGP, 2018) and Primary Health Networks (PHN). For example South Western Sydney (2018) and Central and Eastern Sydney (2018), highlight CVD as a significant health issue via their websites. Cardiovascular screening and risk assessment has occurred in other PHC settings as well, such as Remote Indigenous Communities and Pharmacies (Peterson, Fitzmaurice, Kruup, Jackson, and Rasiah, R. 2010; Burgess et al, 2015).

Despite the range of services that are currently engaging with patients about CVD risk, there is no national or state model of care that defines what screening and risk assessment for CVD is for men and women in Australia in terms of criteria, frequency, risk history, clinical investigations, health promotion education, referral and follow up. Also there are no nationally or state endorsed guidelines for screening, risk assessment

and management of patients at risk of CVD. As a result, clinicians could potentially source information from a range of places locally and/or globally to guide their practice.

The National Vascular Disease Prevention Alliance and the Heart Foundation are however, leading the way here through the development and promotion of guidelines for screening and risk assessment for CVD. The Royal Australian College of General Practitioners website (RACGP, 2018) also includes a guide focusing on chronic disease prevention, including CVD and this refers to the NVDPA guidelines. These guides include:

1. The Absolute Cardiovascular Disease Risk Management Guide (NVDPA, 2012)
2. Australian Absolute Cardiovascular Disease Risk Calculator (NVDPA, 2012a)
3. Guidelines for Preventive Activities in General Practice, 9th edition (2018)

These three guides are discussed in more detail below.

### 3.5.1 Australian CVD Screening and Risk Assessment Guidelines

1. **The Absolute Cardiovascular Disease Risk Management Guide** (NVDPA 2012)

This guide was developed by the National Vascular Disease Prevention Alliance in 2012. This alliance was established in 2000 and comprises Diabetes Australia, Kidney Health Australia, the Heart Foundation and the Stroke Foundation. The guide is available on the NVDPA website and also via links from the Heart Foundation (HF), Stroke Foundation, Diabetes Australia, and the RACGP websites among others.

The guide, includes:

- A risk assessment algorithm to guide decision making
- Risk charts on smoking and diabetes
- Risk management summary table
- Lifestyle advice
- Information on blood pressure and lipid lowering therapy.

The guide however, does not reflect women as a separate group that requires the consideration of additional and different factors in risk assessment or preventative treatment needs. For example, it doesn't include risks that impact women specifically and/or differently such as depression, diabetes, pre-eclampsia or other gender specific risk factors.

The guide also does not provide a comprehensive overview of what a standard risk assessment looks like. Rather it suggests what could be considered as part of a risk assessment and focuses on interpretation of results.

The NVDPA has also developed a more comprehensive 123 page *Guidelines for the management of absolute cardiovascular disease risk* (2012). This does contain

information about depression however, it contains the same limitations as the abridged version in relation to women and heart disease.

## **2. The Australian Absolute Disease Risk Calculator (NVDPA, 2012a)**

This is an online automatic calculator available on the same websites as the Absolute Cardiovascular Disease Risk Management Guide discussed above. The clinician enters information and the calculator determines the risk of the patient developing CVD in the next 5 years. The clinical assessment information required in the risk calculator is not as comprehensive as that recommended in the *Guidelines for the management of absolute cardiovascular disease risk* (NVDPA, 2012).

## **3. Guidelines for Preventive Activities in General Practice, 9th edition (2018)**

This guide does address inequity and socioeconomic disadvantage and health literacy, although not in detail and not specifically in relation to women. It does not specifically detail what a CVD risk assessment is, but includes information on hypertension, lipids, diabetes, stroke, kidney disease and atrial fibrillation. The guide refers GP's to the *Australian absolute disease risk calculator* discussed above. This guide is available via the RACGP website.

### **3.5.2 Impact of the Current Lack of Standardised Guidelines for CVD Screening and Risk Assessment**

It is important to note that while the information in the guides described above is comprehensive, they do not address risk and prevention specific to women's biological sex and gender differences or their cultural and social contexts in relation to CVD. Because these Australian guidelines (recommended by the HF and the NVDPA for risk assessment, diagnosis and treatment) do not differentiate between men and women, the myths around women's heart disease risk and symptomatic presentation are likely to persist among the clinicians who use them (Harvey et al., 2015; Chen et al., 2016; Heart Foundation 2018b; NVPDA, 2018).

Similarly, the lack of national and state guidelines means clinicians' practice will be influenced by the recency of practitioner's clinical information and where they have sourced it. This is problematic because it has the potential to result in a piecemeal approach to CVD screening, risk assessment and prevention, based on information that may not be current. For example, in Australia, the medical profession broadly, views women as less prone to CVD than men. As a result, currently across mainstream services, men are more likely to be screened for heart disease, prescribed preventative measures and advised about behavior modification than women. This further highlights the value of incorporating risk assessment and prevention into Women's Health services (Current Jarvie and Foody, 2010; Hyun et al., 2017).

## 4 Consultation Findings

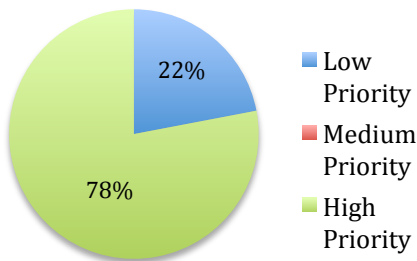
### 4.1 Stakeholder Engagement WHNSW: Current Status of Heart Health Screening and Education Conducted in Women's Health Centres in NSW

The information in this section has been collated from consultations with WHC Managers via questionnaire and with WHC Managers and WHNP via interview. Respondents answered an 8-item questionnaire. The results are summarised below.

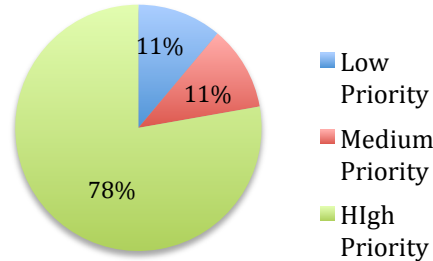
- Respondents: n = 10  
8 x WHC Managers and 2 x WHNP
- Responses recorded: n = 9  
Two respondents were interviewed together resulting in one response

#### 4.1.1 Priority of CVD Risk Assessment / Screening and Education for WHC

**Where do you see heart health *screening* in the Women's Health context?**



**Where do you see heart health *education* in the Women's Health context?**



#### *Rationale*

Reasons given for responses to both of these questions were similar.

Reasons for CVD screening/risk assessment and education being a **medium** and **high** priority:

- Core business: part of WHC Key Performance Indicators
- High risk related to both modifiable behaviours and comorbidity among women who attend WHC
- Low awareness among women who attend WHC: still perceived by them as a men's issue
- Women's heart health concerns are often minimised or ignored in other health contexts



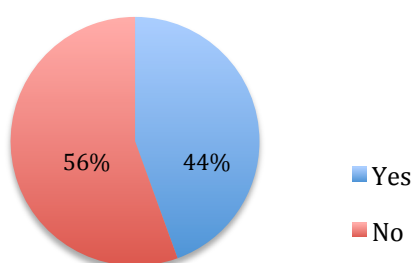
- Outcomes for women who experience CVD are poor.

Reasons for CVD screening/risk assessment and education being a **low** priority:

- Lack of funding
- No capacity to do this currently, but it is viewed as important.

#### 4.1.2 CVD Risk Assessment / Screening

**Have, or do you screen for heart health in your centre(s) or community?**



**Who Conducts the Screening?**

- WHNP
- Women’s Health Nurse Registered Nurses (WHNRN): Clinical Nurse Specialist, Clinical Nurse Consultant
- Medical Officer (MO) and Practice Nurse (PN) as a Team
- Medical Officer

#### 4.1.3 Examples of the Range of CVD Screening and Risk Assessment Practices Undertaken in WHC

Women’s health clinicians reported undertaking a number of CVD screening, risk assessment and referral activities with their clients (see table below). These ranged from brief to comprehensive depending upon the context, the clinicians scope of practice and the focus for the client/clinician interaction. From the interviews conducted with two WHC managers and two WHNP, it was evident that each clinician who undertook a CVD risk assessment with a client was informed by their own clinical knowledge and expertise and the professional guidelines they referred to. Similarly, each clinician’s referral and follow up criteria was also based on their clinical knowledge and expertise as well as their context and scope of practice.

The table below is not an audit of clinical practice; rather it provides an overview of both the similarities and the differences that relate to context and scope of practice. It also highlights the range of potential CVD risk assessment options available to clinicians.

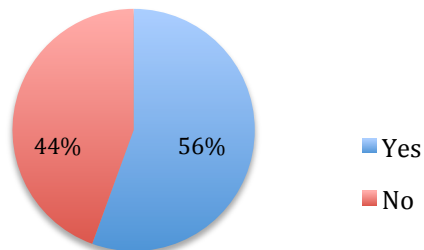
## Range of Reported CVD Risk Assessment and Referral Practices Across the Centres Surveyed

	Range of assessments undertaken by Nurse Practitioner	Assessments that can be undertaken by RNWHN	Assessments that can be added to RNWHN assessment if ordered by Medical Officer
<b>Short Screen: workshop, opportunistic:</b>			
Blood Pressure	x	x	
Hip/Waist Ratio	x	x	
Referral to WHNP clinic or local GP	x	x	
<b>Full screen: often a booked half hour consult</b>			
Screening # criteria	X		
Risk history	X	X	
Clinical assessment	X	X	
Blood Pressure	X	X	
Pulse	X	X	
Hip/waist ratio	X	X	
Weight	X	X	
BMI	X	X	
Blood Sugar	X	X	
Cholesterol fasting	X		X
HvA1c	X		X
Fasting Blood Sugar	X		X
Pathology Results	X		X
Education	X	X	
Referral GP	X	X	
Tertiary referral	X		X
Advocacy	X	X	

#Screening criteria refers to risk factors for CVD that prompt the clinician to offer a screen for example, a woman's age or family history of CVD

#### 4.1.4 CVD Prevention Education

**Have or do you run any heart health education in your centre(s) or community**



**Who Conducts the Education?**

- WHNP
- Dietician
- Medical Officer
- Exercise Physiologist
- Community Educators

#### 4.1.5 Examples of Range of CVD Related Educational Practices Undertaken in WHC

Respondents reported providing a large number of educational activities that had a direct focus on heart health promotion and also activities that are relevant to and impact on women's heart health, both directly and indirectly. These include:

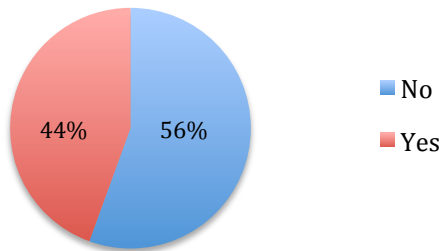
- Big community events linked to the HF *Make the Invisible Visible* campaign with or without CVD risk assessment and screening
- Workshops
  - Heart Health Education and Lifestyle for mainstream women and Culturally and Linguistically Diverse women
  - Stress, anxiety and depression
- Classes: medication, cooking, yoga, meditation, singing, exercise and weight management
- Groups: Women's Health (run a range of workshops including heart health), aqua aerobics, quit smoking and walking groups
- Exhibitions
- Social media
- Informal and opportunistic education in the clinical context during one on one consultations.

Some WHC have run education in the past and have stopped or reduced the amount for the following reasons:

- We require participants to have GP referrals and Chronic Disease Management Plans to support the cost of the program through Medicare
- Some aspects are still continuing e.g. social media campaign
- No staff free to run the walking group or activity
- It is not seen as a priority in key performance indicator negotiations with funding bodies.

#### 4.1.6 Willingness to Engage in Heart Health Screening and Education

**Have you ever applied for a grant to run a heart health screening and/or education program?**



##### **Programs Run**

- Community workshops using art to create a video and written resources that are still available
- Peer education program for women with disability
- *Love your Heart* awareness raising program

**If you were provided with the appropriate tools, would you be willing to run a heart health screening and / or education program?**



##### **Program Ideas**

- Walking groups
- Pampering day
- Peer education
- Create closer links with other health disciplines: diabetes, health promotion
- Heart health workshop
- Well women conference
- Regular heart screening and prevention information clinics

#### 4.1.7 Ideas for Ideal Heart Health Services

In a 'perfect world', respondents identified that heart health screening and education could look like this:

- Discussion among WHC managers and clinicians (Women's Health Nurses (WHN), dieticians, counsellors, naturopath) about how to weave women's heart health and prevention into practice to form a standardised approach across the sector
- Workshops once a quarter where clients can have a brief risk assessment and education and those with an identified risk can be booked in for a heart health check

- All WHN would be Nurse Practitioners to they can provide full assessment screening, management of results and referral
- Someone to work with community GP's to promote them to do heart health screening and not to dismiss women's symptoms as part of ageing
- Provide cardiac rehab for women: journey to tertiary services from rural locations is arduous
- Provide outreach screening and education services to small communities
- Respite care for the over 55's who may have a dual caring role (parents, grandchildren)
- Link with existing organisations in communities
- Pretty much what we do. It is part of our core business
- Run a big centre based event
- Community outreach
- It would be an integral part of holistic health care of women across their lifespan, including individual GP/WHN health checks and group activities. Our emphasis would be on prevention/early intervention as opposed to chronic disease management (although this would remain part of existing practice)
- Health practitioners on site to run screening sessions
- The MO or WHN visiting our Centre at least once a month to conduct heart health screening
- Regular exercise groups (Yoga, Aqua Aerobics, walking group or exercise group) for free or at very low cost to reach disadvantaged members of the community.
- Regular information sessions and workshops promoting healthy eating and lifestyle modifications
- Health promotion funding to run educational groups for all areas of health
- Considered as 'on the radar' for all practitioners and health promotion materials that are woman friendly and not scary, made freely available and displayed
- There would be an established process which had clinical policies and procedures and training for clinicians to include:
  - Overview of screening and different levels of screening and education according to scope of practice. i.e. what can be done with the staff we have, e.g. baseline screening
  - Resources
  - Internal and external referral
  - Holistic approach from a clinical to community perspective.

#### **4.1.8 Tools Required for Providing Identified Ideal Heart Health Services**

- Speakers (HF, Dietician, QUIT, Exercise Physiologist)
- Designated position to focus on building links with Health Care Workers (HCW) in other local services and provide a concentrated and focused approach
- Sufficient funding for appropriately qualified and resourced staff and equipment
- Staffing availability and skills: MO or WHN to facilitate information session and heart screening clinic
- Exercise group facilitator or personal trainer. Facility or hall to run the exercise group.
- Possible pedometer or activity tracker for walking group

- Written resources, brochures, checklists, PowerPoint presentations and handouts.

#### 4.1.9 Barriers to Providing Identified Ideal Heart Health Services

- Lack of time across the sector to develop programs about how we could have more of a focus and impact around chronic disease prevention
- Funding would be required to extend the hours of specialist workers i.e. Dietician, Exercise Physiologist, WHN, MO/GP, Nutritionist.

#### 4.1.10 Ideas to Incorporate Heart Health into Existing Programs

- Workshops targeting healthy heart
- Integrating education into existing workshops e.g. "Easier steps to a healthier you"
- Written resources included in health info bag provided to counselling clients.
- The program can run as a part of an existing Women's Health Group
- Heart health-screening program can be developed as a separate program with expansion of regular programs such as Meditation, Yoga and Aqua Aerobic groups.
- Education via Social Media e.g. Facebook.

## 4.2 Stakeholder Engagement: Heart Foundation

### Concerns About Women and Heart Disease

- Driving concern is disparity of care across the patient journey
- Women less aware of heart disease risks, prevention and disparity of care in relation to treatment and rehabilitation. They are less likely to do rehabilitation and less likely to be compliant with medication. They are also more likely to die in the first 12 months after a cardiac event
- There is an unconscious bias in how risk and disease is managed in women
- Women attend their GP at least twice a year, but often with children and often for cervical or breast screening and results. The opportunity to think about heart health is rarely there. Having an alternative to the GP for assessment is important, especially as women's health is a safe space, other women are around and women will be empowered to make choices and ask questions.

### 25-Year Vision

- To see clinicians being more responsive to identifying and managing heart disease in women: risk prevention and disease management through a heart health screening program for women
- Community and health systems more responsive in helping women live well with heart disease around rehabilitation, medication, lifestyle and prioritising self-care
- The responsibility for this doesn't only rest with women; it also rests with clinicians, the health system and the broader community, including the family, which has a significant role to play in advocating for the above.

### **Barriers and lessons Learned**

- Cervical and breast screening operate from a mandated position in terms of frequency and age. Also there is a reminder process embedded in these programs
- Challenge to reach underserved women and entice them in when you do
- In the past the use of fear to get women to have breast screens turned them away and cervical screening being linked to sexual activity/promiscuity put a lot of women off. It took a long time to explode these myths. There is a need to be careful about messaging
- Tricky with heart disease because screening is currently a result of a clinical decision making rather than a prescriptive 'heart screen' process. Makes it awkward to explain and to talk about with women.

### **Potential Enablers**

- De-mystifying what a heart health check is because it is so complex – not a 'one investigation' screen as it incorporates clinical risk assessment, lifestyle, assessment and modification, family history and clinical investigations
- Scope what a heart health check is – what's in what's out (e.g. complete versus partial health check)
- Be clear what happens when you identify someone with a concern and someone who needs referral and / or repeat screen
- Get quotes from local GP's to endorse the program in relation to their role and capacity to participate. Highlight that women's health centres would reach women they are normally not seeing . Identify why it is important and how it benefits their patients
- Define the scope of practice for WHN and MO. What is it and what should it be, in terms of primary care for women's health?
- Develop a heart health screening model of care specifically for women
  - Risk assessment and screening: is there a gold standard for a heart health check and if so we could consider a tiered approach to heart health screening and referral according to resources (time) and competency
  - Health information, health promotion
  - Referral: make it easy to refer to GP's with a letter
  - GP's need to be notified of the model of care.
- Develop culturally appropriate information and programs.

### **Potential Blockers**

- Funding
- Difficulty attracting women
- Lowering of enthusiasm – if clinics don't get filled then 'this is a waste of time'
- Market locally with message that heart disease can happen to anyone
- Seven centres don't do screening – how to incorporate CVD referrals e.g. how do they refer for cervical smears?

### 4.3 Stakeholder Engagement: Community General Practitioner

The General Practitioner interviewed stated that it is essential to provide screening to women who cannot or do not access mainstream PH services. Through early identification and intervention we have the opportunity to prevent a range of other diseases and reduce the overall impact on the health system as women age. This GP would be very happy to receive a referral for a woman whose heart health risk has been identified by a Women's Health Service.

### 4.4 Review of Heart Smart Program South Western Sydney Local Health District

A pilot CVD screening program called *Heart Smart for Women*, run by Women's Health Nurses was developed and implemented in 2011 in South Western Sydney Local Health District (Fisher and Jogia, 2011), and evaluated in 2015 (Jogia, Fisher and Beer, 2015). Heart Smart for Women comprised:

- Heart Smart for Women Cardiovascular Disease Screening Tool Training Package for clinicians
- Clinical Guidelines for CVD screening risk and assessment with women
- Heart Smart for Women Bilingual Community Education (BCE) Heart Health Training Program.

In order to develop a full understanding of this program including its scope and applications, an interview was conducted with the staff member from South Western Sydney Local Health District (SWSLHD), who co-developed, coordinated, implemented and evaluated this pilot program.

#### Context

This program was developed at a time when there was a Women's Health Nursing Service staffed by four WHN in SWSLHD. There was scope to develop a large project. The reason for choosing to focus on women and CVD was the emerging evidence on women and heart disease and its impact in the local community. The vision was to develop a comprehensive screening program for women that could ultimately be applied in other LHD and WHC across NSW using a Train the Trainer approach.

Due to the closure of Women's Health Clinical Services in the LHD however, only the Bilingual Community Education component remains currently active.

#### Program Development Process

The SWSLHD project team engaged in the following processes

- Collection of evidence to justify and inform practice
- Engagement in partnerships and identification of champions in the LHD across departments including cardiology, community health, dieticians and health promotion
- Formation of an advisory group with stakeholders from nursing, cardiology and the Heart Foundation to inform the program content
- Ensuring support for nursing practice by engaging with MO's and cardiologists



- Ensuring referral pathways were in place for patients who required follow up elsewhere
- Development of documentation for risk history taking, clinical risk assessment, interpretation of results, absolute CVD risk assessment, preventative health education and referral.
- Development of a face to face training package for WHN
- Piloting and evaluation of the program in one site.

#### *Screening and Education Overview*

- WHN practice was supported by clinical management and referral guidelines
- Guidelines for risk assessment, referral and advice for follow up were based on the information provided by the Heart Foundation and Cardiologists, agreed via the advisory group
- Scope of WHN practice was enabled by clinical support provided by the Cardiologists who were happy to be consulted for advice and receive referrals from the WHNRN.

#### *Transferability of Program More Broadly*

From speaking with program developer, it was clear that 'buy in' from the cardiologists and the HF, as well as local GP's, was essential for the success of the program. This was specifically important in relation to the development of the guidelines and practical implementation of the program and to inform the WHN scope of practice and referral pathways.

## **5 Summary of Consultation Findings**

The literature clearly identifies CVD screening as a priority for women and that it aligns well with Primary Health Care. It also identifies that women have different risks and health outcomes to men. In addition, many women do not access health care when they need it and some will only access services specifically for women in which they feel more comfortable. Both locally and globally, there have been some innovative and flexible models of service delivery around CVD screening and risk assessment for women that illustrate the importance of a tailored approach. The literature therefore, clearly indicates that women require a tailored CVD screen and risk assessment that meets both their clinical, lifestyle and psychosocial needs and takes into account biological sex and gender differences. Importantly, some women will only access this at a women specific health service.

In the WHNSW context, clinicians have traditionally undertaken screening with women that have clear parameters and guidelines, often in the context of a National Screening Program. Also traditional screening undertaken by WHN is related to a specific body system, for example cervical, breast and sexual health screening. In contrast, CVD in women affects and is potentially affected by a range of factors such as their sex and gender, family history, pregnancy and modifiable behaviours, as well as impacting and being impacted by and other chronic diseases such as diabetes. Despite the impact of

these differences on traditional Women's Health (WH) service delivery and models of care, it is clear from this stakeholder engagement that CVD risk in women is seen as a priority by WHC and that this shift is already in progress. Similarly to other women's specific services across the world some clinicians in WHNSW have already begun to incorporate CVD screening and risk assessment into their traditional women's health services.

What is less clear is how CVD risk assessment and education should or could be incorporated as part of core business for WHNSW in the future.

## 6 Recommendations

WHNSW have an opportunity to lead the way in CVD screening and risk assessment for Women in NSW and beyond, by developing a *Heart Health Pathway for Women*. The focus for a Heart Health Pathway would be on screening and risk assessment for CVD, although it is recognised that outcomes may have a broader health benefit. In this context screening and risk assessment encompasses:

- Risk history taking
- Clinical investigations
- Health promotion education
- Follow up
- Referral

To ensure standardised practice across WHC, a *Heart Health Pathway for Women* would need to encompass clinical practice guidelines and an associated learning program. The following recommendations have therefore been made:

1. Development of a *Heart Health Pathway for Women* guide for screening, risk assessment and management of CVD risk for women
2. That a tiered approach to screening and risk assessment is adopted within this pathway. This could comprise of a short screen, a full screen and a community event to cater for differing contexts as well as providing an opportunity to reach women in the community.

### **Short Screen**

This would be a brief screen guided by a tool that includes specific risk history questions, simple clinical screening activities and education messages for the purpose of identifying potential CVD risk followed by a referral for a full screen if required. It is anticipated that both clinical and non-clinical staff could undertake a short screen.

It is envisaged that this screen could occur:

- Opportunistically as part of a consultation about something else, for example cervical screening
- As part of a workshop
- During outreach services.

### **Full screen**

This would be a validated comprehensive screen and risk assessment for CVD that incorporates heart health risks and prevention strategies that are specific to women. A full screen would be conducted by a clinician or team of clinicians who have the scope of practice required to assess and manage CVD risk. It is envisaged that should a woman be identified as requiring secondary prevention, having co-morbidities, requiring preventative medication or more in depth investigations than can be conducted through a WHC, she would be referred.

### **Heart Health for Women Event**

This would be a day held in a community by WHC or group of WHC that promoted heart health and provided the opportunity for women to access CVD screening and health promotion information from within their community.

As it is likely to take some time to develop and implement across these three tiers, it is recommended that a staged approach be taken, beginning with developing and implementing the short screen first, followed by the full screen and then the community event.

## **6.1 Practice Considerations Related to the Development of a Heart Health Pathway for Women**

That there are no Australian standardised guidelines for CVD screening and risk assessment and none at all that describe optimum screening and risk assessment for women, it will be important that WHNSW develop clinical guidelines that suit their client population and their clinical context. The range of disciplines that provide services in WHNSW and the differences in scope of practice among and between them further indicates a need for these. As a way of beginning to scope out such guidelines it is recommended as a result of the learnings from this paper, that the following questions are initially considered for each screening type:

### **Short Screen**

- What are the criteria for a short screen?
- What elements comprise a short screen?
- What are the referral criteria and pathways for women identified as having a CVD risk as a result of a short screen?
- Who (role, discipline) can undertake a short screen?
- When should or could a short screen be undertaken?
- What health promotion interventions should be used in a short screen?
- What health promotion materials should be available to women who have had a short screen?
- What training and or assessment is required to ensure competence?
- What resources are required to promote competence?
- What data collection is required?
- How do we ensure cultural relevance?

## **Full Screen**

- What are the criteria for a full screen?
- What elements comprise a full screen?
- What are the internal referral pathways for clients for whom a full screen is indicated?
- What are the external referral criteria and pathways for women who need further care that cannot be provided by WHC?
- Which clinicians or teams of clinicians can undertake a full screen?
- When should a full screen be undertaken?
- How will women be able to access a full screen (e.g. booking mechanisms)?
- What health promotion interventions should be used and available for a full screen?
- What health promotion materials should be available to women who have had a full screen?
- What training and /or assessment is required to ensure competence?
- How do we ensure cultural relevance?
- What resources are required to promote competence?
- What data collection is required?
- What processes and medical records are required?
- How can WHNSW access Medicare for CVD screening?

## **Heart Health for Women Event**

- What are the intended outcomes of such an event?
- Which roles / disciplines would be required to meet the intended outcomes?
- What resources would be required to meet the intended outcomes?
- What would WHC managers need to know to successfully hold a Heart Health for Women Event?
- What resources would WHC managers need to successfully hold a Heart Health for Women Event?

## **6.2 Staged Approach to Implementing a Heart Health Pathway for Women**

Developing clinical guidelines for the WHNSW *Heart Health for Women Pathway* will require consultation with a broad range of stakeholders and is likely to take some time. It is suggested therefore that WHNSW takes a staged approach that includes:

- Developing and implementing the Short Screen as a pilot
- Evaluating the Short Screen pilot and using the learnings to finalise and implement across WHC
- Evaluating the short screen pilot and use the learnings to inform the development of the Full Screen
- Developing and implementing the Full Screen as a pilot
- Evaluating the Full Screen pilot and using the learnings to finalise and implement across WHC
- Evaluating the Full Screen pilot and using the learnings to develop a blueprint for a Heart Health Pathway for Women Event.

## 7 Conclusion

The purpose of this document has been to review cardiovascular screening, risk assessment and health promotion/prevention for women and address how to best meet the needs of women at risk of CVD specifically through WHNSW services.

The evidence gained from both the literature and through stakeholder engagement clearly shows that that screening and risk assessment of women for CVD, to be effective, must encompass biological sex differences and gender, with all of its associated impacts (Nolan et al., 2016, O'Neil et al., 2018). It also shows that this is not currently happening in Australia in a standardised way. WHNSW however have begun, in some WHC to incorporate CVD risk assessment and screening with at risk women, indicating both an understanding of the importance of heart disease in women and the willingness to address it.

For these reasons WHNSW is best placed to develop and implement the recommended *Heart Health Pathway for Women*. This pathway addresses women's heart health in both clinical and community settings. It is anticipated that once it has been developed, piloted and validated, it is likely to be of value to other public and private PHC services as well.

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