Managing pregnant women with obesity in country South Australia: the perspectives of primary care maternity providers

Dr Jennifer Njenga

MBCHB, MPH

A dissertation submitted in partial fulfillment of the requirements for the

Degree Doctor of Public Health in the Discipline of Public Health, College of Medicine

and Public Health, Flinders University, South Australia

July 2019

Contents

List of Tables and Figures

Declaration

I certify that this thesis does not incorporate, without acknowledgement, any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Jennifer Njenga 25th July 2019

Acknowledgements

I would like to acknowledge and thank my supervisors, Professor Linda Sweet and Professor Colin MacDougall for their unwavering support, patience, advice and support, as well as the study participants who willingly gave of their time and experience. I would like to acknowledge my late Mum and late sister, Dr Margaret Mungherera, whose courage and inspiration nudged me on. Lastly a special thanks to my husband Dr Michael Njenga and my children Charles and Michelle Njenga whose love and support has enabled me to complete this study.

Abstract

The overarching aim of this research was to explore the views of local maternity providers in country South Australia, charged with compliance to the *'Standards for the Management of the Obese Obstetric Woman in South Australia'* policy. The study identified maternity providers' views that may have otherwise remained silent, providing a better understanding of the local context in which the policy was implemented. The project employed a constructionist perspective with the underpinning assumption that policy solutions are dependent on the views, meanings and beliefs of policy makers. Maternity providers, who are key stakeholders provided evidence based on their own experience, knowledge, and ideas derived from local context that interacted with research evidence. This local evidence, although different from evidence-based guidance, is equally sound as it considers the, political, social, economic, cultural and environmental context in which the policy was implemented. However, the differing ways in which stakeholders view an issue impacts on the policy options they propose. The study investigated the underlying beliefs and values that maternity provider stakeholders attach to managing pregnant women who are obese.

The research involved interviewing 17 of these key stakeholders who provide maternity care to pregnant women with obesity in country South Australia. The stakeholders were asked about their ability to manage pregnant women with obesity as required by the policy; problems encountered, and solutions proposed. Emerging themes from the interviews were compared and contrasted with those found in other national and international policy documents on the management of maternal obesity over the past decade. Additionally, emerging themes were examined using Bacchi's interpretive framework to uncover the underlying beliefs and values that the stakeholders attached to the issue of management of maternal obesity. The interpretive analysis of stakeholders' responses uncovered the various ways stakeholders perceive the problem and whether they placed responsibility for the issue on individuals, clinicians, communities, government, culture, public health, or the media. Several

policy options may be applicable in similar contexts outside of South Australia. Additionally, this study design methods can be replicated in other contexts to address other public health problems.

Chapter 1: Introduction

In 2012 the South Australian state government introduced a mandatory policy to guide the management of obese pregnant women (South Australia Dept. of Health, 2012). The introduction of this policy met with varied response and compliance from health care practitioners, particularly those in rural and remote centres. This dissertation reports on a study which investigated the implementation of the policy, by critiquing the policy and examining the views and concerns of maternity providers charged with its implementation, including barriers and enablers to compliance of maternity providers outside of tertiary referral centres. This study aimed to understand and highlight what key stakeholders in the field believe are more feasible policy options for South Australia to manage a pregnant woman with obesity. In doing so the research attempts to uncover the various and differing ways that key stakeholders view maternal obesity and how their proposed policy solutions frame the issue. The project takes a constructionist perspective with the underlying assumption that meaning is socially constructed rather than there being an absolute truth and that truth and meaning are dependent on individual's interactions with the world. In taking this perspective, the success of policy solutions is dependent on the local context in which they are to be implemented. Therefore, to develop successful policy solutions a greater understanding of the local context is required. The study begins with the perspective that maternal obesity is a significant public health issue that needs to be addressed.

1.1 The Significance of Obesity as a Public Health Issue

The World Health Organization (WHO) has identified the 'epidemic of obesity' as one of today's most significant global health problems (WHO, 2017). Overweight or obesity is considered weight that is more than a healthy weight for a given height. Body Mass Index (BMI), a calculation of body weight divided by height in metres squared (kg/m2), is applied as a screening tool for overweight or obesity (Centers for Disease Control and Prevention, 2016). BMI is classified by the Centers for Disease Control and Prevention (2016) and WHO (2017) as follows:

- BMI 18.5 to <25 falls within normal range
- BMI 25.0 to <30 falls within the overweight range
- BMI 30.0 or higher falls within the obese range

Obesity maybe further divided into three categories (Centers for Disease Control and Prevention, 2016):

- Class 1: BMI of 30 to < 35
- Class 2: BMI of 35 to < 40
- Class 3: BMI of 40 or higher. Class 3 obesity is sometimes referred to as "severe" or "extreme" obesity

Obesity rates in Australia, United States and England have grown rapidly over the past 20 years (Australian Institute of Health and Welfare, 2017b; National Center for Health Statistics, 2017; Organisation for Economic Co-operation and Development, 2014). By 2014, worldwide figures showed that 39% of adults aged 18 years and older were considered overweight (40% women and 38% men), and 15% of women and 11% of men were obese (WHO, 2014). Prevalence rates of overweight and obesity in high-income countries are reported to be more than double those in low-income countries (WHO, 2014). Overweight and obese people are reported to be a majority in the Organisation for Economic Co-operation and Development (OECD) countries (Organisation for Economic Co-operation and Development, 2014).

In 2014-15, 63.4% of Australians aged 18 years and above were reported as overweight or obese (11.2 million people), comprising of 35.5% overweight (6.3 million people) and 27.9% obese (4.9 million people) (Australian Bureau of Statistics, 2015). Although there was no increase from 2011-12, these figures were significantly raised from 56.3% in 1995 and 61.2% in 2007 (Australian Bureau of Statistics, 2011).

The original intention of measuring BMI was to monitor and measure progress towards government targets on overweight and obesity, but has subsequently been adopted in policy and practice as the sole tool to measure and assess individual overweight and obesity (Knox, Crowther, McAra-Couper, & Gilkison, 2018). For instance, in pregnancy, it is used as the sole tool for assessment of weight -based risk stratification and dominates the woman's care plans (Knox et al., 2018).

1.2 Maternal Obesity

The global rise in overweight and obesity is also affecting maternity care in Australia as evidenced in national prevalence data demonstrated by significant rates among childbearing women. In 2014-15, an estimated 56.3 percent of women in Australia were overweight or obese (Australian Bureau of Statistics,

2015). Since women in the reproductive years are similarly affected by the general increase in overweight and obesity, the prevalence among pregnant women has also risen (Fisher, Kim, Sharma, Rochat, & Morrow, 2013; Hawley et al., 2015). More than 40 percent of Australian women in reproductive years, aged 25 to 35 are overweight or obese (Australian Bureau of Statistics, 2015), with a significant increase in prevalence among pregnant indigenous women (Australian Institute of Health and Welfare, 2017a). Similarly, in England and the United States, women of reproductive years are reported to be more obese than men of the same age group (Baker, 2017; Fisher et al., 2013). In the United States, more than one- half of pregnant women were reported to be overweight or obese, and an estimated eight percent of women of reproductive age have class 3 obesity, also considered extremely obese (Harper, 2015).

Overweight and obesity increase the burden of disease and injury among women (Department of Health and Ageing, 2010; Ogden, Lamb, Carroll, & Flegal, 2010; Organisation for Economic Co-operation and Development, 2014; World Health Organization, 2014). Increased BMI is directly proportional to an increase in morbidity and mortality of childbearing women and babies (Australian Institute of Health

and Welfare, 2017a; Kim, Burn, Bangdiwala, Pace, & Rauk, 2017; National Institute for Health and Care Excellence, 2010). The Confidential Enquiry into Maternal and Child Health (CEMACH) deaths in the United Kingdom reported that approximately 30 percent of mothers who lost their babies or had stillbirths were obese (Confidential Enquiry into Maternal and Child Health, 2007). Furthermore, they also showed that over half of the women who died because of direct or indirect causes were obese (Confidential Enquiry into Maternal and Child Health, 2007). Research suggests that if 10 percent of women with pre-pregnancy obesity were to achieve a healthy weight before pregnancy, nearly 700 foetal deaths and 300 congenital heart defects could potentially be prevented per year (Honein et al., 2013).

Maternal overweight and obesity not only result in adverse health outcomes but also pose significant challenges for health care systems (Heslehurst, Lang, Wilkinson, & Summerbell, 2007; Schmied, Duff, Dahlen, Mills, & Kolt, 2011). Hospitals and health care facilities may lack space and equipment for safe care of pregnant women with overweight or obesity (Schmied et al., 2011). Additionally, facilities may not have access to transportation nor adequate number of trained staff to manage these women (Heslehurst et al., 2013; Smith, Cooke, & Lavender, 2012). Because of the above issues, national governments embarked on developing new policy initiatives and practices to assist perinatal health providers to manage obese pregnant women within rationalised health care systems. Examples of these include the *Standards for the Management of the Obese Obstetric Woman in South Australia (South Australia Dept. of Health, 2012)*, the *Management of Women with Obesity in Pregnancy* in the United Kingdom (UK) (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010), and the *Obesity and Pregnancy Clinical Practice Guideline* in Ireland (Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland, & Clinical Strategy and Programmes Directorate. Health Service Executive, 2011).

1.2.1 Current Policy Options to Manage Pregnant Women with Obesity in South Australia

The *Standards for the Management of the Obese Obstetric Woman in South Australia* policy was developed on the backdrop of the 2010 South Australian Department of Health and Ageing *Standards for Maternity and Neonatal Services* policy (South Australia Dept. for Health and Ageing, 2015). These were intended to provide clinical guidance for the management of the pregnant woman with obesity during the perinatal period in the public health sector, but also provide recommendations for private health services (South Australia Dept. for Health and Ageing, 2015). There appears to have been little consideration of the socioeconomic and environmental determinants of maternal obesity within these policies. Although the *Standards for the Management of the Obese Obstetric Woman in South Australia* policy acknowledges obesity as a significant health problem for women during and after pregnancy (South Australia Dept. of Health, 2012) it does not describe the group of women who are more at risk, nor does it seem to incorporate social determinants in their prescribed management. Obesity may further complicate an already challenging state, particularly for women who have other socioeconomic needs.

To further understand how the *Standards for the Management of the Obese Obstetric Woman in South Australia* policy is set out to promote a healthy pregnancy for the obese woman, it is crucial that we comprehend how maternity care is delivered within South Australia.

1.2.2 Maternity Care in South Australia

Approximately 92.7 percent of women in Australia receive maternity care through one of four models: public hospital care, combined maternity care, private maternity care and shared maternity care (Commonwealth of Australia, 2009b). The majority of births in South Australia take place in the Adelaide metropolitan region and the rest occur in rural maternity centres across South Australia, 81.4% and 18.6% respectively (Scheil et al., 2017; South Australia Dept. of Health, 2012). The Adelaide metropolitan region has three public hospitals with tertiary level facilities; having the ability to care for

'high risk' mothers and babies of any gestation and birth weights, namely the Lyell McEwin hospital, the Flinders Medical Centre and the Women and Children's Hospital (South Australia Dept. of Health, 2012). Additionally, South Australia has five private maternity units, situated in Adelaide metropolitan region providing care to 'moderate risk' mothers and babies (South Australia Dept. for Health and Ageing, 2015). Country/rural South Australia has two maternity units providing care to 'moderate risk' mothers and babies, and all others provide 'normal/low risk' maternity care (South Australia Dept. for Health and Ageing, 2015).

1.3 The Use of Local Evidence for Policy Development and Implementation

Development of healthcare policies is driven by evidence-based research, where policy makers search the literature for what works within healthcare systems where resources are rationalised. However, this approach may overlook the effect of the local context on the success of interventions. It may be important to incorporate stakeholder perspectives in policy development to yield positive outcomes. Stakeholders and target populations provide unique forms of evidence, (experience, knowledge, ideas and opinions) (Bacchi, 2009). Consulting these groups can be beneficial in providing insight into the effectiveness and feasibility of certain strategies and policy options (Bacchi, 2009). For this local knowledge to gain recognition, it must be considered as different although equal to that of academic literature and policy professionals.

Moreover, policy solutions reflect how a problem is understood. This is further influenced by policy makers' views of the target population (Bacchi, 2009). Often policy makers have no real understanding of the circumstances in which the target population live and work, and are often far removed from the social, economic, cultural and geographic circumstances experienced by the target population. In this case, policy makers may need to seek the views and experiences of maternity providers who care for women with obesity to get a better understanding of determinants of maternal obesity and more

feasible policy solutions. The next section will describe the significance of maternal obesity as a global and local problem as well as provide the rationale for this research.

1.4 The Research Question

Maternal obesity is a major public health challenge, with significant health consequences for the obese women and their children, as well as to the health system, and therefore warrants critical and creative interrogation. One approach is to examine the current policy, and to explore alternate solutions. To do so would address representations of problems associated with managing women with obesity in pregnancy, and the clinical and social implications this policy produces. This research provides us an understanding of how maternity providers perceive the determinants of maternal obesity and its management in women in rural areas. The study explores how the current policy affects the ability of maternity care providers to care for pregnant women with obesity. Bacchi's (2009) approach examines policy solutions as concerns the representations of the policy issue, arguing that the issues problematized arise from, and reflect, the values and beliefs underpinning current policy directions. This approach allows for identification of issues that have not been problematized and policy solutions that have not been thought about. The current policy solutions are the development of mandatory standards to govern practice, and the delineation of perinatal service based on staff training, specialist and infrastructure availability. Stakeholders working with pregnant women with obesity can provide greater understanding of the issues within a local context, and their experience and knowledge can help adapt policy solutions to suit local conditions. This research aims to gather this local knowledge from key stakeholders to evidence the current situation and to assess the applicability of the policy and its impact on pregnant women with obesity. From this approach, the study intends to answer the research question 'how is maternal obesity represented in the policy?' and 'how does the policy influence the provision of care to pregnant women with obesity?'

1.5 A Personal Note

Born in an affluent family, in Uganda, a low-income country situated in East Africa, I was privileged to have a relatively good education and access to quality health and social services. Both of my parents were well educated and had highly paid jobs, enabling them to provide the family with quality food, accommodation, transportation, recreation and other luxuries. This childhood resulted in four of six children becoming doctors, where health and wellbeing were concepts which dominated our day to day conversations. Being much younger than my other 3 doctor siblings, I knew what was considered 'healthy' and what was not, from a very young age; the right foods and beverages to eat and drink, the ideal amount of physical activity to engage in to remain healthy, and many other health promoting behaviours. Not only were the above concepts spoken about but were a reality in our home. For instance, my parents ensured that I received all my childhood checks and immunisations, and I was enrolled in extracurricular activities such as sport and music. The high levels of health literacy in the family, availability, accessibility and affordability of quality food and healthcare and engaging in health promoting behaviours such as sport contributed significantly to my health and wellbeing.

Going into medicine was not a surprise for many as I had role modelling from my siblings and parents. As a medical student I was taught about health and disease. I learned about disease causation, comorbidities and complications. Emphasis was placed on the fact that individuals who made the 'wrong choices' were more than likely to acquire disease. Those who chose to eat fatty foods, or not engage in a certain amount of physical activity acquired diseases such as obesity, type 2 diabetes and cardiovascular diseases. Health was depicted mainly as an individual's sole responsibility. There was less focus on the role and responsibilities of other stakeholder groups such as government, community and the media.

After a few years of practicing medicine, I pursued my passion of working with women and children. I worked in hospitals and clinics, treating the 'individual' woman or child. While working with mothers

and their infants, I developed an appreciation of the 'mother-baby-unit,' where the health of one influenced the other. An unwell mother may not have been able to breastfeed and provide the comfort and support that the infant required. Equally an unwell infant may have impacted negatively on the psychological health of the mother.

Working in the departments of Obstetrics and Paediatrics as a Senior House Officer and Registrar, I managed the care of pregnant women with obesity and related diseases such as gestational diabetes, hypertension and pre-eclampsia. Some of the women required assisted births; instrumental births and caesarean sections, and some infants had complications such as traumatic birth and hypoglycaemia. I was intrigued to learn that some mothers had a lack of, or limited knowledge about their condition(s). Of note was that some of the multiparous mothers reported similar comorbidities in previous pregnancies. As a secondary care doctor receiving referrals from pregnant women from primary care and the community, I often wondered about the support given to these groups of women. My questions included, "Are you aware of the outcomes of being overweight for you and your baby?" Additionally, "Has your general practitioner or midwife referred you to a dietician?" Often derogatory remarks were made by staff in the wards; "why do they get so fat?", and "they eat so much junk!". Discharge summaries from the postnatal ward included written information regarding healthy eating and drinking, and a referral back to the general practitioner or obstetrician without much else.

Working in regions of New Zealand with relatively high Indigenous populations, allowed me to appreciate the similarities between them and African people. Health was not regarded as just as physical concept but was a much wider phenomenon, encompassing spiritual, and family and community dimensions. For Maori people, the ill health of an individual brings families and communities together, not only to provide material and other support to the patient, but also to discuss causation and possible solutions to the problem. Health is viewed as a shared responsibility with different roles for all who were involved with the patient. For example, the Kaumatua or elder, provided spiritual and cultural support for Maori patients both in health facilities and in the community, whereas the Maori liaison

officer in the hospital, worked in partnership with other health providers to ensure that Maori patients' rights and culture were preserved. Additionally, working in areas of relatively high deprivation in New Zealand with Maori, Pacific Islanders and other migrant groups, taught me that ill health was not just about the sick child with a cough or the pregnant woman with hypertension, but a much wider concept. It was about the other children in the home, the physical environment in which a person lives, the employment status of the mother, and whether that mother had transport to return for her next clinic appointment. I soon learned that these were called the 'social determinants of health'.

I decided to pursue a career in Public Health to explore these determinants further and to understand how they impact the health and wellbeing of individuals and families. With my clinical experience and a public health lens I decided to work in primary care as a general practitioner, working mainly with women and children from low socioeconomic backgrounds. Working as a General Practitioner Liaison for Women and Children's health, on the interface of primary and secondary care, enabled me to further understand the complexities of health care services and systems, including financing, distribution of resources, quality and cost, delivery and accessibility. There were, however, health system challenges including shortage of staff, and poor communication and collaboration among caregiving team members. Equally, patients reported failure to understand and navigate the various components of the health system; they highlighted many health system barriers including poor communication between them and health providers, and the stigma felt among various patient groups, such as young pregnant mothers. Other challenges included the inability to attend appointments due to lack of transportation, having other children to care about, and not understanding the reason for attending the appointments.

My appreciation of the social determinants of health above challenges associated with maternity care propelled me to lead the development and implementation of Antenatal Care Pathways for Primary Care in the district where I worked as a general practitioner. This project involved general practitioners, midwives, nurses and secondary care staff to work closely together to create a seamless transition for pregnant women from primary to secondary care and back to primary care. One of the major aims of

the pathways was to clearly demonstrate the role of each provider in the care of the woman. For example, if a pregnant woman had gained excess weight during her pregnancy the pathway stipulated whose role it was to obtain support for the woman during and after the pregnancy. The pathways also aimed to address some of the socioeconomic issues experienced by the women. Maternity care providers reported that some pregnant women expressed discontent about having to travel to health facilities for care, that were not near their homes. Additionally, these pregnant women not only presented with obstetric needs but had a whole myriad of social problems. Some were single mothers, some unemployed, others had poor housing or no personal vehicle, and many had other young children to look after. Care for these women not only required primary and secondary care but also input of various community social services. Often, there were no clear pathways, nor service referral guidelines. Moreover, the services had limited capacity to accommodate all referrals. These challenges were encountered predominantly in small towns far from tertiary health facilities and with limited resourcing of trained staff, hospital equipment, community social services and others.

Through interactions with pregnant women, particularly Maori and Pacific Islanders, engagement with health professionals in primary and secondary care, my passion for maternal health had now piqued and I sought to explore further the determinants of maternal health. I was particularly interested in maternal obesity, a significant public health issue among Maori and Pacific women. In most cases, these women did not only present with physiological problems but several other socio determinants including low education attainment, unemployment and having many children to care for.

Reflecting on this got me to question what has been done and what has been achieved in addressing the non-medical determinants of maternal obesity. As a public health problem, we needed to look more upstream to address these issues. I wanted to further understand how polices on maternal obesity impacted on the ability of maternity providers to care for these women, so I chose to undertake a public health doctorate study in Australia, a country with one of the highest rates of overweight and obesity (Australian Institute of Health and Welfare, 2017b; Hales, Carroll, Fryar, & Ogden, 2017; Navaneelan &

Janz, 2014; Organisation for Economic Co-operation and Development, 2014). In 2014-15, there was an estimated 11.2 million adult population with overweight or obesity; 6.3 million were overweight and 4.9 million were obese (Australian Bureau of Statistics, 2015). Within the same period, country South Australia was reported to have had the highest rates of overweight and obesity within primary care across Australia (Australian Institute of Health and Welfare, 2016). With this situation, there was a perceived need to provide guidance for maternity providers on how to manage pregnant women with obesity, which led to the development of the Standards for the Management of the Obese Obstetric Woman in South Australia policy. With obesity being such a significant issue in Australia, and the development of the above policy, I undertook this study, to look at what maternity providers in country South Australia thought about its applicability and impact on pregnant women with obesity. Considering my background, I tried to remove myself from the situation as a clinician and assumed the role of a researcher, resolving to avoid any perceptions that I was a colleague.

1.6 Structure of the Dissertation

Chapter 1: Introduction

An introduction is provided as a means of positioning the writer in the research enquiry. A cultural, educational and work background provides a glimpse into the values and beliefs underlying the writer's discourse. The importance of maternal obesity as a Public Health issue is described, the research question is defined, and the structure of the dissertation given.

Chapter 2: Literature review: Maternal obesity as a public health problem

This chapter explores the various ways in which maternal obesity is spoken about and the range of policy solutions provided both nationally and internationally. The relevance of this literature to the research project is discussed.

Chapter 3: Epistemology, methodology and methods

This chapter describes the aims and objectives of the research. The theoretical perspectives of constructionism and interpretivism employed in this research are set out, drawing on governmentality to 'unpack' the topic of maternal obesity. The choice of data collection and analysis tools are explained.

Chapter 4: Interview findings

This chapter explores the various ways in which key stakeholders view the issue of maternal obesity, its determinants and potential solutions. A description of emerging themes and subthemes from interview transcripts is undertaken and some of the quotes from interviewees presented to further emphasize the interpretations and understandings of those being researched.

Chapter 5: Analysis of how stakeholders represent the problem of maternal obesity

In this chapter, Bacchi's framework, is used to provide an analysis of maternity providers' views on the management of maternal obesity.

Chapter 6: Conclusions, reflections and research transfer

Research findings are brought together in this chapter by comparing emerging themes from stakeholder responses with the academic literature. A discussion of the interpretive analysis will demonstrate how particular aspects of an issue may be silenced in the policy making process. The strengths and limitations of the research design are presented and discussed. The chapter reflects on the research process, the findings and outcomes. The process by which research findings will reach appropriate stakeholders to influence future policy and practice in the area of maternal obesity in South Australia is outlined.

Chapter 2: Maternal obesity as a public health problem

2.1 Introduction

The study aims to demonstrate how maternal obesity has been 'problematised' in the *Standards for the* Management of the Obese Obstetric Woman in South Australia policy (South Australia Dept. of Health, 2012) and highlight alternative strategies to provide care for obese pregnant women. Before collecting and analysing stakeholders' views on the issue of maternal obesity as its framed by the said policy, a narrative review of the literature was conducted to uncover the various ways in which maternal obesity is depicted within national and international literature, and the emerging themes on its determinants and policy solutions. The literature was not examined for strength of study design but rather for the range of themes being presented to uncover the dominant thinking around maternal obesity as an issue during the last decade. The purpose of gathering this literature was to identify and analyse existing policy options that have ensued because of how maternal obesity is viewed. As there is a small body of evidence within Australia, and due to the magnitude of the issue globally, international literature was also sought.

2.2 Search Strategy

Unlike in systematic reviews where literature is identified, assessed and synthesized in response to a specific query and the basis of the knowledge established, a non-systematic or narrative review was conducted to identify and summarize previously published guidance documents on the management of maternal obesity and to seek areas that have not yet been addressed so as to provide a rationale for future research (Ferrari, 2015).

National and global health documents linked to the management of maternal obesity in the past decade (Jan 2008 – Jan 2018) from Australia, New Zealand, the United Kingdom, Ireland, the United States of America and Canada were sought. This period was chosen for review, as it was in 2008 that

the National Preventative Health Taskforce was established by the Australian Government, to develop a National Preventative Health Strategy to provide guidance on the management of chronic disease caused by obesity, tobacco and excessive consumption of alcohol (Commonwealth of Australia, 2009a). The countries were selected based on having similar health systems to Australia, good reporting mechanisms, and data on their maternity systems. Only English language documents were included, articles related to other countries were excluded due to their lack of relevance. Relevant documents were identified through a series of electronic searches of databases and the internet. PubMed, EMBASE, CINAHL Plus, OVID Medline, Expanded Academia, ProQuest, Cochrane, Sage and Science Direct were searched for scientific literature and Informit for its Australian content. An internet search for grey literature was also conducted, including ministry of health websites, WHO, Centre for Disease Control, national Obstetrics and Gynaecology associations, national obesity associations, Google and Google Scholar.

To obtain professional guidance on the management of pregnant women with overweight and obesity, the following search terms and combinations were used: “maternal obesity” OR “maternal overweight” OR “excess pregnancy weight” OR “increased maternal weight” OR “increased pregnancy weight” OR “excess maternal body mass index (or BMI)” OR “increased pregnancy body mass index (or BMI)” OR “pregnancy weight gain” OR “excess gestational weight gain (or GWG)” **AND** “ policy” OR “strategy” OR “guideline” OR “guide” OR “recommendation”. The inclusion and exclusion criteria were as follows:

Inclusion criteria: Official health documents in the form of guidelines, strategies and policies were eligible for inclusion if they provided guidance to health providers that cared for pregnant women with obesity and those that had excess gestational weight gain.

Exclusion criteria: Documents were excluded if published before 2008, did not include the year of publication and were not from the countries Australia, New Zealand, UK, Ireland, Unites States of America (USA) or Canada. Documents were also excluded if they provided general guidance on obesity and were not specifically developed to address maternal obesity. In a text on conducting literature

reviews, Aveyard (Aveyard, 2014) argues that if it is discovered that a topic of research has minimal evidence, other papers can be incorporated into the review, to add context and more insight to the arguments that arise (Aveyard, 2014). With this in mind, additional references are used to expand on the aspects raised form the primary review articles.

2.3 Method of Synthesis

Following the identification and selection of documents, each one was individually read, and its content coded and analysed. The findings of the individual documents were collated and reviewed, looking for similarities and differences among them. A thematic synthesis was then completed (Aveyard 2014).

2.4 Results

A total of twenty-nine documents were identified from the search strategy (see Appendix 1 Prisma chart). These documents were identified from national gynaecology and obstetrics associations' web sites, national governments' websites, Google Scholar and Google Search. No eligible document was found through electronic databases of peer-reviewed publications. Nine documents were subsequently excluded from the analysis as eight were general guidance documents on obesity, that only briefly, if at all, touched on pregnant women, and one was an implementation guide of one of the policies identified in the search. The final documents were then critically read to identify the determinants of maternal obesity, whose responsibility it was to act, and recommended strategies to address maternal obesity.

Twenty documents met the inclusion criteria. There were 14 professional guidance documents on the management of maternal obesity in this review, 13 referred to as guidelines and one as a policy (see Appendix 2). There were four guideline documents on guidance for healthy weight gain in pregnancy and two guidance documents on maternal nutrition in pregnancy. A summary of the major components of each document with reference to maternal obesity is provided, including the presence or absence of

social support (see Appendix 3). There were seven clinical guidance documents from Australia (King Edward Memorial Hospital Obstetrics and Gynaecology, 2016; Maternity and Newborn Clinical Network, 2011;QueenslandClinical Guidelines, 2015; South Australia Dept. of Health, 2012; St George/Sutherlands Hospitals and Health Service, 2015; The Royal Hospital for Women, 2014; Women and Newborn Health Service, 2009), one jointly from Australia and New Zealand (Royal Australian and New Zealand College of Obstetricians and Gynaecologists, 2013), and one from New Zealand (Ministry of Health, 2014b). There were four guidelines from the UK (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; National Institute for Health and Care Excellence, 2008, 2010; Stanley, 2017). There were two documents from the USA, (Alaska Native Medical Centre, 2016; Institute of Medicine and National Research Council, 2009), and three from Canada (Canadian Obesity Network, 2013; College of Midwives of Manitoba, 2011; Society of Obstetricians and Gynaecologists of Canada, 2010a).

2.5 Emerging themes on maternal obesity from the literature review

One of the main purposes of the literature review was to uncover the various themes that developed from the presentation of maternal obesity within professional guidance documents. Following a collective review of the documents, it was discovered that there was similarity in structure among them, with the following topics: a background on obesity in general and maternal obesity a definition of obesity and maternal obesity, recommended weight gain during pregnancy and recommendations on management of obesity before, during and after pregnancy. The emergent six key themes evident in most of the guidance documents were:

1. Pre-pregnancy weight optimization
2. Weight monitoring during pregnancy
3. Lifestyle interventions
4. The role of health professionals
5. Transfer of care to other geographical areas

6. Potential strategies and policy options to address maternal obesity

2.5.1 Pre-pregnancy weight optimization

The guidance documents consistently stated that it was important for women to have an optimum pre-pregnancy weight to avoid adverse pregnancy outcomes (Institute of Medicine and National Research Council, 2009; Maternity and Newborn Clinical Network, 2011; National Institute for Health and Care Excellence, 2010; Royal Australian and New Zealand College of Obstetricians and Gynaecologists, 2013; Society of Obstetricians and Gynaecologists of Canada, 2010a; South Australia Dept. of Health, 2012). Some documents suggested that this was the role of primary care, particularly, general practitioners, midwives, and dieticians to ensure that women's weight was monitored, and women were advised to maintain a healthy weight before pregnancy (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; National Institute for Health and Care Excellence, 2008, 2010; Royal Australian and New Zealand College of Obstetricians and Gynaecologists, 2013; St George/Sutherlands Hospitals and Health Service, 2015). Whilst the guidance documents seemed to suggest that it was the responsibility of health professionals to discuss weight issues with childbearing aged women, it was recognised that they may lack the knowledge and skills required to do so (National Institute for Health and Care Excellence, 2010; Stanley, 2017). These documents advised that training boards and organisations should provide the skills, knowledge and competencies that health workers require to be able to advise women on healthy weight ranges across the lifespan (National Institute for Health and Care Excellence, 2010). Training of health workers on ways in which to communicate on weight issues, affords them with the knowledge and confidence they require to address maternal obesity. Some of the documents suggested that there were ideal opportunities for health professionals to discuss weight related issues with the woman, such as during family planning consultations or periodic health visits (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; Society of Obstetricians and Gynaecologists of Canada, 2010a). A relatively large proportion of women of childbearing age are likely to have regular health visits, however, there is a

proportion of women who are not able to attend these appointments for various reasons (Tanton et al., 2017). For instance, in Australia, New Zealand and Canada, indigenous and immigrant populations have reported difficulties in attending a general practitioner and receiving health care, compared to non-indigenous and non-migrant population groups, due to factors including; lack of transport, costs of consultations, distance and cultural reasons (Australian Institute of Health and Welfare, 2016; Lalonde, Butt, & Bucio, 2009; Ministry of Health, 2016; Statistics Canada, 2016). For these hard to reach population groups, the documents do not provide information on how to engage and support them to maintain a healthy weight.

Some of the documents recommended that women are advised about obesity related pregnancy complications during pre-pregnancy counselling (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; Ministry of Health, 2014b; Queensland Clinical Guidelines, 2015; South Australia Dept. of Health, 2012; Stanley, 2017). In Ireland, this recommendation is extended to all women who attend healthcare visits, including those who do not plan to conceive (Institute of Obstetricians and Gynaecologists et al., 2011). Engaging and advising women about risks associated with obesity is beneficial but may not be enough. Research shows that while making behavioural changes, women require social support (O'Brien et al., 2017; Sui, Turnbull, & Dodd, 2013; World Health Organization, 2010a). While trying to quit smoking, pregnant women reported success if their partners, family or friends also quit smoking (World Health Organization, 2010a). The role of the family is further accentuated by the Maori people in New Zealand, who consider family or *te taha whanau*, as one of the four cornerstones of health (Mauri Ora Associates, 2008). Although several documents mentioned pre-pregnancy counselling for the woman, only one acknowledged the role of the family in the woman's ability to maintain a healthy weight during the pre-pregnancy period. The guidance document from the UK, suggested that health professionals should be mindful of how the woman's social context and relationships influence her ability to make behavioural changes towards achieving a healthy weight pre- pregnancy (National Institute for Health and Care Excellence, 2010).

Achieving an optimum weight pre- pregnancy may not only require the woman's individual efforts, but the support of her family and friends.

2.5.2 Weight Monitoring during pregnancy

There was consensus that all women should have their weight and height measured at their first appointment and throughout pregnancy, and their BMI calculated (College of Midwives of Manitoba, 2011; King Edward Memorial Hospital Obstetrics and Gynaecology, 2016; Maternity and Newborn Clinical Network, 2011; Society of Obstetricians and Gynaecologists of Canada, 2010a; Stanley, 2017; The Royal Hospital for Women, 2014). Although there are some concerns regarding its reliability in pregnancy, BMI was the most clinically agreed upon definition of obesity (Institute of Obstetricians and Gynaecologists, Royal Collegeof Physicians of Ireland, & Directorate of Clinical Strategy and Programmes and Health Service Executive, 2013; Maternity and Newborn Clinical Network, 2011). The documents recommended that BMI should be calculated early to allow time to identify women at risk, and to intervene in a timely manner (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; Health Service Executive, 2016; King Edward Memorial Hospital Obstetrics and Gynaecology, 2016). Additionally, the papers recommended that weight should be monitored during antenatal visits. However, it is known that certain groups of women, do not present, or present late for antenatal care, and others are infrequent with their health visits. For instance, women from ethnic minority groups and socially deprived areas are reported to have poor access to antenatal care, due to poor reproductive health knowledge, lack of family support, language and cultural barriers (Commonwealth of Australia, 2009b, 2011; Corcoran, Catling, & Homer, 2017; Henderson, Gao, & Redshaw, 2013; Kapaya et al., 2015; Mone, Adams, Manderson, & McAuliffe, 2015). Yet, women who are more at risk of gaining excess weight in pregnancy are noted to be from socially deprived areas (Australian Institute of Health and Welfare, 2017b; Cheney, Berkemeier, Sim, Gordon, & Black, 2017; Shub, Huning, Campbell, & McCarthy, 2013). Only two of the documents acknowledged these groups of women. One document from New Zealand advised that women with low education

attainment are more at risk of excess pregnancy weight gain and the information provided to them should be tailored to meet their needs (Ministry of Health, 2014a). Another one from the UK advised that certain groups of ethnic women may be at an increased risk of obesity even at a lower BMI (National Institute for Health and Care Excellence, 2010). Despite this information most documents did not describe women who are more at risk of obesity nor advise on how they can be assisted to access antenatal care to have their weight monitored and have timely interventions as required.

2.5.3 Lifestyle interventions

As a way of identifying and intervening for women at risk of maternal obesity before, during and after pregnancy, the documents recommended that health professionals evaluate and advise women on dietary intake and physical activity (College of Midwives of Manitoba, 2011; Institute of Medicine and National Research Council, 2009; National Institute for Health and Care Excellence, 2010;QueenslandClinical Guidelines, 2015; Society of Obstetricians and Gynaecologists of Canada, 2010a; South Australia Dept. of Health, 2012). Diet and physical activity are modifiable lifestyle determinants of maternal obesity, that have an impact on maternal weight (Nelson, Matthews, & Poston, 2010). The papers recommended that women should be advised to eat adequately to avoid excess weight gain in pregnancy (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; Ministry of Health, 2014b; National Institute for Health and Care Excellence, 2010). Furthermore, the papers suggested that women should be counselled on receiving adequate physical activity, to maintain a healthy pregnancy weight (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; Maternity and Newborn Clinical Network, 2011; Stanley, 2017). There was seldom any mention of social determinants of maternal obesity within the documents, yet research demonstrates that women who are more at risk of obesity are primarily from low socioeconomic backgrounds, with low levels of education and unemployment (Cheney et al., 2017; Shub et al., 2013). This suggests that these women may not be able to afford adequate nutrition or memberships to local gymnasiums, hence requiring further support

to meet the dietary and physical activity requirements. Only two of the guidance documents seemed to demonstrate the importance of these social determinants (National Institute for Health and Care Excellence, 2008, 2010). In these, health professionals were advised to refer pregnant women with low incomes to the Healthy Start Scheme for food and nutrition support (National Institute for Health and Care Excellence, 2008, 2010).

The Healthy Start Scheme is a statutory scheme introduced in 2006 that supports low income families including pregnant and breastfeeding women in the UK and Northern Ireland (Lucas et al., 2013; McFadden et al., 2014). The scheme provides vouchers that can be used to purchase food and fresh and frozen vegetables from local retail shops (Lucas et al., 2013; McFadden et al., 2014). However, even though health practitioners and beneficiaries expressed some satisfaction with the scheme's contribution to the increase in consumption of fruits and vegetables there were still concerns raised about the program (Lucas et al., 2013; McFadden et al., 2014). Access to the program was particularly challenging for certain groups of women, such as those in low paid work, non-English speakers, women with low literacy levels and immigrants (Lucas et al., 2013; McFadden et al., 2014). Perhaps there is a need to consider social determinants of health and their impact on maternal obesity and develop interventions that address them.

2.5.4 The role of health professionals

The documents suggested that weight management of pregnant women should be the role of all health professionals (Canadian Obesity Network, 2013; Ministry of Health, 2014b; Royal Australian and New Zealand College of Obstetricians and Gynaecologists, 2013; The Royal Hospital for Women, 2014). As mentioned earlier, initial discussions regarding pre-pregnancy weight optimisation was suggested to be the role of primary care including general practitioners and midwives (Canadian Obesity Network, 2013; Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; Queensland Clinical Guidelines, 2015; Royal Australian and New Zealand College of Obstetricians

and Gynaecologists, 2013). Additionally, the documents suggested that women with increased weight before, during and after pregnancy may be offered referrals to a dietician or an exercise specialist to help manage their weight (Canadian Obesity Network, 2013; Queensland Clinical Guidelines, 2015; Royal Australian and New Zealand College of Obstetricians and Gynaecologists, 2013; Stanley, 2017; The Royal Hospital for Women, 2014; Women and Newborn Health Service, 2009). However, research shows that dieticians and exercise specialists are not readily available in rural and other non-urban settings (Brown, Williams, & Capra, 2012; Department of Health, 2011; Keane, Lincoln, & Smith, 2010), where obesity is more highly prevalent (Australian Bureau of Statistics, 2015; Navaneelan & Janz, 2014; Trivedi et al., 2015). So, it seems that not all women with a risk of obesity are able to receive the support they require from dieticians and exercise specialists. Two of the documents suggested that local authority bodies, community, voluntary and commercial organisations may have a role to play in addressing weight gain in pregnancy (National Institute for Health and Care Excellence, 2010; Queensland Clinical Guidelines, 2015). The clinical guideline from the UK, advised that women be offered memberships to local leisure and weight management centres where they can swim, cycle, dance and have organized walks (National Institute for Health and Care Excellence, 2010). However, studies demonstrate that communities with rural and low-income populations, where obesity is highly prevalent, have limited access to physical activity resources and others have structural environmental barriers such as lack of walking and cycling trails (Frost et al., 2010). There was no mention of support given to these women to engage in physical activities that may assist in weight management.

Research also demonstrates that maternal obesity is highly prevalent among women from indigenous and diverse cultures (Australian Bureau of Statistics, 2011; Hales et al., 2017; Lucas et al., 2013). Two of the documents briefly acknowledged the importance of culture and language in providing an understanding of women's health behaviours and the ability to intervene effectively (Canadian Obesity Network, 2013; National Institute for Health and Care Excellence, 2010). Culturally centred maternity programs have been reported to have had positive feedback. For instance, indigenous pregnant women

in South Australia reported that communication within indigenous midwifery services was better compared to mainstream services as they had a better understanding of the terminology used (Corcoran et al., 2017). Other positive aspects of the program highlighted were the availability and flexibility of midwives, clinic opening hours and home visitation services (Corcoran et al., 2017). Additionally, pregnant women and their communities reported that culturally centred maternity services promote continuity of care and a feeling of ownership of the birthing process (Corcoran et al., 2017; Lalonde et al., 2009).

Interventions from dieticians and exercise specialists are beneficial in promoting healthy weight before, during and after pregnancy (Buckley, 2016; Giacobbi, Zautra, Dreisbach, & Liguori, 2016; McGiveron et al., 2015; Opie, Neff, & Tierney, 2016), however the impact of these efforts can be amplified by engaging culturally centred services which have been reported to have positive pregnancy outcomes (Corcoran et al., 2017; O'Driscoll et al., 2010).

2.5.5 Transfer of care to other geographical areas

Five of the documents advised that in circumstances where local maternity services do not have adequate resources, pregnant women with obesity may be transferred from their home environments to other geographical areas to receive specialised care in higher level facilities and returned home after birthing (King Edward Memorial Hospital Obstetrics and Gynaecology, 2016; Maternity and Newborn Clinical Network, 2011; Queensland Clinical Guidelines, 2015; South Australia Dept. of Health, 2012; Women and Newborn Health Service, 2009). The documents advised that these regulations are imposed to ensure safe outcomes of the pregnant woman and her baby (Queensland Clinical Guidelines, 2015; South Australia Dept. of Health, 2012). Two of the documents did not provide actual details of the transfer and relocation process, but advised that the woman may be transferred back to a peripheral hospital after giving birth (King Edward Memorial Hospital Obstetrics and Gynaecology, 2016; Women and Newborn Health Service, 2009). There was generally no mention of discussions held with the

woman regarding her care, yet the documents advised that decisions regarding her transfer and relocation were made prior to the onset of her labour (Queensland Clinical Guidelines, 2015; South Australia Dept. of Health, 2012). Furthermore, the South Australian policy advised that the woman will be directed to relocate to a residence of her 'choice' (Department of Health, 2016). Only one document advised that the woman and her family were integral to decision making regarding transfer and relocation (Queensland Clinical Guidelines, 2015), while the other four documents did not provide any information. It is therefore not clear if the guidance documents supported the notion that the pregnant woman should be given a choice regarding her care.

One document acknowledged the importance and risks of the pregnant woman birthing away from her family and community (Queensland Clinical Guidelines, 2015). Pregnant women may have been expected to move to other geographical areas to obtain the care they required. For instance, regulations stipulated that pregnant women from rural and remote communities must travel elsewhere to access perinatal services as local centres may not have the capacity to provide the care required (Miller et al., 2012; South Australia Dept. of Health, 2012). Women may need to be away from their homes and families from 36 weeks' gestation until they give birth (Queensland Clinical Guidelines, 2015; South Australia Dept. of Health, 2012). The process of relocation is reported to result in social, psychological and financial consequences for these women and their families (Miller et al., 2012). Women reported difficulty in leaving other children behind, having no partner support and having to deal with expenses of the relocation (Ireland, Narjic, Belton, & Kildea, 2011; Miller et al., 2012). The guidance documents did not mention any form of support or assistance offered to the women and their families during this period.

Rural and remote women reported that childbirth was considered stressful as they had to leave their communities to give birth without their family and community members present (Miller et al., 2012; Society of Obstetricians and Gynaecologists of Canada, 2010b). Rural and remote are defined by variables including distance between the area and advanced care, between the area and basic care as

well as the density and population of the site (Australian Institute of Health and Welfare, 2008; Kralj, 2008). Although women were directed to relocate from their homes, to ensure safer births, the process may in fact have impacted negatively on them and their families.

2.5.6 Potential strategies and policy options to address maternal obesity

The findings highlighted the limitations on guidance for health professionals in managing pregnant women with obesity. Four guidelines stipulated that it was the role of health professionals to have weight related discussions with women so that they achieve and maintain a healthy weight before pregnancy (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; National Institute for Health and Care Excellence, 2008, 2010; Royal Australian and New Zealand College of Obstetricians and Gynaecologists, 2013). One document though acknowledged that these discussions needed respect and tact (St George/Sutherlands Hospitals and Health Service, 2015). Other studies have shown that at times maternity providers do not provide women with dietary advice, as they lack the knowledge and confidence (Wilkinson, Poad, & Stapleton, 2013; Willcox, Campbell, Plight, Hoban, & Pidd, 2012). Health professionals should be supported with training to acquire the skills and competencies required to address weight issues as advised in one of the clinical guidelines (National Institute for Health and Care Excellence, 2010).

The documents advised that as a way of supporting women to maintain a healthy weight before, during and after pregnancy, health professionals should use every opportunity to counsel women about their weight during their regular health visits and the antenatal care period (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; Institute of Obstetricians and Gynaecologists et al., 2011). However, research has shown that certain groups of women, who are more at risk of obesity such as women from low income, indigenous, rural and remote communities, may not attend antenatal care and others health visits because of cultural and language barriers, lack of reproductive health and distance to health centres (Commonwealth of Australia, 2009b; Henderson et

al., 2013; Kapaya et al., 2015). Perhaps there is a need to consider other ways of engaging and intervening for these women.

Research has shown that indigenous women preferred culturally centred maternity services compared to mainstream services as they promoted women's ownership of the birthing process, provided better communication and home visitations (Birch, Ruttan, Muth, & Baydala, 2009; Corcoran et al., 2017). Management of obesity may need to incorporate more cultural practices to improve access and provide better outcomes for indigenous women.

2.6 Conclusion

The documents unanimously stipulated that health professionals should 'encourage', 'advise', 'counsel' women and make them 'aware of' the diet and physical activity required to prevent maternal obesity (Centre for Maternal and Child Enquiries & Royal College of Obstetricians and Gynaecologists, 2010; Institute of Obstetricians and Gynaecologists et al., 2011; Royal Australian and New Zealand College of Obstetricians and Gynaecologists, 2013; South Australia Dept. of Health, 2012). As shown in chapter 1, women who are more at risk of maternal obesity were described as indigenous, rural, women with low income and low education attainment, yet this was not reflected in the guidance documents. The documents advised that women may have to relocate to other communities away from their homes, to receive optimum care. However, there was no mention of any discussions held with the woman and her family regarding the transfer and relocation process, nor the effects that it may have on her and her family. The findings of the review had a very strong biomedical focus with less mention of the social determinants of health.

This chapter has provided a synthesis of the content of the guidance documents on maternal obesity through identifying six common themes. From these findings we can see that they cover the biomedical requirements of maternal obesity. The absence of social determinants of maternal obesity within the documents needs us to consider policy areas that may need to be further explored and addressed. The

next chapter will provide the study project's underlying epistemology, methodology and research methods used to answer the research question and address the aims and objectives.

Chapter 3: Epistemology, methodology and methods

3.1 Introduction

The previous chapter explored literature that provides professional guidance on the management of maternal obesity. The literature was examined to ascertain current views on maternal obesity, its determinants, and strategies to address it. Informed by the review, this study aimed to understand the perceptions of maternity care providers charged with complying with the *Standards for the Management of the Obese Obstetric Woman in South Australia* policy (South Australia Dept. of Health, 2012; South Australia Dept. of Health and Ageing, 2015). The project aimed to explore key stakeholders' capacity to implement the South Australian policy as well as to understand what they perceived to be the impact of the policy on pregnant women with obesity.

This chapter describes the epistemology underlying the research to provide a context within which the research methods were chosen. This is followed by an outline of the methodological framework for the approach and methods which were employed in this study. Methodology will be provided as a two-phased approach. The first phase consisted of a qualitative research methodology using thematic analysis of interview findings to seek in depth understanding of the perceptions of maternity providers charged with compliance with policy and the impact related to its implementation. The second phase consisted of an analysis of stakeholder responses using an interpretive framework of Bacchi's (2009) 'What's the problem represented to be' methodology to understand how stakeholders perceive the South Australian policy. The results of the study will be presented in chapters four and five.

3.2 Epistemology

The underlying epistemological base of the study is constructionism, embedded within an interpretive framework. Constructionism is a notion that states that truth and meaning do not exist outside their construction but through the subject's interaction with the world (Gray, 2014). Searle supports this

notion when he argues that language is the fundamental source of institutional reality which enables people to see things that they would not otherwise have seen (McCaffree, 2018). Without the use of language and the capacity for collective intentionality, institutional reality would not exist (McCaffree, 2018). The same meaning of a phenomenon or institutional reality can be can constructed in different ways depending on the way the subject engages with the world around it (Gray, 2014). The existence of 'real' phenomena is not dependent on our knowledge of their construction. For example, tables may exist independently of knowledge of what they do. However, our perception of tables, their role, their name and suggested purpose stems from our previous experience, knowledge and the cultural lens from which we view the world. Cultural differences provide evidence of how meaning is socially constructed through varied understandings of the same phenomenon. For example, lack of direct eye contact is a sign of anxiety, fear and insincerity and disrespect among non-Maori. Among Maori, the converse is true; direct eye contact is considered a sign of disrespect and lack of acknowledgement of cultural norms (Medical Council of New Zealand, 2006). This shows that there is no one true interpretation of a phenomenon, but rather multiple logical interpretations of the same social actions or objects (Weinberg, 2014). This is an example of social constructionism, a demonstration of the extent to which our understandings of the world are the product of social forces and consequently how socio-political processes shape our forms of knowledge (Bacchi, 2009; Burr, 2015; Weinberg, 2014). Bacchi informs us that social constructionism is different from 'constructivism', which sees the person as 'actively engaged in the creation of their own phenomenal world' (Bacchi, 2009 p33). This perspective, social constructionism, aligns well with the interpretive approach. Interpretivism explains, 'culturally derived and historically situated interpretations of the social life-world' (Crotty, 1998 pg46). Interpretation of the world is based on an individuals' social environment and prior knowledge and experiences. Furthermore, this is an ongoing process that changes from time to time. An individual's view and understanding of the world at one given point may be different at another point in time. However, meanings from previous contexts influence the way things are understood in the given context (Storey, 2006).

The interpretive approach is based on the premise that the world is viewed through multiple lenses (Yanow, 2000). With this approach, policy issues cannot be considered independent of underlying beliefs and values of those involved in the process. This explanation supports the notion that during the analysis process, individuals acquire knowledge through their interpretation of information based on their prior experience, education and training as well as their personal, family and social background (Yanow, 2000). This approach suggests that different beliefs and values will be ascribed to the same policy option by different groups based on their previous experiences. The interpretive approach values these differences and validates them as the explanation for the different understandings of the problem and solutions during policy development and implementation. There is a need to understand the different policy interpretations, to explore the effectiveness of the policy and as such, the approach values local knowledge during the policy process. Local knowledge stems from groups of individuals with the same understanding of policy problems and similar underlying values and beliefs. These groups are referred to as 'communities of meaning' of which there are at least three main communities; policy makers, implementing personnel, and affected clients or citizens (Yanow, 2000). The interpretive approach focuses on how different groups frame policy issues. 'Frames' direct attention towards certain elements and simultaneously divert attention away from others, both of which are valued (Yanow, 2000).

The 'What's the problem represented to be?' policy approach, examines the way problem representations hinder the thinking of an issue in a different way, and thus constricts social vision (Bacchi, 2009). Bacchi (2009) proposes that suggested solutions to a policy problem reveal underlying assumptions, beliefs and values of stakeholder groups. Each solution is in response to a particular representation of the problem. Problem representation is a notion that supports the constructionist view; problems do not exist independently, but rather are a result of how individuals construct their reality. Bacchi (2009) provides a set of questions to determine the assumptions, beliefs and values underlying policy solutions and to discover how the various groups view the issue. These questions can

be used to examine how maternal health issues are presented and how stakeholders view maternal health through the solutions proposed in South Australia. In doing this it aims to identify the various interpretive communities of meaning for maternal health within South Australia. One of the study's main objectives is to develop a set of context specific policy options. In doing this the varying 'truths' of each stakeholder are valued and acknowledged.

3.3 Study Methodology and Methods

To address the aims and research questions the methodology employed qualitative research; an overarching term, used to describe a variety of methods and approaches to the study of natural social life (Saldana, 2011). Qualitative research has multiple goals depending on the project, including new insights into social and individual complexities, documentation of cultural norms, and evaluation of the effectiveness of policies and programs (Saldana, 2011). Qualitative research is used to develop a deeper understanding of the social world from informants perspective as interpreted by the researcher by collection and analysis of data that is primarily non-quantitative in character and may be in the form of interview transcripts, video recordings, documents, photographs, and internet sites, to document human experiences of others or oneself in reflexive states or social events (Saldana, 2011). The information collected allows for documentation of categories and patterns so as to construct meanings of the ambiguities and complexities of the social world (Saldana, 2011). The epistemological base of constructionism described above provides a good foundation from which the social world can be understood, and meanings interpreted based on the informants' prior knowledge and experience. Qualitative research is conducted across and within multiple disciplines, including sociology, education, psychology, social work, healthcare, and other related fields (Saldana, 2011). Qualitative health research is distinguishable from qualitative research as a subdiscipline, due to the difference in nature of the participants, the context and the research questions being investigated (Beck, 2013). It is postulated that qualitative health research has to be conducted by "insiders" such as social workers, nurses and physicians, as they possess qualifications and special skills in healthcare required to better

understand the complexities and ambiguities surrounding health: knowledge regarding patient populations, rules, regulations and norms required to work in healthcare organizations (Beck, 2013). In this way, qualitative research provides an opportunity for health care professionals to make a unique contribution to healthcare and their respective disciplines (Beck, 2013).

Many qualitative research studies employ the interviewing method of data collection. Interviewing participants allows access to individual perspectives and worldviews that will best answer the researcher's questions (Saldana, 2011). Interviews are an effective way of gathering and documenting participants own words, individual perspectives, values, feelings, opinions, beliefs and attitudes about their personal views and social world (Saldana, 2011). The research purpose, topic and questions provide the basis for the areas covered and types of questions asked during an interview, but the extemporized conversation may also lead to unexpected insights and topics for further exploration (Saldana, 2011). This methodology is therefore appropriate to articulate the explicit and implicit views around maternal obesity.

This project sought to understand what maternity providers in South Australia thought about the applicability of the South Australian policy and its impact on pregnant women with obesity. Interviews were used to explore providers' experiences and meanings they attach to them while considering the broader role society plays in influencing and shaping these meanings and the subsequent understandings (Fielden, Sillence, & Little, 2011). The following sections outline the research process.

3.3.1 Ethics Approval

Ethics approval was obtained from the Flinders University Social and Behavioural Research Ethics Committee. Potential participants were approached by e-mail outlining the project's intent and a request for involvement in the study. A letter of introduction from the project supervisor was provided to the stakeholders together with an information sheet providing details of the study and the consent form. Stakeholders were assured that they would remain anonymous and the information they provide

will be held confidentially. Once stakeholders agreed to participate in the project, they were asked to complete the consent form. Participants were also asked to indicate by email, the date and time that they would be available for the interview. A copy of these documents is provided in Appendix 4 and 5.

3.3.2 Study Sample

Study participants were providers of maternity care with the potential to influence the social construction of maternal obesity as well as improvement of its management within South Australia. These were country obstetric GPs and midwives providing care for obese women within their local regions, as well as metropolitan based obstetricians to whom some of these women were referred, all of whom were expected to conform with the policy. Purposive sampling from pre-existing lists of non-metropolitan maternity care providers in South Australia was used to identify appropriate participants including general practitioners, obstetricians and midwives. Twenty-eight stakeholders were identified and approached to participate in the study. Of the stakeholders approached, five declined, citing reasons including 'busy work schedules' and 'going away on leave', and six stakeholders did not respond. This left a total of 17 participants who consented to participate and were interviewed as part of the study, resulting in approximately 60% response rate. Table 1 outlines the study participants and their professional role to maternal obesity. Participants' real names have not been used, but rather pseudonyms.

Table 1: Participant relationship to management of maternal obesity

Participant	Relationship to maternal obesity and reason for participation
Andrew	GP Obstetrician who provided care to pregnant women with obesity
Brian	GP Obstetrician and GPAnesthetistwho provided care to pregnant women with obesity
Charles	Private Obstetrician who provided maternity care for pregnant women with obesity referred from GP obstetricians.
Angela	GP Obstetrician who provided care to pregnant women with obesity
Dennis	Rural Obstetrician
Betty	Rural Obstetrician
Carol	Private Obstetrician who provided maternity care for pregnant women with obesity referred from GP obstetricians.
Edward	GP Obstetrician who provided care to pregnant women with obesity
Fred	GP Obstetrician who provided care to pregnant women with obesity
Gordon	GP Obstetrician who provided care to pregnant women with obesity
Diana	Community Midwife, who provided care to pregnant women with obesity
Eva	Community Midwife, who provided care to pregnant women with obesity
Fiona	Community Midwife, who provided care to pregnant women with obesity
Gloria	Community Midwife, who provided care to pregnant women with obesity
Harriet	Community Midwife, who provided care to pregnant women with obesity
Isabelle	GP Obstetrician who provided care to pregnant women with obesity
Harry	GP Obstetrician who provided care to pregnant women with obesity

3.3.3 Data Collection

Interviews were conducted to enable the in-depth exploration of reasons underpinning policy implementation and barriers and enablers to compliance. Participants were asked to participate in a single individual telephone interview with the researcher. The interviews explored the broad area of practitioners' perceptions of the policy to understand their relationship to and influence on compliance with the management of obese women under their care. Like Bacchi, the interviews sought to discover the effects that the policy had on the women being referred and, on the providers, referring the women. Interview questions aimed to expose both apparent effects as well as those that Bacchi described as being left 'unproblematic' (Bacchi, 2009). The interviews ranged from 15 to 35 minutes in duration. They were audio recorded to increase the accuracy of data collection, and then later professionally transcribed (Patton, 2015). The following questions were asked during the interviews:

1. Can you describe your perception of the current policy on managing obese obstetric women?

2. What do you see to be the issues for women being referred in compliance with this new policy?

3. What do you see to be the issues for yourself as practitioner for referring women to comply with this new policy?

4. How do you perceive your knowledge and experience in managing obstetric problems in obese obstetric women?

5. How do you assess/manage the changing risk status of obese women during pregnancies and with subsequent pregnancies?

6. What occupational health and safety practices do you have for managing obese patients?

7. What strategies have you achieved or tried to achieve in order to meet the requirements of this policy?

8. What do you see as barriers and enablers to implementing policies such as this?

These questions were however used as a guide to generate discussion and not rigidly used to dictate the line of inquiry. As the study progressed, earlier interviews were used to inform subsequent interviews and test proposed solutions. Using this approach, earlier interviews influenced the types of questions that were asked. Table 2 below provides a summary of the data collection and analysis methods used to meet the research aims and objectives.

Table 2: Summary of the Research Design

Aim	Objectives	Data Source	Analysis Method
1. Explore the ways in which dominant discourse(s) shape understandings of maternal obesity as depicted in professional guidance documents	To undertake a review of the relevant literature to explore the various ways in which maternal obesity is spoken about and the range of policy solutions provided.	Literature Review	Thematic synthesis
2. To critically analyse the perceptions of stakeholders involved with pregnant women with obesity and charged with compliance of the South Australian policy	To uncover the views of stakeholders on their capacity to implement the policy	Semi-structured interviews	Thematic Analysis
	To critically analyse stakeholder responses to uncover the various problem representations	Semi-structured interviews	Descriptive analysis 'how' questions in What's the Problem Represented to be (WPR) approach Interpretive Bacchi
	To critically analyse stakeholder responses to explore the impact of the policy on the pregnant women cared for.	Semi-structured interviews	Interpretive Bacchi
3. To develop a set of context specific policy options to reduce maternal obesity	To use local evidence provided to develop realistic locally informed policy options to manage obesity in pregnancy within the South Australian context.	Semi-structured interviews and literature review	Thematic analysis and Interpretive Bacchi approach

The research study was undertaken over a period of four years, in which the policy was revised. The research timeline is shown in Table 3.

Table 3: Research Timeline

March 2015	Doctoral student and Supervisors have their dissertation supervision meeting. Ethics approval is requested.
April 2015	Ethics approval received from the Flinders University Social and Behavioural Research Ethics Committee. First semi-structured interview conducted.
April to September 2015	Semi-structured interviews conducted.
April 2016	Revision of the Standards for the Management of Obese Obstetric Woman in SA 2012. Approved SA Health Safety & Quality Strategic Governance Committee.
October 2015 to November 2017	Doctoral student away on personal bereavement leave
November 2017 – March 2019	Writing of the doctoral dissertation and submission.

3.3.4 Approaches to data analysis

To meet the research aims, the data corpus was analysed twice using two different approaches or phases.

Phase 1: Thematic analysis

Thematic analysis was used to identify and describe implicit and explicit ideas from key stakeholders of the policy. Thematic analysis, also called theme-analysis (Meier, Boivin, & Meier, 2006), is used systematically to identify, analyse and report patterns of meanings within data (Braun & Clarke, 2006). Thematic analysis allows for the researcher to identify and make sense of collective or shared experiences and meanings (Braun & Clarke, 2006). Thematic analysis is not an approach to conducting qualitative research, but a method of data analysis, rendering it flexible yet methodologically sound if applied in a robust manner (Cooper et al., 2012). Braun and Clarke (2006) provided a series of steps to be done when conducting

thematic analysis. This procedure provides a clear explanation of what thematic analysis is and how it is conducted, while maintaining the "flexibility" attached to the method (Braun & Clarke, 2006).

As a flexible method, thematic analysis can be used within different theoretical frameworks and can be conducted in different ways (Braun & Clarke, 2006). It can be an essentialist or realist method, reporting meanings, experiences and the reality of participants or it can be used as a constructionist method, which examines the ways in which events, experiences, meanings and realities are the effects of a variety of discourses being applied within society (Braun & Clarke, 2006). It can also be a contextualist method, situated firmly between essentialism or realism and constructionism (Braun & Clarke, 2006). This approach acknowledges the ways in which individuals make meanings of their experiences and consequently the ways the broader social context impacts on those meanings (Braun & Clarke, 2006). In this study, the reality of maternal obesity was important through exploring the experiences of maternity providers and the meanings they attach to them, while incorporating the impact of the wider social context on these meanings and subsequent understandings. In this way, the position of a contextualist was assumed (Braun & Clarke, 2006).

Braun and Clarke's (2006) six-phased approach to the thematic analysis process was used, providing structure to the analytical process. Although these are logical phases, they are not linear in sequence, as thematic analysis is a "nonlinear, recursive (iterative) process in which data collection, data analysis, and interpretation occur and influence each other" (Willis, 2007 pg 202).

1. **Familiarization with the data**. This phase involved reading and rereading the transcripts of the interviews and listening to audio recordings (Braun & Clarke, 2006). Notes on the data were made as the recordings were read and listened to. At this stage, note-making was observational and casual rather than inclusive and systematic.

2. **Generation of initial codes**. This was the beginning of the systematic analysis of the data using coding (Braun & Clarke, 2006). In qualitative inquiry, a code is often a word or short phrase that symbolically assigns a salient or essence-capturing attribute to a portion of data that has potential relevance to the research question (Braun & Clarke, 2006; Saldana, 2009). All interviews were coded using NVivo 11 to assist in the data management.

3. **Searching for themes.** This phase involved reviewing data that had been coded to identify regions of similarity and overlap between codes. The process of clustering codes that seem to share common features, generated subthemes, the subcomponents of themes (Braun & Clarke, 2006). A theme is known to capture something important about the data in relation to the research question and represents some level of meaning or patterned response within the data set (Braun & Clarke, 2006). Codes were collated into initial themes and the relationship between themes explored to determine how they would work together to provide a good narrative about the data (Braun & Clarke, 2006).

4. **Reviewing themes**. In this phase, themes were checked and rechecked against the initial codes and the original segments of data to explore whether the theme worked in relation to the data (Braun & Clarke, 2006). Once there was a coherent and distinctive set of themes that worked in relation to the coded segments of data, they were reviewed in relation to the whole dataset to ensure that they captured the most important and relevant aspects of the data in relation to the research question (Braun & Clarke, 2006).

5. **Defining and naming themes**. In this phase, initial themes were further collated into finer themes that were clearly defined. Each theme had a clear scope, focus and purpose, and built and developed on the previous themes, coming together to provide a coherent story about the data (Braun & Clarke, 2006). This phase involved selecting data extracts to present and analyse and then

laying out the story for each theme around these extracts. The extracts selected provided structure for the analysis (Braun & Clarke, 2006). Themes or patterns of responses within data can be identified primarily as an inductive or 'bottom up' approach or as a deductive or 'top down' approach (Braun & Clarke, 2006). An inductive approach to data coding and analysis is one whereby the codes and themes identified are closely linked with the content of the data (Braun & Clarke, 2006). With this approach, if data has been collected specifically for the research, the themes identified may have minimal relation to the specific questions that were asked in the interviews (Braun & Clarke, 2006). They would also not be influenced by the researcher's theoretical interest in the topic (Braun & Clarke, 2006; Cooper et al., 2012). In contrast, a deductive approach to data coding and analysis is one where the researcher approaches the data with a series of ideas, concepts or topics that they use to code and derive meaning from the data (Cooper et al., 2012). However, coding and analysis combines the two approaches. It is hard to be purely inductive as one always brings something to the data when analysing it and equally one cannot ignore the meanings within the data when coding for a specific theoretical construct (Braun & Clarke, 2006). However, one approach tends to predominate, signalling the overall orientation that emphasizes either data-based or participant meaning or theory- based or researcher meaning (Braun & Clarke, 2006). The dataset was analysed using an inductive or data- based thematic analysis using the reiterative stages described above.

6. **Producing the report**. This is considered the final phase of the analysis as the themes are described and credible data extracts are used to explain each theme (Braun & Clarke, 2006). Major themes will be presented and explained in chapter 4.

<u>Phase 2: Bacchi informed analysis</u>

Interpretive approaches to policy analysis assume that there may be other ways of viewing or understanding the world in which we live rather than an absolute objective truth. Policies can represent problems in various ways through the types of solutions they offer. Bacchi's 'What's the problem represented to be?' approach to policy analysis is interested in understanding how the representation of policy problems closes off the space for thinking about the issue in different ways and thus constricts social vision (Bacchi, 2009). Interpretive policy analysis identifies the various values and beliefs that are expressed when defining a problem in a certain way (Yanow, 2000).

Stakeholder views were analysed using five key questions adapted from Bacchi's framework of analysis (Bacchi, 2009). These questions were applied to each individual interview transcript to uncover any tensions. The following key questions were used in the analysis:

1. What is the problem represented to be through the solutions proposed by stakeholders?
2. What presumptions or assumptions underlie representations of the problem?
3. What is left unproblematic by representations? Where are the silences? How can the problem be thought about differently?
4. What effects are produced by representations of the problem? What are the unintended consequences of representations? Who benefits from the representations?
5. Where are the various problem representations being produced and reproduced?

Adapted from Bacchi (2009)

These questions were adapted from the original framework of six questions, to avoid repetition and better meet the needs of analysing interview data as opposed to policy, which is how Bacchi most commonly uses her framework (Bacchi, 2009). As Bacchi herself highlights, separate application of the questions can result in some repetition, thus 'every question need not always be addressed in every analysis' (Bacchi, 2009 pg 101). The first question in the analysis asks of any subject being discussed, 'what's the problem represented to be?' If the government has proposed to do something, this question is asking what is the

problem and what change is anticipated (Bacchi, 2009). Subsequent questions two through to question five inquire deeply into the need for change and probe further about underlying presuppositions underpinning the change proposed, possible silences regarding what may have needed to be changed and the likely effects accompanying the understanding of the problem in a particular way (Bacchi, 2009).

Policy is shaped by the beliefs and values of policy actors and reflects power relationships (Hill & Varone, 2012; Stewart, 2009). The process involves decision-making and deliberation over which beliefs and values should be translated into public policy (Stewart, 2009). An interpretive policy analysis of maternal obesity policy provides insight into the prevailing beliefs and values surrounding obesity issues generally and maternal obesity specifically within key stakeholders and government at the time of its development. Bacchi's framework was used to identify different solutions offered in response to the issues and how representation of maternal obesity in a particular way, diverts attention away from other issues, thus rendering them silent and unproblematic (Bacchi, 2009). The Bacchi interpretative analysis is presented in chapter 5.

3.4 Summary

This third chapter outlined the research project's underlying epistemology of constructionist, and the closely aligned interpretive, perspectives. An overview of the two-phased methodology was provided within the chapter: qualitative research methodology and Bacchi's 'What's the problem represented to be?' methodology. The next two chapters provided the findings from the interviews: chapter 4 presents the thematic analysis and chapter 5 the analysis of stakeholder responses using Bacchi's framework. Research transfer was considered but as a constructionist perspective was being taken on a relatively new policy it was more appropriate to wait until the end of the project to consider research transfer. A practice brief is appended to the dissertation (see Appendix 6).

Chapter 4: Stakeholder views on the Management of Maternal Obesity

4.1 Introduction

This chapter begins to address the second aim of the research project, to critically analyse the views of key stakeholders involved in or have the potential to impact on the care of pregnant women with obesity and charged with compliance of the Standards for the Management of the Obese Obstetric Woman in South Australia policy.

By analysing stakeholder responses, the first objective for this aim is addressed; to uncover the different views of stakeholders on the issue of maternal obesity, its determinants and potential solutions. Participant transcripts were examined to look for similarities of the findings and as a result, emerging themes and subthemes were developed. Analysis aimed to ensure that all participant views were noted while highlighting those that were most common. These emerging and themes will be discussed using some of the quotes from interview transcripts and presented below. Frequency indicators will be used to validate stakeholders claims as the more people say something, the more credible it becomes (Sandelowski, Voils, & Knafl, 2009). In qualitative studies, the quantitative conversion of qualitative data is done to facilitate pattern recognition, account for all data, verify interpretations or otherwise to extract meaning from qualitative data (Sandelowski et al., 2009).

4.2 Perceived determinants of maternal obesity

Stakeholders named several determinants of maternal obesity. The various determinants have been categorised as individual, family and community, and socio-structural determinants. There was some similarity of the findings with the literature, where most of the guidance documents advised that individual determinants such as diet and physical exercise were significantly associated with maternal obesity. Although scarcely mentioned, two of the guidance documents alluded to the importance of

socio- structural determinants in the management of maternal obesity. Stakeholder responses are presented under these three themes.

4.2.1 Individual determinants

More than half of the stakeholders attributed maternal obesity to individual lifestyle and behavioural determinants. Maternal obesity was attributed to unhealthy eating and sedentary lifestyles of the general population, affecting all age and population groups. Unhealthy eating was described as a lack of adequate amounts of fruits and vegetables and high intake of processed, high energy containing foods.

It's the lifestyle. Its people eating the wrong foods, not doing enough exercise, all of us are the same in our current 21st century, all of us are walking less (Brian, rural GP Obstetrician).

> *I guess laziness, sedentary lifestyle, complacency (Harry, GP Obstetrician).*
>
> *I think that is partly related to sedentary life, lack of activity, poor eating habits and looking at take-away food and easy produced food which is high in fat, sugar, salt all contribute (Charles, private Obstetrician).*

Ten percent of stakeholders advised that pregnant women were cooking less and opting to purchase unhealthy food choices, because they simply did not know how to cook.

> *Unfortunately, there are some people who have just never been taught good simple cooking. They tend to be more dependent on processed stuff and if that's the taste that they've developed, it's difficult to wean them off it. I can say about myself or my family, we eat Grandma's diet, which is delicious but there's not a lot of processed food in that one (Fred, GP Obstetrician).*
>
> *Some of them don't even know how to prepare healthy meals – whole range of healthy meals (Fiona, Community Midwife).*

Maternal obesity was attributed to unhealthy diets and lack of adequate physical activity of the women and the general population.

4.2.2 Family and Community Determinants

Stakeholders advised that there was a rise in obesity prevalence negatively affecting all age groups within communities, including school children and pregnant women.

> *It hasn't really addressed obesity because that is a whole community problem. There are just a lot of fat people out there unfortunately, and it has increased in the time that I've been in practice. There are more and more obese people out there (Fred, GP Obstetrician).*
>
> *I think the problem is that obesity is a problem in general. It's not specific to pregnancy. I think our efforts should be in reducing pre-pregnancy obesity then trying to maintain a healthy weight through pregnancy (Gordon, GP Obstetrician).*
>
> *Our kids don't ride their bikes to school anymore and we all eat a lot of fast foods (Harry, GP Obstetrician).*

Some stakeholders felt that families and communities played a key role in contributing to the woman's obesity, by modelling unhealthy behaviours and lifestyles.

> *If you've got large parents or relatives, you'll find the kids are large as well. So, I think it's something that starts early on in life. It's a problem with our society really (Charles, private Obstetrician).*
>
> *If she's not eating healthy, often the rest of the family aren't eating healthy as well. So, you've got to try and get everybody to be healthy and on board and change things … … A lot of women haven't got good role models to learn good dietary habits from. Role modelling is a big issue that they haven't learnt how to bring up healthy children with healthy food and healthy food for themselves as well (Fiona, Community midwife).*

Although unhealthy eating behaviours and lifestyles were observed among most people, stakeholders reported that they were more prevalent among certain ethnic groups.

> *The Indigenous population have more bad eating habits and like – you know, more Coca- Cola, more fizzy drinks, more into the McDonald's (Dennis, rural Obstetrician).*

Some stakeholders felt that there was a lack of knowledge and understanding about health issues such as obesity among the general population, which contributes to the problem.

> *Large women don't perceive themselves as being a problem. They don't perceive their weight as being a risk. I think that's a general public perception, that even if you're overweight there's nothing wrong with being overweight, you're no more risk than anybody else (Charles, private Obstetrician).*

Others were concerned that cultural norms among certain groups, affected the way people viewed obesity, making it challenging to intervene.

I guess in Aboriginal society, which is the main ones that I focus on, body image is not an issue in any way. They're just accepted however they are (Fiona, Community Midwife).

4.2.3 Socio structural determinants

Two stakeholders felt that other structural factors, such as poor access to health care services and low education attainment were also responsible for maternal obesity. They cited several barriers to accessing health information regarding obesity including language, level of education, not knowing where and how to access the information, and lack of transport to attend healthcare services.

Trying to access language that they understand – so it wouldn't matter what you were saying, you'd still have to put it in a language, and in a way that they understand. Also, in a way that they have to be able to access that information by engagement. If they don't know how to engage, or they don't trust people to engage, or they are too frightened to engage, or there's a lack of ability to engage – as in they don't have transport to get to places, or they don't have accessibility to a computer, or they don't have these things, then it doesn't matter how much information is available to them, it still has to be accessible to them and understandable to them (Gloria, Community Midwife).

Certainly, in our area it's quite a low socioeconomic area, and despite having … we often get people who might not have completed secondary education and that sort of thing, so their knowledge of healthy eating and things is limited (Harriet, Community Midwife).

4.3 Maternity providers' perceptions of the policy

Stakeholders had numerous views regarding the policy and its effects on their ability to safely manage pregnant women with obesity within country South Australia. These views are themed under risk identification, clinician's knowledge and experience, and barriers and enablers of policy implementation.

4.3.1 Risk identification and determining safety of the woman

Nearly a quarter of stakeholders felt that the policy provided clinically sound guidance for the safe management of pregnant women with obesity.

I think it provides guidelines for clinicians on safe management and looking at the best options for those women in terms of keeping them and their babies safe and where they access certain services in order to do that (Harriet, Community Midwife).

It's a safe policy. Certainly, when I read it, it covered quite a lot of areas. The policy – it certainly seemed comprehensive and covered some of the small – all the practical areas that we deal with on a day-to-day basis as well (Fiona, Community Midwife).

it's very good to have that evidence-based medicine in front of you that's easily accessible in black and white that you can show the patient and say I'm operating within the recommended guidelines here as to what we know to be the safest thing (Isabelle, GP Obstetrician).

Stakeholders had contradicting views regarding how the policy classified women at risk, and the criteria used to determine referral to a specialised maternity unit, at times very far from home. Some stakeholders felt that the policy provided clear guidelines on classifying women at risk and provided a practical guide for their safe management according to their needs.

Look, I think we've always had trouble with classifying obstetric women. What it's done is just to make it a more rational way of managing women that are overweight in various hospitals, depending on their level of complexity (Charles, private Obstetrician).

the policy is partly about the practical stuff about which units have got appropriate equipment to manage people who are morbidly obese (Carol, private Obstetrician).

However, some stakeholders felt that the policy had some negative effects on the pregnant women and maternity providers caring for these women. One of the concerns raised was that the policy was too stringent regarding its definition of women at risk and did not employ a holistic approach. Others questioned the use of BMI as a sole indicator for determining risk and felt that it was lacking in scientific credibility.

I think that it's overs-simplified in how they've worked out what constitutes a high risk. I don't think BMI is the best way to work out whether someone's at a high level of risk, because it's not a well-defined enough term. I think it's actually outdated too. It's proven scientifically to be outdated (Gloria, Community Midwife).

Some stakeholders felt that risk of a pregnant woman with obesity should not be determined solely by her BMI but by other factors such as comorbidities and outcomes of previous pregnancies.

The policy picked out one risk factor that they focused on, rather than looking at the whole picture. We as GP obstetricians out here and anaesthetist's – I'm a GP/Anaesthetist as well –

manage complete patient and complete risk, of which BMI is one of those, (Edward, GP Obstetrician and GP Anaesthetist).

I'm not sure if it's necessarily, but in some instances, I guess someone who's had two normal vaginal deliveries, her BMI's 42, no issues with blood pressure, diabetes, that wasn't normal, but we had to transfer her because her BMI is 42 or 43. In actuality, I'm not sure that a number or in this case this measure is accurate (Gordon, GP Obstetrician).

Stakeholders felt that as obesity is a multifactorial issue, other risk factors should be considered when deciding on management of the woman.

4.3.2 Barriers of policy implementation

Stakeholders felt that some of the negative effects of the policy were non-attendance or late presentation for antenatal care, for fear of being referred and transferred to centres far from the woman's own communities. Some women refused to attend antenatal care as they felt that the policy denied their decision-making rights pertaining to their management.

What I predicted has happened and that is that some women stop attending anti-natal care because they fear they're going to be –that they can't deliver locally (Edward, GP Obstetrician and GP Anaesthetist).

One of the barriers would be that women refuse to turn up for care. Women refuse to leave the community or go AWOL when the Flying Doctor comes in and or they know that there's going to be a clinic on or something so that they can put off the inevitable or not have to talk about it (Diana, Community Midwife).

Sometimes the women get quite angry, that they feel powerless, like they don't have a choice. At times they will say that they won't go, that they will just rock up to the local hospital in established labour and will have their baby here (Harriet, Community Midwife).

Stakeholders felt that the policy was not mindful of women's socioeconomic status, further increasing health disparities. Policy stipulations requiring transfer and relocation of pregnant women with obesity to larger specialised maternity units, had a negative impact on women living in rural and remote communities. These women suffered anxiety over having to leave other children and other family members behind for long periods of time and move to new communities, and deal with social isolation and financial costs of the relocation process.

The costs involved if they had to go and live in Adelaide. Sometimes the difficulty for families, accommodation and the dislocation from work and the lack of appropriate accommodation for them and their family members is a big issue (Brian, GP Obstetrician ad GP Anaesthetist).

There are very few services, if any, for women and if they've already got a family they often have to be relocated from their husband and their care base and that causes them a lot of anxiety (Harry, GP Obstetrician).

Two of our biggest issues or three really, is transport to the higher level – the tertiary centres. A car ride is eight hours; a bus ride's twelve hours. Big, big financial barriers because they've got to go down to a tertiary centre four week prior to birth, so that means they've got to find accommodation in Adelaide. They've also got to pay their rent and have people look after other children et cetera, and the third one is actually finding the accommodation for that length of time (Fiona, Community Midwife).

Maternity providers reported that due to professional obligations, they were forced to breach policy stipulations in some cases, and care for pregnant women with obesity who refused to be referred or presented so late in their pregnancy that they could not be transferred or those who were already in labour.

Putting this as standard, is you actually force people to potentially then breach the standards, which has all sorts of legal and other complications. It has - it mandates things that doctors and even the patients may not have control over like relocating (Andrew, GP Obstetrician).

In fact, there's no situation where I could imagine that we'd have a patient arrive on our doorstep and we say to them, sorry, you've got to deliver in the car park because you're too big to have your baby here (Angela, GP Obstetrician).

Personally, I've had patients who flat out refuse to go and get transferred. I've had to write letters explaining what the risks are and trying to scare them, to go basically and they're like, 'no I'm going to wait in the parking lot until I have to push and then you won't be able to send me', so is that any safer? (Gordon, GP Obstetrician).

About ten percent of the stakeholders felt that the policy was therefore not legally protective of those who cared for these women in the circumstances mentioned.

'I think though that the policies don't – or risk that they actually then make us all feel vulnerable when in fact its patients' choice, or just precipitant complications that don't allow for timely transfer. So, we then are actually dealing with patients who are bigger than is approved. So, we all feel vulnerable that if something goes wrong, that the powers that be will just say well you should have done it here rather than recognising that actually we have a responsibility to provide the best level of care that we can in rural and remote areas when people turn up' (Angela, GP Obstetrician).

Stakeholders felt that some aspects of the policy had discriminatory effects and created tensions between the women and their maternity providers. Discourses regarding obesity were reported as challenging, resulting in failure of the stakeholders to provide adequate information pertaining to obesity and some pregnant women not presenting for antenatal care for fear of being stigmatised.

> *Going back to barriers, sometimes the language used in the policy is quite- some people interpret that as quite offensive, the obese obstetric woman. That's probably one of the barriers as well (Harriet, Community Midwife).*
>
> *The only thing I have an issue with is that the information we give them, it always has the word obese, and I just think obese is such a confronting word for women. I would like to see a different word used (Eva, Community Midwife).*
>
> *At the moment a lot of discontent in that often people feel they're being labelled fat and feel they're being discriminated against for this and it can be difficult (Harry, GP Obstetrician).*

Some stakeholders felt that the policy was imposed on them, without adequate engagement and consultation, particularly with rural primary care maternity providers. As a result, there was decreased readiness of both referring and receiving providers to act on policy directives.

> *The other negative I think it was introduced without a lot of rural input, I don't think there was a lot of doctors involved when the standard was set up. I think it would have been better putting it as a guideline to begin with (Andrew, GP Obstetrician).*
>
> *The way it was pitched to us at our hospital, is that it is very rigid and that for a BMI of over 40 we have no choice. I understand that it's based on a lot of experience and statistics and what have you. So, it was something where there was no clinician input really available. It was really imposed upon us rather than our opinion requested or sought (Fred, GP Obstetrician).*
>
> *I guess you have to make sure that the actual information is disseminated adequately. I think that was done in a formal way through letter or document form to those people. The actual communication from Country Health SA to the procedural doctors, I'm talking surgeons, anaesthetist and obstetricians I still think is not adequate enough and there needs to be a better way of having formal communication about policy changes and mandated policies (Brian, GP Obstetrician).*
>
> *The issue is that this policy was implemented without the major hospitals that would be the receiving hospitals having a plan in action to provide for these women and the issues they have, i.e. accommodation, being seen in clinic, travel time. Indeed, when we first started directing people down to the Women's and Children's Hospital it was not uncommon for the consultants to say why are you sending this patient down? So, it was implemented without preparations being made for these people to get to Adelaide, (Edward, GP Obstetrician).*

Some stakeholders felt that the policy was restrictive and did not consider clinical experience and maturity thus limiting the ability of providers to make clinical decisions regarding the women.

> *It's the standards, which is the reason why it's been greeted with some lack of enthusiasm, because it takes away some discretionary ability of doctors to make choices with their patients, informed choices (Andrew, GP Obstetrician)*

> *It's never as easy and as one gets older you become increasingly reluctant to get yourself in a situation which prior experience may tell you can go south quickly. Yeah, in one sense it's great, it's oh sorry, you can't have your baby here. You think well that's a relief, but on the other hand, there are some people who you think, well they're just over the limit but they'd be okay really (Fred, GP Obstetrician).*

> *The BMI is a very, very, crude way of measuring body shape and risk. There are certain patients that I will send off because I know that I'm going to have trouble with the women and there are certain patients I'd be happy to manage with a BMI over 40 because they've had normal deliveries before and are quite low risk (Edward, GP Obstetrician).*

A small proportion of stakeholders felt that the growing obesity epidemic would eventually place excessive demand on the healthcare system as more women were being referred to other centres based on their BMIs for specialised maternity care. The rise in obesity was also putting a strain on rural and remote maternity centres where women present first, as they were not adequately resourced to care for these women.

> *If it's just simply because of weight and the furniture so to speak, then a lot more of those people are coming here to [rural town B] either for caesareans or for management of their birth or both, whatever it ends up being (Diana, Community Midwife).*

> *If they do have to end up in theatre as a caesarean, the equipment needs to be different. We're not rated at a - our beds don't have the bariatric capability for the higher risk women (Gloria, Community Midwife).*

> *I think it's going to put a strain on the city hospitals because women are getting bigger and bigger (Gordon, GP Obstetrician).*

Approximately one tenth of the stakeholders felt that the policy medicalised the notion of normalcy in pregnancy and birth by focusing largely on risk and complications of obesity, creating fear and anxiety over what would have otherwise been considered a normal event for many women. Stakeholders felt that policy makers were focused on risk associated with poor birthing in rural and remote communities and failed to acknowledge some of the good outcomes of rural and remote birthing.

it's a difficult discourse to have with a patient about the fact that often for – even in a first world country like Australia with good access to healthcare, the day that you have your baby is one of the most dangerous in both your life and your baby's life. So, trying to not alarm people but giving them, a really stiff understanding of the risks associated with pregnancy and particularly birth is challenging at the best of times (Angela, GP Obstetrician).

I'm all for doing the best for our women out here but let's not kind of jump at shadows and let's manage risk. Let's try and normalise the birthing process and take it away from this kind of risk assessment all the time … … What really annoys me is when policy is placed on us from afar, big centres, which quite frankly when we have to refer people down there, they can't wait to get out of those centres. They are so interventionist. They've gone away from what is a normal physiological condition with a case of complications and they have medicalised it so much that I find it irritating (Edward, GP Obstetrician).

Stakeholders felt that there was lack of proper communication and coordination between referring clinicians and receiving hospitals as well as between units within hospitals where pregnant women were referred, leading to inadequate care for the women and lack of continuity in care.

There's no central coordinating body in Adelaide that I'm aware of, there's no - and there needs to be. The hospitals are receiving these patients, there needs to be a special person that coordinates with the doctors and with the patients. They don't get lost in this nameless system of an overstressed public hospital and get neglected and they go down there (Andrew, GP Obstetrician).

The barrier to all these things I think, is that the staff in every unit, these days, are time poor and also that there isn't already connections between them. So, having to create connections between each service is often difficult. So that's probably the biggest barrier, is that the communication is poor, particularly the written communication (Gloria, Community Midwife).

The lack of coordination among the various groups of health providers that provided care for the women was perceived as added risk to continuity of care.

4.3.3 Enablers of Policy Implementation

Stakeholders reported several factors that enabled policy implementation and contributed to safer management of the women. These factors included having maternity centres with adequate numbers of trained staff who worked closely and collaboratively together.

We have a fabulous small team of specialists, and a specialist registrar who become very engaged in the intrapartum care of women that are of high risk, so that includes obesity (Angela, GP Obstetrician).

I don't make any of those decisions in isolation, and it's because of the model in which I work. It's always in collaboration with her GP/obstetrician. If she's connected with a city carer, like tertiary centres, then I would be trying to make an attempt to have some sort of coordination with her care there (Gloria, Community Midwife).

I think it is more successful when you have a second doctor, an anaesthetic doctor, saying we're not equipped to manage your pregnancy and delivery if there is an emergency situation (Isabelle, GP Obstetrician).

Stakeholders advised that collaborative care was of utmost importance as it contributed to continuity of care, which resulted in safer management of pregnant women with obesity. Stakeholders advised that units where clinicians worked closely together and communicated effectively among each other resulted in early identification of women at risk and timely referrals to specialists to ensure better pregnancy outcomes. This method of working also helped to build relationships between maternity providers and the women and made it easier to have discussions regarding potential referrals and transfer of care to other centres.

We have written letters to all of us on the roster saying Mrs So-and-So is 150 kilograms, she's supposed to be delivering. If she comes in labour, you need to do this and this. We actually have a formal way of communicating with other members of our team and the midwives if we've got someone in the community who may suddenly bob up and in and emergency. … … We try to have continuity. The idea is that women are booked in to see the same GP Obstetrician for most of their antenatal visits. There is also a team of midwives who see them as well. We try and have continuity of antenatal check-up and appointments so that the same person is responsible for their antenatal care throughout the pregnancy. I think that helps in any discussion and education about if things are changing then you can say I've seen you in visit one, your BMI was 35, now you're 41. I spoke to you about this three or four months ago. I'm afraid we now have to consider other services that may be needed. I guess it's that relationship you have to try and influence them in a way that's saying you're doing it for the safety of the mother and the baby (Brian, GP Obstetrician).

There are some real advantages in the system that exists in [rural town] with continuity of care for patients. So, people that use the system that exists where they have a single and general practitioner that manages them with continuity of care throughout their antenatal care, when they're admitted to hospital, they're admitted under the doctor on call for that day and so they get continuity of care within their hospital admission by a single doctor. So that's great (Angela, GP Obstetrician).

Stakeholders felt that having good communication skills enabled them to sensitively broach the obesity subject without being discriminatory and offensive to the women and further disadvantaging them.

But the other side of medicine, the art of medicine is about the communication skills so that you can sensitively help an obese woman to identify that obesity is not a judgement with a social - it's not intended to be a negatively social judgement. It's actually a judgement in terms of a measure. It's a medical term used in association with objective BMI measurement, and that it's around adapting the health care that we provide in order to best protect them during their - them and their baby during their pregnancy (Angela, GP Obstetrician).

Stakeholders advised that discussions regarding healthy weights, monitoring, early identification of risk, and timely referral of women with a high BMI to specialists were named as effective enablers of the policy.

So, what happens is between the BMI up to 40, if you get a BMI, we just give them diet advice and all that and explain to them that they should keep the healthy weight gain, not excessive health weight gain. If they find it hard we get them involved with dieticians. Now these patients definitely go to dieticians early in pregnancy and we keep an eye on their weight. We get anaesthetists involved in the third trimester, and if the anaesthetist is not happy for them to deliver in (name of country town) then they are transferred … … hen earlier on in pregnancy you look at all the risk factors associated with this patient. Obesity is one of the risks but you look at other risk factors with these patients and you recommend that she is high risk or low risk. You get a dietician involved. You get a diabetic educator involved. You get in contact with tertiary centres about these patients. So this is how we manage obese patients. A diet is a big issue that we try and talk to them about, and try and encourage them to say, if you comply maybe you can get to stay here and birth if your BMI doesn't go up to high, and just use that as encouragement to stick to our plan (Betty, rural Obstetrician).

So, it's about just monitoring and hopefully seeing problems that could emerge, like the gestational diabetes and the hypertension (Fiona, Community Midwife).

Input from other healthcare professionals such as allied health providers was regarded as beneficial in the management of these women.

I utilise the dieticians locally quite a bit within my pregnant patients as well. We do have exercise physiologists that we can utilise (Isabelle, GP Obstetrician).

For those women who are borderline, there is a lot of education and involving Allied Health services to try and support them to maintain their weight in a certain range (Harriet, Community Midwife).

Stakeholders advised that units that had adequate equipment were able to safely manage women with obesity.

We have beds which can take up to a BMI of 45. We have got all their preferences there in labour ward. We are equipped for these cases in cases they come, there is an emergency (Betty, rural Obstetrician).

Stakeholders felt that women with obesity were better cared for in health facilities that were better resourced with adequate staff and equipment.

4.4 Strategies for implementation of the policy

Several strategies were suggested for safely managing a pregnant woman with obesity and not further increasing health inequalities. These strategies are categorized into healthcare system strategies, clinician, individual, and public health strategies.

4.4.1 Healthcare System Strategies

It was suggested that policy makers increase their engagement and consultation with primary care maternity providers to improve their understanding of local needs and increase the feasibility and effectiveness of policies.

> *I wish that some of these units would take notice of the sort of outcomes that we have in terms of women's satisfaction, lower caesarean section rate and so forth. So, it's the old ivory tower situation that we're constantly battling … So genuine consultation is what we want before policies are implemented. Evidence that we're not doing – that people are at risk and there is no evidence. There is evidence overall that women who are morbidly obese have poorer outcomes. I don't deny that. But there's no evidence that these people are getting even worse outcomes by being assessed and managed out in country area, (Edward, GP Obstetrician).*

Several stakeholders suggested that rural and remote maternity units needed to be better resourced with equipment and specialised staff such as anaesthetist's', obstetricians and dieticians to provide better care of the women.

> *Probably more staff is needed, especially the anaesthetic staff. So more regular staff will be a good idea (Dennis, rural Obstetrician).*

> *But where is that anaesthetist? We don't have the luxury to have an anaesthetist available to do the pre-op checks now. Now we have skeleton staff or anaesthesia that we can't do that. If we were three, four obstetricians here, we will have three or four anaesthetists like in a big city hospital (Betty, rural Obstetrician).*

Stakeholders proposed that there needed to be better access to specialists by providing free services or physically locating them closer to rural and remote maternity units, so that pregnant women with obesity do not have to travel far from their communities to receive care.

> *One of my big issues, is these women are supposed to go down to Adelaide to the tertiary hospital for appointments with several people, just to manage their obesity and their risk factors. The women often won't do that. I don't know. Is there a way that they can come to us in a way – even just once a month to some of the rural hospitals? Whether it's to talk to the women, or talk to us about managing these women. Instead of having to – for the women to go to the hospital to have these appointments, can the hospital come to them, sort of thing, and make some plans and discuss what they need to do and why they need to do it (Fiona, Community Midwife).*

> *So, there may be a place for a high-risk clinic to be provided free of charge through the hospital, although I know that would be in competition with the specialists' private rooms and there's some tension associated with that (Angela, GP Obstetrician).*

Stakeholders advised the use of a more holistic approach to management of maternal obesity, incorporating cultural and family components to ensure wider effectiveness. They suggested that maternity units should work more closely with Aboriginal health workers to particularly increase access for indigenous communities, in which obesity was more prevalent.

> *More of a holistic point of view, which is what we're trying to achieve here. I work – our Obstetric doctor works at the clinic here and the GP Clinic in hospital, but across the road from us is [rural town] Aboriginal Health Service, community owned surgery. What the AMIC worker and I are trying to do is set up a – we've started setting up a meeting once a fortnight with some of the women to get together. We're trying to bring all women together. Not just necessarily pregnant women, but we're hoping to bring out some mum's and grandmas along and maybe their kids, and just continue to preach the healthy message I suppose, about reducing – just the whole lifestyle factor (Fiona, Community midwife).*

> *So, I think that there has to be more work to be done in this area with culturally sensitive and appropriate materials, something along those lines (Edward, GP Obstetrician).*

Management of maternal obesity among indigenous communities should be more inclusive of cultural and family norms, to be effective and sustainable.

4.4.2 Clinician focused strategies

Stakeholders suggested that more training and upskilling is required for maternity providers caring for pregnant women with obesity, to ensure safer pregnancy outcomes such as knowledge regarding identification of risk, timely referrals and use of the necessary equipment.

> *So, I think we need to have increased education on how to manage, and be educated on how to handle, and have more equipment available at our country centres for obese women, (Harry, GP Obstetrician).*
>
> *We have tried educating the GP workforce if they've seen people that have come in, maybe not to an obstetric trained GP, to say you need to see the antenatal doctors sooner rather than later and try and get that referral in. Also get referrals for 20 weeks, to see the anaesthetist or GP surgeon if they look like they might need to have repeat caesareans or something like that, (Brian, GP Obstetrician).*
>
> *It would be good to increase education for the doctors on how to manage bariatric pregnant ladies, (Harry, GP Obstetrician).*

Stakeholders in accordance with the literature, expressed that there was a need for further training and upskilling for maternity providers to enable them to adequately provide care for women with obesity.

4.4.3 Individual Strategies

Stakeholders advised that it was important to provide counselling and education to women regarding obesity in pregnancy and associated risks and complications. It was also important to discuss prevention, including maintaining a healthy weight, and the importance of attending antenatal care for timely management to ensure safer pregnancy outcomes.

> *If antenatal care was, and people were counselled prior to even conceiving – which of course doesn't happen given that 50 percent of conceptions are not planned – then people could lose weight before the event (Diana, Community Midwife).*
>
> *I think our efforts should be in reducing pre-pregnancy obesity then trying to maintain a healthy weight through pregnancy. I guess there should be an approach or some kind of campaign to educate women before they get pregnant. So, get them early, in high school or maybe earlier because we have some high schoolers getting pregnant (Gordon, GP Obstetrician).*

Some maternity providers suggested that the process of transfer and relocation away from their communities could be an impetus for the women to maintain a healthy weight for subsequent pregnancies.

> *We've had several women that have modified their weight gain, so that they don't have to go away. So that acts as a motivator for them not to put too much weight on during the pregnancy, (Andrew, GP Obstetrician).*
>
> *trying to use it as a bit of a motivator for the women if they didn't particularly enjoy the experience of having to deliver elsewhere, potentially using that as a motivator to get them to have a safer weight for the next pregnancy, (Isabelle, GP Obstetrician).*

Stakeholders suggested that the fear of being away from their communities incentivized women to change their behavior to maintain a healthy pregnancy weight.

4.4.4 Public Health Strategies

Stakeholders proposed the increase of media and public health initiatives including education and advertising of healthy behaviours and lifestyles, and awareness of health issues such as obesity to decrease the magnitude of the issue.

> *Look, I think obesity is a big issue. It's not just – I mean pregnancy's just one tip of it. To really manage it I think you have to look back to some sort of state or countrywide attempt at trying to re-educate people into a much more healthy environment (Charles, private Obstetrician).*
>
> *I think educating the public. I think we need to have an education program to explain to patients because often we do the BMI and say, sorry you can't deliver here and they may have delivered here and they may delivered here previously when they had a lower weight or even a similar BMI before the policy was implemented (Harry, GP Obstetrician).*
>
> *I think we need to do a lot in advertising, education, healthy choices to food (Harry, GP Obstetrician).*
>
> *Perhaps the emphasis should be more on education of it on a grand scale … We've had policies and public campaigns around smoking, around drinking, around drug taking – things that impact on pregnancies, but there is nothing around about obesity (Gloria, Community midwife).*

Public awareness and education around obesity and related complications through channels such as the media were perceived to be beneficial to addressing obesity.

4.5 Conclusion

This chapter has presented themes and subthemes from stakeholder interviews, outlining the various ways in which key stakeholders view the issue of maternal obesity in South Australia. Furthermore, a discussion regarding compliance with the Standards for Management of the Obese Obstetric Woman in South Australia policy was provided, highlighting barriers and enablers to implementation of the policy. Several concepts emerged from the interviews that had not been provided resulting in an array of potential policy solutions. The next chapter collates these solutions provided by stakeholders into feasible and field-informed policy options to manage pregnant women with obesity in South Australia.

Chapter 5: Analysis of how stakeholders represent the problem of maternal obesity

5.1 Introduction

As seen in chapter 4, stakeholders offered a range of views on the management of maternal obesity as stipulated in the *Standards for the Management of the Obese Obstetric Woman in South Australia* policy, and proposed varied and diverse solutions. In this chapter, stakeholder responses are critically analysed using Bacchi's approach to uncover their views on the various problem representations within the policy. The analysis uncovers the assumptions underlying these problem representations, the silences and effects produced by these problem representations. Stakeholder quotes were used in the chapter to reveal the results of the analysis.

In keeping with the Bacchi (2009) framework, the interpretive analysis of stakeholder interviews is presented under the following sections:

5.2 What is the problem represented to be through the solutions proposed by stakeholders?

5.3 What presumptions or assumptions underlie representations of the problem?

5.4 What is left unproblematic by representations? Where are the silences? How can the problem be thought about differently?

5.5. What effects are produced by representations of the problem? What are the unintended consequences of representations? Who benefits from the representations?

5.6 Where are the various problem representations being produced and reproduced?

5.2 What is the problem represented to be through the solutions proposed by stakeholders?

Bacchi (2009) states that policy solutions provide an understanding of how policy makers feel about the issue being addressed. Based on this notion, an examination of the different solutions being offered by key stakeholders to address maternal obesity revealed what stakeholders considered the underlying problem to be. However as stated by Bacchi (2009), multiple problem representations can be found in any one policy or in this case, stakeholder transcripts, and these may conflict or even contradict each other. This was witnessed within the range of policy solutions provided by stakeholders in response to their view on the management of the pregnant woman with obesity in South Australia.

Six main themes emerged regarding whose responsibility it was to address maternal obesity. The three most common themes were individual responsibility, clinician responsibility, and responsibility of the government. There was less responsibility attributed to community, public health and media and culture.

5.2.1 The problem represented as individual responsibility

Like the findings in the literature, ninety percent of the stakeholders held pregnant women within South Australia responsible for being obese and thus increasing their own risk for poor pregnancy outcomes. This was evident through numerous suggestions that focused on lifestyle changes, achieving and maintaining a healthy diet, and engaging in adequate levels of physical activity. One stakeholder said, *'It's the lifestyle. Its people eating the wrong foods, not doing enough exercise, all of us are the same in our current 21st century, all of us are walking less'* (Brian, GP Obstetrician). There were recommendations for pregnant women to eat more healthily, avoid or reduce fatty and sugary foods that contributed to obesity. Stakeholders suggested that women should avoid purchasing unhealthy foods and instead purchase and increase their consumption of healthier foods such as fruits and

vegetables. Some stakeholders suggested that pregnant women were not cooking and instead eating processed foods:

> *Unfortunately, there are some people who have just never been taught good simple cooking. They tend to be more dependent on processed stuff and if that's the taste that they've developed, it's difficult to wean them off it. I can say about myself or my family, we eat Grandma's diet, which is delicious but there's not a lot of processed food in that one (Fred, GP Obstetrician)*

Conversely, there were solutions that appeared to attribute less responsibility to the individual. Language was cited as a potential barrier for Aboriginal, refugee and immigrant pregnant women to understand obesity related information provided by stakeholders. One stakeholder said, *'English may be their third or fourth language'* (Gloria, Community Midwife). Another stakeholder said, *'getting them to come and to talk to people about it and take on board the diet and exercise advice and trying to maintain their weight during pregnancy'* (Eva, Community Midwife). However, when the focus is placed on women intentionally or unintentionally failing to understand the information provided to them by health providers, the responsibility shifts to individual behavior and away from the socio-structural barriers (Baum, 2008), such as lack of transport and financial support required to attend health services and lack of health literacy programs.

Another stakeholder suggested that obesity among women was a significant problem in South Australia due to lack of awareness of its impact on health and wellbeing and has been accepted as part of the norm. One respondent said, *'large women don't perceive themselves as a problem. They don't perceive their weight as being a risk'* (Charles, private Obstetrician). Such problem representations place responsibility on the woman and disregarded factors such as not being able to afford healthy foods or being health illiterate.

Achieving and maintaining adequate physical activity was also suggested as a solution to address maternal obesity. Some stakeholders felt that maternal obesity was a result of a sedentary lifestyle with lack or reduced physical activity; *'I think that is partly related to sedentary life, lack of activity'* (Charles, private Obstetrician). Although in some cases, this strategy appeared to take on a more

upstream approach as it promoted sport in school curricula; *'having more PE and physical exercise in the schools and having that as a much greater part of the curriculum'* (Brian, GP Obstetrician), where the focus was on changing school children's behavior rather than increasing the number of gymnasiums or other recreational facilities, particularly in rural and remote areas.

5.2.2 The problem represented as clinician responsibility

Clinicians were held responsible for addressing maternal obesity. Maternity providers were expected to identify pregnant women with obesity early enough to be able to intervene if there were risk factors and to refer them to other facilities depending on their BMI. However, some queried the way risk was defined and did not think that BMI alone, should single handedly determine women's risk status. One stakeholder said, *'I don't think BMI is the best way to work out whether someone's at a high level of risk, because it's not a well-defined enough term. I think it's actually outdated too'* (Gloria, Community Midwife). Instead clinicians felt that obesity alone was not the only determinant of risk for these women. One said,

> *There are certain patients that I will send off because I know that I'm going to have trouble with the women and there are certain patients that I'd be happy to manage with a BMI of over 40 because they've had normal deliveries before and are quite low risk (Edward, GP Obstetrician)*

Another stakeholder commented,

> *Often, I think they've probably - these are women who might have had a baby before, had normal births before, and just because of their weight they're put into that high-risk category. I think that it's a bit restrictive in terms of how it looks at whether women are in that safety category or not (Harriet, Community Midwife)*

Therefore, attention is placed on stakeholders identifying obese pregnant women at risk, shifting responsibility to the clinician and way from the other factors that may contribute to her being at risk, such as poor antenatal care attendance and other socioeconomic factors that may contribute to the woman's risk status.

Additionally, it was suggested that maternity providers acquire proper communication skills so that they can address obesity related stigma and not further discriminate against these women. One stakeholder commented,

> *the art of medicine is about the communication skills so that you can sensitively help an obese woman to identify that obesity is not a judgement with a social – it's not intended to be a negatively social judgement (Angela, GP Obstetrician).*

Maternity providers advised that they were not only required to educate pregnant women about healthy weight and complications of maternal obesity, but also to inform the women that due to increased risk for poor outcomes, beyond a specific BMI, they would be sent to more specialised birthing centers away from their communities to ensure safer birthing. One stakeholder said, *'we tell them from the beginning that if you don't control your weight, you will be sent to Adelaide'* (Betty, rural Obstetrician). However, when pregnant women with obesity birthed in their rural or remote community despite the medical warnings above, maternity providers felt that it was providers' responsibility. Another stakeholder added,

> *We have tried educating the GP workforce if they've seen people that have come in, maybe not to an obstetric trained GP, to say you need to see the antenatal doctors sooner rather than later and try and get that referral in (Brian, GP Obstetrician)*

This perception of providers responsibility disregards the reality that women may choose not to attend antenatal care or present too late, whereby they are then not in the position to physically travel and relocate to obtain specialized maternity care. Pregnant women may also make a conscious informed decision to remain and birth in their own community.

5.2.3 The problem represented as community responsibility

The problem was represented as a lack of role models in the community from whom the women could learn how to eat healthily. One stakeholder said,

> *often mum's a drinker, so it was just easier to go and get some takeaway. She never really cooked proper foods every night – no healthy snacks. It is just easier to give them a pack of chips than it is to go and buy some fruit and veg every couple of days (Fiona, Community Midwife).*

Stakeholders proposed that addressing maternal obesity required role modelling. Stakeholders argued that maintaining healthy lifestyles was not only the responsibility of the woman, but the family and community who had to learn to cook healthy meals and live healthier lifestyles. This shifted the responsibility onto community members, such as mothers and grandmothers and away from the cost and affordability of healthy foods. Other proposed solutions included cooking classes in the community, where pregnant women with obesity could learn how to prepare healthy meals.

5.2.4 The problem represented as government responsibility

Nearly thirty percent of the stakeholders held government responsible for addressing maternal obesity. They felt that food corporations were promoting the production of unhealthy foods and government had purposely refused to intervene. They proposed that government could address the issue by changing the socio-structural context of maternal obesity within South Australia. Strategies proposed included banning food retail outlets that sold unhealthy foods, developing and implementing pricing policies such as subsidizing of healthy foods, increased taxation of unhealthy foods, and changing social policy to ensure that income matches the current cost of living. Low education attainment was highlighted as a barrier for pregnant women in rural and remote communities to understand information regarding maternal obesity, as commented by one stakeholder,

> *Certainly, in our area it's quite a low socioeconomic area, and despite having - we often get people who might not have completed secondary education and that sort of thing, so their knowledge of healthy eating and things is limited (Harriet, Community Midwife).*

There were numerous strategies that framed the health care system as being responsible for addressing maternal obesity within South Australia. Stakeholders expressed concern that travel and relocation to

referral communities had several challenges for women, including costs of transport and accommodation for themselves but also their families. It was proposed that rural and remote communities should be resourced with specialized maternity services so that women do not have to leave their community to receive care, as one stakeholder said,

> *Instead of having to – for the women to go to the hospital to have these appointments, can the hospital come to them, sort of thing, and make some plans and discuss what they need to do and why they need to do it (Fiona, Community Midwife).*

Additionally, stakeholders suggested that government should increase the number of trained health workers in rural and remote communities, as *'shortage of personnel is the main problem here'* (Betty, rural Obstetrician).

Proposed solutions included assistance with transport and relocation costs.

> *Accommodation is really our number one big issue for – if we could say look, hey it's only a few dollars a day or free, even better, they would go down and stay, no problems at all' (Fiona, Community Midwife).*
>
> *One stakeholder suggested that government should tighten its rules regarding funding assisted reproductive technologies and deny women with high BMI processes such as in vitro fertilization to avoid high risk pregnancies (Carol, private Obstetrician).*

5.2.5 The problem represented as public health and media responsibility

The problem was represented as the responsibility of public health authorities and the media. Proposed solutions included public health campaigns like those developed around smoking and alcohol. It was proposed that public health authorities embark on educating the public, and most specifically communities who were more at risk of obesity. Other public health initiatives proposed included advocating for restrictions to be placed on retail shops selling unhealthy foods like one stakeholder said,

> *I think some public health initiatives could stop some of those advertising and the points of sale where the shops are not allowed to sell rubbish right next to where you have to pay (Brian, GP Obstetrician).*

It was proposed that the media should increases awareness around obesity through advertising and providing other types of information.

5.2.6 The problem represented as cultural responsibility

The problem was attributed to cultural differences among the various communities in South Australia. Some stakeholders felt that among some cultural groups such as Aboriginal communities, obesity was considered a cultural norm and not considered an issue. Health care systems tend to apply a 'one size fits- all' approach which however unintended, excludes or minimizes different cultural meanings and understandings related to health that deviate from the established norms of western axiology, epistemology and ontology (Durey & Thompson, 2012). Obesity discourses among different social groups such as African and Indigenous populations demonstrate that people tend to resist the standards and norms set for them, including those relating to food choices and weight and may instead find weight gain desirable (Cinelli & O'Dea, 2009; McHugh, Coppola, & Sabiston, 2014; Ristovski-Slijepcevic, Bell, Chapman, & Beagan, 2010). One stakeholder said, *'I guess in Aboriginal society, which is the main ones that I focus on, body image is not an issue in any way'* (Fiona, Community Midwife). With this problem representation, responsibility of the issue is shifted to the women's culture and away from facilitating factors of obesity, such as high costs of healthy foods compared to those of unhealthier options. Bacchi's (2009) approach has been applied to stakeholder responses, describing six major problem representations of maternal obesity; individual responsibility, clinician responsibility, community responsibility, government responsibility, the responsibility of public health and the media and cultural responsibility. The next section explores the underlying assumptions attached to these representations.

5.2.7 The problem represented as risk associated with the management of maternal obesity

Each of the emerging themes discussed previously have the notion of risk embedded within them: change in lifestyle to prevent the risk of maternal obesity and subsequent negative pregnancy

outcomes, risky mothers and communities, risky environments, early identification of women with raised BMI and referral to specialised maternity units to mitigate risk, and risky maternity providers who manage pregnant women with obesity in country maternity units. In combination and through discourse, these themes interact with each other and develop a representation of the problem as one of risk.

Risk became a concept of modern society in the closing years of last century and the first decade of the new. It is a key word that signifies danger or hazard (Lupton, 1999). A hazard is defined as a series of circumstances that may have negative consequences, while risk is regarded as the likelihood of those consequences (Lupton, 1999). In this regard, this hazard/risk differentiation introduces a moral perspective whereby the perpetrators of risk may be held accountable in some way or the other (Lupton, 1999). Risk determines the way we view and act on a range of issues, from childhood immunisations to screening for various cancers. One discursive effect of situating maternal obesity within a discourse of risk is that the problem is made governable in particular ways, with particular techniques, and for particular goals. Lupton, using a Foucauldian approach to discourse, regards these expert knowledges as governmentality techniques which involve the construction of understandings of individuals and populations and a way of regulating their conduct (Lupton, 1999). Risk determines the scope and presents a focus on what can be done. Obesity is not only a disease, but a symptom and a risk factor, as illustrated in chapter one. Obesity is associated with heart disease and hypertension as well as musculoskeletal disorders and mental health illnesses (Australian National Preventive Health Agency, 2014; Hammond & Levine, 2010; National Heart, 2013).

The focus on risk associated with maternal obesity, highlights the role of the pregnant woman, her maternity provider, family and community and the health care system, to promote prevention and reduction of obesity, and provide appropriate management to ensure a safe birthing process. Eating of unhealthy foods and living a sedentary lifestyle were highlighted as the two main risk factors for maternal obesity, and subsequently women were held responsible to make changes in their lifestyle

and behavior to address these. Additionally, this risk was compounded by the woman's lack of health knowledge regarding healthy eating and adequate physical activity.

These problem representations place responsibility on the women to act in different ways, to self-govern, by seeking information regarding maternal obesity and its determinants, and by achieving and maintaining a healthy weight to minimize the risks and ensure a safe birthing process. Other factors held responsible for increasing the risk of maternal obesity were lack of general population awareness of obesity and a lack of support from communities. Families and communities were accused of not being good role models who promoted healthy lifestyles and behaviours, thus increasing the risk of women being unhealthy themselves and more likely to become obese.

Although the policy highlighted BMI as the most effective marker to determine women with obesity and associated risk, about one fifth of the stakeholders refuted this, as one stakeholder commented,

> *I'm not sure if it's necessarily, but in some instances, I guess someone who's had two normal vaginal deliveries, her BMI's 42, no issues with blood pressure, diabetes, that wasn't normal, but we had to transfer her because her BMI is 42 or 43. In actuality, I'm not sure that a number or in this case this measure is accurate (Gordon, GP Obstetrician).*

There has been ongoing debate over how and where to measure obesity parameters as well as defining the optimal cutoff values for abnormal and normal (Litwin, 2008; National Institutes of Health, 1998; Rasmussen et al., 2010; WHO, 1995; 2000). Anthropometric measures such as body mass index, waist-to- height ratio, waist-to-hip ratio and waist circumference are used to predict cardiovascular risk, which is significantly associated with obesity (Gelber et al., 2008; Lavie, Milani, & Ventura, 2009; Litwin, 2008; MacKay, Haffner, Wagenknecht, D'Agostino Jr, & Hanley, 2009; Ryan, Fenster, Abassi, & Reaven, 2008; WHO, 2000). It is thought that each parameter may perform better in measuring body composition and central adiposity in specific population groups depending on age, gender, ethnicity and history of smoking and other medical conditions (Gelber et al., 2008; Litwin, 2008; MacKay et al., 2009; Rasmussen, Catalano, & Yaktine, 2009; WHO, 2000). For instance, in older patients BMI was reported to be less robust at predicting the risk of cardiovascular disease even though higher BMI is strongly

associated with mortality in the elderly (Litwin, 2008). Equally, research findings on BMI were inconclusive for pregnant women with short stature and underweight women carrying twins (Rasmussen et al., 2009; Rasmussen et al., 2010). Additionally, there was a concern that established pregnancy guidelines on BMI had not taken into consideration the rise in obesity and therefore recommendations were not stratified for different obesity classes (Artal, Lockwood, & Brown, 2010; Rasmussen et al., 2009; Rasmussen et al., 2010).

In other studies, however, BMI was considered a stronger predictor of cardiovascular disease among non- pregnant study participants of European and Indian ancestry (Ryan et al., 2008). A higher waist-to-height ratio was associated with an increased risk of cardiovascular disease after excluding smokers and people with unstable weight and a history of cancer prior to waist-to-height ratio assessment. In contrast, a higher BMI showed less association with increasing risk of cardiovascular disease in this group of people with a history of smoking, unstable weight and cancer (Gelber et al., 2008). In other studies, waist circumference and BMI demonstrated a close relation to insulin resistance which is associated with visceral adiposity, a key factor in obesity related diseases (Stepien et al., 2014). Considering its ease of measurement and standard use in the classification of obesity and overweight, it was concluded that BMI remains the most clinically practical measure of adiposity (Gelber et al., 2008; Institute of Medicine and National Research Council, 2009; National Institutes of Health, 1998; WHO, 1995).

The *Standards for Management of the Obese Obstetric Woman in South Australia* policy advises that there is shortage of resources to provide care for all pregnant women with obesity within the state (Department of Health, 2016). As a result, the policy stipulates that in some cases women will be asked to relocate to specialised maternity units away from their homes to minimise the risk of poor pregnancy outcomes (Department of Health, 2016). Some stakeholders regarded the policy as protective of themselves, their colleagues and the women,

> *There are just a lot of fat people out there unfortunately and it has increased in the time that I've been in practice. There are more and more obese people out there. There are safety issues and it's very easy, if you appear to discount any of this you'll look like a cowboy and I can tell you I'm a big chicken, I don't like putting my patient or myself at any, or colleagues, at any undue risk (Fred, GP Obstetrician).*

Yet other stakeholders expressed concern that these stipulations put pregnant women at risk, particularly in rural and remote areas where obesity was more prevalent (Australian Bureau of Statistics, 2015; Australian Institute of Health and Welfare, 2017c; Navaneelan & Janz, 2014; Trivedi et al., 2015). These women presented late, and some did not present for antenatal care for fear of being asked to leave other children and family members behind for long periods and relocating to new communities where they were socially isolated. Furthermore, women had to incur the cost of transport and accommodation for other family members who travelled with them, during this relocation process. This process further impacted on the health and wellbeing of rural and remote women, resulting in increased risk of health disparities.

Individual beliefs about risk often differ from scientific measurements of risk, thus making subjective risk important (Andersson & Liff, 2012). However, the structure of the policy and lack of engagement between the health system and women is a structural barrier to discussing these risks. People understand and socially construct risk based upon culture and locally defined concerns and values (Andersson & Liff, 2012). Maternity providers argued that although the policy stipulated that they had to refer pregnant women with high BMI, they were under professional obligation to care for any woman who presented late for antenatal care. This placed responsibility on clinicians to ensure that the women had a safe birthing process, despite the poor resource shortages in rural and remote communities.

This analysis has outlined the different effects of various problem representations and how different features of the same issue may be left unexposed or silenced by the various problem representations. The next section outlines the assumptions that underpin the problem representations discussed.

5.3 What presumptions or assumptions underlie representations of the problem?

Bacchi (2009) highlights how language used and meanings attached to key concepts disclose the underlying assumptions (knowledge) and values attributed to particular policy issues. An examination of interview transcripts revealed how stakeholders viewed various aspects of maternal obesity through their use of certain terms or language. Most of the stakeholders agreed that the policy provided guidance regarding the safe and appropriate care of pregnant women with obesity. One stakeholder said the policy, *'provides a practical list of the things to do and not do'* (Angela, GP Obstetrician). The policy stipulated that pregnant women with high BMI were at an increased risk of poor pregnancy outcomes thus requiring transfer to specialised maternity units for birthing. This blanket statement was refuted by some stakeholders who argued that risk of these women could not simply be attributed to BMI. They argued that some of these women were known to them for several years and had previous uncomplicated births despite a high BMI. In this case, 'risk' was not absolute but instead relative to other factors.

Stating that 'some people are not eating healthy' and others are 'eating the wrong foods' attributes maternal obesity to individual diets rather than facilitating socioeconomic factors such as high costs of healthier food options. Some stakeholders argued that pregnant women were obese because they ate unhealthy foods due to a lack of role modelling from their families and communities. One stakeholder said, *'role modelling is a big issue that they haven't learnt how to bring up healthy children with healthy food'* (Fiona, Community Midwife). Additionally, stakeholders argued that due to lack of role models, women had not learned how to cook healthy foods. It was further argued that *'quite often mum's a drinker, so it was just easier to go and get some takeaway'* (Fiona, Community Midwife*)*. These arguments placed the responsibility onto the individual, her family and community, rather than facilitating factors such as cost and affordability of healthier food options. Furthermore, by stating that the general population's increase in BMI is a result of a *'sedentary lifestyle and lack of activity'* (Charles, private Obstetrician), again places the responsibility of obesity on the individual and the community, rather than on barriers such as lack of recreational spaces.

There were others who framed the issue of maternal obesity differently and instead highlighted socio-structural factors as barriers. One stakeholder said,

> *If they don't know how to engage, or they are too frightened to engage, or there's a lack of ability to engage – as in they don't have transport to get to places, or they don't have accessibility to a computer, or they don't have these things – then it doesn't matter how much information is available to them, it still has to be accessible to them and understandable to them (Gertrude, Community Midwife).*

Underlying assumptions support the ways in which the issue is framed, leading to thinking of that issue in a particular way. The focus on changing individuals' behaviour to eat healthy foods is underpinned by the assumption of reduced government intervention and increased economic liberalism, also referred to as neoliberalism (Bacchi, 2009; Collyer, 2015). The government enlists expert groups (such as GP Obstetricians, Midwives and Obstetricians) to set norms through the knowledge they produce (Bacchi, 2009). These norms of desirable behaviour are specified, and individuals are involved in self-surveillance and self-regulation as a mode of governance (Colebatch, 2002a). Foucault uses the concept 'governmentality' to describe different forms of governance (Bacchi, 2009). Neoliberalism is a form of rule or governmental rationality that describes government as taking place 'at a distance' (Bacchi, 2009). Conversely when there is increased government participation in addressing the social determinants of health, the focus shifts to providing supportive social and structural conditions such as reduced food prices and increased income. These two perspectives are explored in more detail below.

5.3.1 A neoliberal perspective

Presenting the problem as individual responsibility to access and eat healthy food, along with engaging in physical activity, such as sport, both allude to a neoliberalism perspective of the issue, with a reduced government role. Unlike classical liberalism whose focus was to protect the free market from the state, neoliberalism involves the active creation of the conditions required for the free market to operate (Collyer, 2015). Free markets are supposedly more advantageous for the economy and society (Collyer, 2015). In this construction, government is less regulatory and plays more of a supportive role, reaffirming the separation of government from society (Collyer, 2015). Many of the functions and roles

previously performed by government have been privatised and there is now a definite divide between the private and public sector.

Neoliberalism is associated with the changing relationship between state and citizens of that state. It premises that active citizens are responsible for their health and wellbeing by managing their lifestyles, thus reducing their dependence on government support (Collyer, 2015). The government in return, has an obligation to provide favorable conditions including education, health and welfare. Citizens of the state can exercise free choice, but must assume responsibility of the activities carried out as well as their outcomes (Collyer, 2015). Preservation of a healthy state thus becomes an obligation of the citizens (Collyer, 2015). With this perspective, there is an underlying assumption that individuals will endeavor to better their health and that of their families (Collyer, 2015). However, some critics argue that the move towards economic free markets, has given rise to what is coined as "the neoliberal diet" (Otero, Pechlaner, Liberman, & Gurcan, 2015). This is composed of what is generally known as "junk food", which includes chips, candy and soft drinks, also known as 'pop' (Otero et al., 2015). Nutritionists describe these as energy dense foods that are highly processed with high contents of sugar and fat, with low nutritional value, and a leading cause of the obesity epidemic (Otero et al., 2015). This type of food has reduced prices making it most affordable to low income groups which are rising in numbers and proportion, resulting in an unequal burden of obesity within society (Otero et al., 2015). Sociologists argue that governments of wealthy nations are accountable for being inconsistent with neoliberalism regarding state intervention. They heavily subsidize their agriculture and practice trade protectionism for some of their industries including some agricultural products, while advocating for global neoliberalism (Otero et al., 2015). These wealthy states are involved in neoregulation, which promotes the main economic role of agricultural production and agribusiness multinationals (Otero et al., 2015). Much of the neoliberal diet is based on crops such as soybeans and corn, which in countries such as the US, are the most subsidised crops (Otero et al., 2015).

The neoliberal movement favors a small elitist group of the academic community, professional community, the corporate sector, politicians, public and private companies, and the media (Cahill, 2004). These elitists argue that government interference is an invasion of individual rights and instead government governs 'at a distance' guided by the group expertise (Bacchi, 2009; Cahill, 2004).

By placing the responsibility of maternal obesity onto the pregnant women, the role of government is reduced within the neoliberal perspective. Additionally, some stakeholders providing maternity care to pregnant women with obesity supported free market economies, by framing the issue as failure of the women to purchase and consume healthy foods and engage in adequate physical activity. With this problem representation, addressing maternal obesity is left to the pregnant woman with minimal responsibility for government.

5.3.2 A socioeconomic perspective

A converse perspective is presented where a social determinants of health approach is used with government intervening to ensure that individuals are afforded equal access and opportunities to income, education and healthcare (Baum & Simpson, 2006). The provision of housing, income, education and healthcare is considered the obligation of government in free market economies (Otero et al., 2015). This however requires more intervention by government and less expectation on individual behavior. Although there is an abundance of evidence on social determinants of health and health equity, governments do not often translate this into effective policy. Instead, Australian government policies have continued to favor individual behavior change strategies (Fisher, Baum, Macdougall, Newman, & Mcdermott, 2016). The Commission on the Social Determinants of Health (2008) advises that health inequalities within and between countries are a result of unequal distribution of power, goods and income, and access to services due to poor programmes and policies.

Although the Commission acknowledges the importance of a country's economic growth as it provides the necessary resources to improve the lives of the population, it emphasizes that this growth alone, without suitable social policies would be less beneficial to improving unequal resource distribution. Under this premise, unequal access to healthy foods and the ability to engage in adequate physical activity is a result of poor social policies and programs and unequal economic arrangements. In order to increase access to income, goods and services, the Commission recommends that governments act on the social determinants of health to promote health equity (Baum & Simpson, 2006). This increased the role of government associated with management of the pregnant woman with obesity, highlighted by stakeholders. These included the increase in rural and remote health workforce, building of regional specialised health centers to improve access for rural and remote communities, and financial and social support for women transferring and relocating to other communities for their maternity care.

This analysis demonstrates two dominant ways in which maternal obesity is thought about and represented by stakeholders; the neoliberal and socioeconomic perspective regarding maternal obesity. The next section explores the effects of these representations.

5.4 What is left unproblematic by representations? Where are the silences? How can the problem be thought about differently?

Bacchi's (2009) framework uncovers who may benefit and who may be disadvantaged by the various ways in which problems are represented. The framework highlights other views of the policy that have not been presented and therefore rendered silent. These varied views are presented in table 4. This section demonstrated how the three main perspectives of the problem are represented and how their underlying assumptions benefitted different groups in society and had diverse effects on the stakeholders and pregnant women with obesity.

Table 4: Participants perspectives of the problem

	Individual	Clinician	Community	Government	Public Health and	Cultural

Andrew	Y	Y			Y	
Brian	Y	Y		Y	Y	
Charles	Y		Y		Y	
Angela	Y	Y				
Dennis	Y					Y
Betty	Y					
Carol	Y			Y		
Edward	Y			Y		
Fred	Y		Y			
Gordon	Y					
Diana	Y	Y				
Eva	Y	Y				
Fiona	Y		Y			Y
Gloria	Y			Y	Y	
Harriet	Y			Y		
Isabelle	Y	Y				
Harry	Y				Y	

5.4.1 Individual representation compared with government responsibility

Different aspects of maternal obesity were discussed by stakeholders who were charged with compliance of the *Standards for the Management of the Obese Obstetric Woman in South Australia* policy. The issue had different problem representations that were framed as individual, clinician, community, government, public health and media and cultural responsibility, producing varied effects. A few stakeholders framed the issue as a social policy problem highlighting the underlying assumptions as poor access to healthcare for women and women's incomes not aligning with costs of living.

Determinants of maternal obesity were mainly attributed to the women's lifestyles and behaviours. Stakeholders framed the issue as health illiteracy regarding obesity; based on failure of the women to acquire and comprehend information regarding obesity, choosing to eat unhealthy foods over healthier options, lack of cooking skills and irresponsible behaviours such as alcohol indulgence. Several stakeholders framed the issue as sedentary lifestyles, where women were choosing not to engage in adequate physical activity. As one stakeholder said, *'Its people eating the wrong foods, not doing enough exercise' (Brian, GP Obstetrician).* The different problem representations may result in different effects. The social policy problem representation placed the responsibility onto government to create changes in social policy. Conversely, the individual skills, knowledge and behaviour place responsibility

onto individuals. Although there may be some government intervention such as funding of community-based initiatives, such as sports and health literacy programs, the ultimate responsibility of prevention of maternal obesity appears to lie on the pregnant woman.

The policy stipulated that women with high BMI be referred to larger specialised maternity units to ensure safe birthing. Some stakeholders highlighted that pregnant women with obesity chose to present when already in labour or heavily pregnant, such that they were not able to travel and relocate to another community for specialised care. Several stakeholders however, framed this as a social policy problem, whereby pregnant woman presented late in pregnancy not wanting to be transferred as they were anxious about leaving their children and families behind, the costs of relocation, and avoiding dealing with social isolation in the new community. As one stakeholder said,

> *If they've already got a family they often have to be relocated from their husband and their care base and that causes them a lot of anxiety' (Harry, GP Obstetrician). Another stakeholder said, 'so it's a transport, finance and the actual accommodation are huge barriers that we have difficulties with, for the women (Fiona, Community Midwife).*

Government was held responsible to provide support to women and their families to travel and relocate to the specialised maternity centres, as one stakeholder working with Aboriginal women commented, *'it's around supporting them and their families to go down and have to do this' (Eva, Community Midwife).* Conversely, women were held responsible for presenting late for antenatal and/or labour care. Even though there is some government intervention in the form of funded maternity services, attendance of antenatal care for risk assessment and relocating for specialised maternity care ultimately was framed as the responsibility of the pregnant woman.

Harmful effects of the problem represented as individual responsibility included weight related stigma illustrated in discourses regarding obesity. One stakeholder said, *'at the moment a lot of discontent in the at often people feel they're being labelled fat and feel they're being discriminated against*' (Harry, GP Obstetrician). Some clinicians argued that classifying women as 'obese' was not only embarrassing for the women but was also a barrier for them to access adequate care, as commented by one

stakeholder, *'so it's sometimes challenging to provide information that is measure and yet sensitive to people's needs and helps them to come to an understanding of their risks'* (Angela, GP Obstetrician). Stigma is pervasive and may have negative physical and psychological consequences, further propagating health disparities (Puhl & Suh, 2015; Puhl & Heuer, 2010). Holding individuals responsible for changing their life circumstances to address obesity places blame on those who are obese and frames them as having failed to modify their behaviours to address the issue. Additionally, inferring that some pregnant women choose to eat unhealthy foods and others spend money on vices such as alcohol rather than purchasing healthy foods, presents these women as being deviant and irresponsible. Under neoliberalism, good citizens were expected to undertake responsibility for their health and well-being as a moral obligation, by engaging in healthy activities and managing their lifestyle (Collyer, 2015; Roy, 2008). Those who failed to comply with social norms were considered indolent and lacking in self-control (Bissell, Peacock, Blackburn, & Smith, 2016). By representing the issue as lack of knowledge regarding maternal obesity, choosing to eat unhealthy foods and leading sedentary lifestyles places blame on the women. This may trigger stigma towards maternal obesity, as pregnant women are regarded as socially deviant, and in doing so they encounter moral judgement from the dominant society. The resulting discrimination and stigmatisation may further lead to poor self-esteem and worsening socioeconomic situation (Otero et al., 2015; Roy, 2008).

The above problem representations draw attention to women's behaviour and way from the socio-structural context of maternal obesity such as cost and affordability of healthy foods, like fruits and vegetables and lack of recreational facilities. What is left unproblematic are the obesogenic environments in which the women live, where high fat and high sugar foods are readily available, and sedentary lifestyles are prevalent (Bissell et al., 2016). Some stakeholders however, raised the issue of cost of healthy options versus affordability and accessibility of unhealthy options. Solutions proposed included government subsidy of healthy foods and increased taxes on unhealthy food options, as well as banning food outlets that contain unhealthier food options. These proposed solutions place the

responsibility on government to change its policies and the food industry to amend its food pricing. Leaving the issue of cost and affordability of healthy options silent, benefits the food industry as there is no price manipulation and profit margins are left to the free market economy. The government also benefits as it does not have to spend additional resources implementing these new strategies.

5.4.2 The problem represented as clinician responsibility

Several solutions proposed placed the responsibility of maternal obesity on maternity providers charged with compliance of the *Standards for Management of the Obese Obstetric Woman in South Australia* policy, including providing pregnant women with education on obesity, early identification of pregnant women with obesity and related risks, and timely referrals for specialised maternity care. Framing the solutions as clinician responsibility, divert attention from the fact that certain groups of pregnant women, such as indigenous women have poor access to antenatal care and other health services (Porter, Skinner, & Ellis, 2011; Shah, Zao, Al-Wassia, Shah, & Knowledge Synthesis Group on Determinants of Preterm/LBW, 2011). Government, through its health care system may benefit from this problem representation, as it is seen to be doing something to address maternal obesity. However, the harmful effect of informing pregnant women about their potential referral and transfer to other communities for specialised maternity care, is that these women may present too late and some may not even present at all to a maternity provider, as one stakeholder said, *'I think a lot of these people sometimes get scared off if we say you might have to deliver somewhere else'* (Brian, GP Obstetrician). Another one said,

> *Women refuse to leave the community or go AWOL when the Flying Doctor comes in and they know that there is going to be a clinic on or something, so that they can put off the inevitable or not have to talk about it (Diana, Community Midwife).*

What remains silent by these problem representations is that pregnant women are choosing to present late or not attend antenatal care, for fear of being transferred and relocated to other communities for

birth, leaving other children and family members behind (Miller et al., 2012; O'Driscoll et al., 2010). Other silences include pregnant women not presenting or presenting late to their maternity providers due to anxiety over relocation costs and cultural isolation during the transfer and relocation process (Miller et al., 2012). As one stakeholder commented,

> *'so they've got to find accommodation for themselves and or whoever comes along with them, in the city somewhere they're not familiar and all that involves, including financial issues' (Diana, Community Midwife).*

Furthermore, indigenous women in some remote communities in Australia regard the experience of having to relocate and birth in a larger maternity unit where men are involved, as cultural 'shame', whilst others expressed fear of flying to the larger cities, while pregnant (Ireland et al., 2011).

Another unwanted and unintended consequence of the problem represented as clinician responsibility is that clinicians were having to manage and deliver those pregnant women with obesity who presented with complications before 36 weeks, and those too late in the pregnancy to be transferred to larger facilities. One provider said, *'the other reality is that because complications are more common in obese women, sometimes they present significant complications prior to 36 weeks'* (Angela, GP Obstetrician). Maternity providers expressed concern about having to look after these women, *'I've seen what goes wrong, both anaesthetic and obstetric wise, these high-risk people either suddenly turn up on your doorstep and you've got to deal with them'* (Brian, GP Obstetrician). Although aware of the policy stipulations, rural and remote maternity providers reported that they were professionally obligated to care for these women, albeit under resourced conditions as one provider commented,

> *There's no situation where I could imagine that we'd have a patient arrive on our doorstep and we say to them, sorry, you've got to deliver in the car park because you're too big to have your baby here (Angela, GP Obstetrician).*

Having to work in that way, clinicians felt that medical authorities could provide better support for clinicians considering their working conditions, as one provider suggested

> *I think that more needs to be done around procedures and protocols to actually manage the exceptions, and protect – not that I think we're unprotected, but to demonstrate the support*

> *that the administration and hierarchy for us doing the best we can with the resources that we have (Angela, GP Obstetrician).*

With clinicians reporting an increase in rural and remote communities and more women presenting late, proposed solutions suggested that there was a need for better resourcing in terms of equipment, training of health providers, and support from specialised services, as commented by one stakeholder,

> *A lot of these ladies are presenting late in labour, so they can deliver where they want to. So, I think we need to have increased education on how to manage and be educated on how to handle and have more equipment available at our country centres for obese women (Harry, GP Obstetrician).*

Proposed solutions place responsibility on government to address work force and resource shortage in rural and remote communities, as well as provide better supportive healthcare policies for health workers.

Stipulating that pregnant women with obesity be transferred to other communities for specialised maternity care benefits the government, who appear to be doing something, but diverts attention from the long-standing shortage of health workers, including maternity providers in rural and remote Australia (Department for Health, 2010; Keane et al., 2010; Viscomi, Larkins, & Gupta, 2013). Due to this shortage, pregnant women in these communities have problems accessing maternity care (Gardner, 2015; Keane et al., 2010; Porter et al., 2011). The policy was developed to provide guidance for maternity providers caring for pregnant women with obesity with the intention of minimizing risk and ensuring a safer birthing process (Department of Health, 2016). One stakeholder said,

> *I think it provides guidelines for clinicians on safe management and looking at the best options for those women in terms of keeping them and their babies safe and where they access certain services in order to do that (Harriet, Community Midwife).*

However, one may argue that although this may have been the intention for the policy, its mandatory nature diminishes the autonomy of women to make decisions about their care, as commented by one stakeholder,

> *Sometimes the women get quite angry, that they feel quite powerless, like they don't have a choice. At times they will say that they won't go, that they will just rock up to the local hospital in established labour and will have their baby here (Harriet, Community Midwife).*

Women not only rely on biomedical information and the expert knowledge of their health providers, but on their cultural and lived experiences (McDonald, Amir, & Davey, 2011). For women, the birth of a baby was a natural occurrence that involved the family and community, as one stakeholder commented,

> *That's particularly an average for women having children because a new baby entering the family is an important social occasion and an important process for family, extended family and community contacts; friends as well as relatives (Angela, Community Midwife).*

Stakeholders felt that the policy did not incorporate the women's perspectives of the birthing process.

Furthermore, as already discussed, neo-liberal society is concerned with calculating, understanding, managing, eliminating or reducing risks associated with daily life (Lupton, 1999). With this context, pregnant women have a moral and social obligation to manage risk and ensure the safety of their unborn baby (McDonald et al., 2011). However, as Lupton (1999) comments, every pregnancy has an element of 'risk' and it's the pregnant woman's responsibility to do everything she can to mitigate this risk. The birthing process is often considered a natural process, yet women are told as one provider commented,

> *Even in a first world country like Australia with good access to healthcare, the day that you have your baby is one of the most dangerous in both your life and your baby's life (Angela, Community Midwife).*

In 2009, the Australian Government supported the move to introduce primary maternity services under the premise that 85 percent of pregnant women are capable of having safe births requiring minimal intervention (Commonwealth of Australia, 2008). Some stakeholders have argued that although these women are obese, that alone does not put them at risk, but instead risk should be assessed on an individual basis. Some providers proposed that specialist services are brought closer to women, to minimize the problems represented above; as one provider suggested,

> *we need to look at ways that these people can stay in their communities and deliver safely and not have this blanket approach of everybody has to move down to Adelaide (Edward, GP Obstetrician).*

This aligns well with Aboriginal communities who have lobbied for the establishment of birthing programs that support women who prefer to give birth in their own communities (Miller et al., 2012). These proposals place responsibility on government to intervene, in ways such as addressing rural health work force shortage, increasing training for rural maternity health providers, increasing remuneration for these providers, and establishing inter-professional models for collaborative and integrated care for rural and remote women (Miller et al., 2012).

Another unwanted effect of presenting the problem as clinician responsibility is that clinicians perceived the policy as being too restrictive, hindering their own clinical decision-making skills. The policy is said to have been developed as a way of minimising risk of the pregnant woman and her baby, as quantified by BMI. Clinicians argued that BMI alone should not be used as a sole marker to classify women as being, 'at risk' as commented by one stakeholder,

> *I think that it's probably a little over-simplified in how they've worked out what constitutes a high risk. I don't think BMI is the best way to work out whether someone's at a high level of risk, because it's not a well -defined enough term (Gloria, Community Midwife).*

Stakeholders argued that they should be allowed to exercise their clinical judgment and make decisions accordingly as expressed by one maternity provider,

> *I'm not going to do something silly and try and do a Grade 4 placenta praevia out here or a person with a BMI of 45 or 60 because that's well beyond our capability. I believe that most country obstetricians don't want to buy trouble for themselves and will refer off appropriately (Edward, GP Obstetrician).*

Tensions sometimes exist between clinicians' desire for autonomy and the need for practice to be standardised. Although clinicians appreciate that clinical guidelines promote safe practice, they are perceived as useful for those who are not as skillful, knowledgeable or experienced (Hupe, 2012).

These sentiments were compounded by stakeholders who advised that sometimes health care policies were developed by expert groups without proper consultation with all stakeholders. Development and

implementation of healthcare polices require proper consultation and formation of partnerships which promote better communication and establishment of clear roles and responsibilities. One stakeholder commented,

> *I understand that it's based on a lot of experience and statistics and what have you. So, it was something where there was no clinician input really available. It was really imposed upon us rather than our opinion requested or sought (Fred, GP Obstetrician).*

Stakeholders argued that effective policy development and implementation requires adequate input from all partners involved, 'I think genuine consultation before the policies come out. I think they need to really talk to us and understand what we do and how we manage risk' (Edward, GP Obstetrician). Collaborative partnerships have agreements on the rationale for their existence, strong champions and leadership, a diverse membership and clarity on roles and responsibilities (Kolbe, Allensworth, Potts-Datema, & White, 2015; Spatig, Swedberg, Legrow, & Flaherty, 2010). Collaborative partnerships among providers of pregnant women with obesity are therefore beneficial. Furthermore, stakeholders were concerned that interventions may not be effective if there was inadequate community participation. Research shows that evidence-based practices are sometimes rolled out to the community rather than being developed with community providers (Kilbourne et al., 2012). Some of the suggestions toward community participation included the involvement of other family members in obesity related discussions and the establishment of community health literacy classes. Community participation through effective partnerships is beneficial in addressing the social determinants of health, representing the needs of those more affected by the problem and understanding the issue better (Israel et al., 2010; Minkler, 2010).

The next section demonstrates how different problem representations benefit stakeholders and their area of work.

5.5 Emerging communities of meaning around maternal obesity

The interpretive approach is based on the assumption that individuals, in this case, stakeholders and policymakers, live in a world that is open to numerous interpretations that are based on their education, previous knowledge and training, as well as individual, social and family backgrounds (Yanow, 2000). The approach suggests that different groups of individuals will attach different beliefs and values to the same policy issue, and these differences in approach to the policy issue are based on prior experiences (Yanow, 2000). Yanow (2000) indicates that different groups of individuals can have the same understanding of policy problems and solutions, and therefore attribute the same beliefs and values to the policy problem. These groups are coined, 'communities of meaning'. This section provides a discussion on these emerging communities of meaning around maternal obesity, based on stakeholders' experience and work. Proposed solutions by different stakeholders expose the assumptions, beliefs and values they attach to maternal obesity. Various discourses about maternal obesity were provided exposing their views on the problem, its determinants and proposed solutions. These views were often consistent across the group but at times, contradictory, as observed by Bacchi (2009).

Stakeholders predominantly represented the problem as individual responsibility. For example, Harry (GP Obstetrician) and Charles (private Obstetrician) attributed the problem to women living sedentary lifestyles and eating unhealthy foods. Fiona (Community midwife) attributed the problem to pregnant women who not only had unhealthy eating habits but lacked cooking skills and engaged in irresponsible behaviours such as alcohol. Fewer stakeholders, like Gloria (Community Midwife) represented the problem as government responsibility and proposed that the determinants of maternal obesity were a result of the socio-structural context of maternal obesity, such as transport and cultural barriers to accessing antenatal care. When it came to discussion about pregnant women with high BMI being referred and asked to relocate away from their families and communities, problems were represented mainly as responsibilities of the women, clinicians and government. The policy stipulates that women with high BMI be referred and relocated to other communities to receive specialised maternity care.

When pregnant women presented too late in their pregnancy or in labour that they could not be transferred to the larger maternity units and instead had to be managed in their rural or remote communities, the issue was represented as a clinician problem, as commented by GP Obstetricians, Angela and Brian.

However, this problem representation was widely contradicted by stakeholders such as Eva (Community Midwife) and Harry (GP Obstetrician) who argued that women chose to present late and others did not present to their maternity providers due to fear of leaving other children and family members behind and costs related to the relocation process. Country maternity providers benefit from representing the problem this way as it appears to exonerate them from any blame and instead places the responsibility onto government. Maternity providers instead proposed that government support pregnant women with obesity by providing specialised maternity services to rural and remote communities, closer to the women, as commented by Edward (GP Obstetrician), and resource country maternity units that may have to support pregnant women with obesity throughout their pregnancy and birthing, as suggested by Carol (private Obstetrician). This benefits maternity providers, as additional resources are directed to their clinics to manage these women. Other stakeholders such as Eva (Community Midwife) proposed that pregnant women who must relocate from their communities as stipulated by the policy, and be supported with costs for transport, food and accommodation during the relocation process. These suggestions appear to benefit pregnant women with obesity as well as their families and communities. From this analysis it appears the various communities of meaning around the issue of maternal obesity are influenced by stakeholder's knowledge, experience and place of work.

5.6 Sources of problem representation and dissemination

Bacchi's last question encourages consideration of the means through which problem representations reach their target audience and achieve legitimacy (Bacchi, 2009). The framework proposes three ways through which this may occur, namely; academic literature and research, the media, and obesity policy solutions. These three avenues do not operate in isolation, but instead interact and influence how aspects of obesity are constructed and viewed.

5.6.1 Evidence as an avenue for problem representations

The first avenue through which problem representations may have impacted on stakeholder responses is through research evidence. Academic research often diffuses through multiple channels, such as professional and scientific journals, the mass media and discussions between researchers and policy makers. Academic research integrates patient values with 'best' clinical evidence, which underpin different priorities and various kinds of ethical judgements. Over time, diffusion of research leads to the development of concepts, ideas and generalisations that influence the way problems are thought about and solutions offered. Therefore, the way public health issues are viewed, and obesity and particularly maternal obesity are represented within academic research may impact on the way policy makers view the problem.

Representation of public health issues is dependent on the way evidence is interpreted and used. Evidence based medicine demonstrates a shift away from the subjective "opinion" of the carer towards a more organised and reliable way of doing research, making it the most dominant paradigm of medicine and science (Marini, 2016). While evidence-based policy may be beneficial for instance, by minimizing the ideologies and interests of policy makers, there needs to be consideration of the types of evidence that gets prioritised. Inevitably the interests and ideologies of policy makers weigh heavily and impact on how evidence is interpreted and used. While democracy is premised on supporting and accommodating the ideologies and interests represented in society, distribution of power within society determines whose ideology, information and interests dominate (Kelly, Health, Howick, & Greenhalgh, 2015). The values and ideas of minority groups are often overlooked and in most cases, will

not be recognised (Kelly et al., 2015). Evidence based medicine is dominated by two key concepts; efficiency and value of money (Porter, 2010). Health systems function under utilitarian principles, which dictate that interventions are as good as far as they maximise benefit for the largest number of people (Renouard, 2011). An intervention is deemed beneficial if it achieves this, but to do this a value judgement about how much that intervention is worth, must be made. Stipulating that all pregnant women with obesity relocate to specialised maternity units to have their babies may appear to reduce healthcare spending, but negatively impact on rural and remote women who must relocate far from their family and community support and incur the costs of moving. In this way, maximising economic value may not be in the best interest of the individual and may further increase inequalities between people and between groups of people (Renouard, 2011). Although rationalising of resources in healthcare is a key intention of the *Standards for the Management of the Obese Obstetric Woman in South Australia* policy (South Australia Dept. of Health, 2012), this may not necessarily be in the best interest of the women.

5.6.2 Media as an avenue for problem representations

By highlighting issues, the media gives more importance to some issues and renders others insignificant (Wakefield, Brennan, Durkin, McLeod, & Smith, 2012). Additionally, by framing issues in particular ways, the media can influence not only what issues are presented to the public, but also how these are perceived and the importance the public attaches to them (Wakefield et al., 2012). The media not only transmits information, but culture, and the stories told most often convey the dominant values and beliefs (Wakefield et al., 2012). Media interacts with and influences the policy process in two major ways, namely by selecting important issues to highlight to policy makers and the public, and secondly by problematising policy in a way that attaches meaning to it that is comprehensible (framing and constructing narratives) (Crow & Lawlor, 2016). Women are often confronted with media messages about illness and health. Although these messages contain information that promotes healthy lifestyles, they also consist of discourses that support particular forms of knowledge about health,

society and women, such as maternal obesity (Roy, 2008). The media as illustrated in women magazines particularly, encourage its readers to exercise self-control, adherence and personal determination to commit to lifestyles that create a state of good health but also demonstrate one's moral worthiness as a woman and upright citizen (Roy, 2008). This problem representation places the responsibility of maternal obesity onto the woman to change her behavior.

5.6.3 Other public health policies on obesity as an avenue for problem representations

The third avenue through which problem representations may have impacted on stakeholder responses is through solutions provided by other public health policies on obesity. Comparing and contrasting the different problem representations of stakeholders in this study with those found within other public health policies on obesity, for instance, in the policy *Australia: The Healthiest Country by 2020*, proposed solutions included development of public education campaigns to improve eating habits and levels of physical activity (Commonwealth of Australia, 2009a). Other solutions proposed in the policy include individuals changing personal behaviours and lifestyles and healthcare systems investing in early detection, prevention and appropriate interventions to keep people healthy (Commonwealth of Australia, 2009a). The Australian National Obesity Taskforce advised that one of the goals of *Healthy Weight 2008*, was to increase the proportion of children and young families who engage in and maintain healthy eating and adequate physical activity (National Obesity Task Force (Australia), 2008). The solutions proposed by this expert group also placed responsibility on the individual to change their behaviour and lifestyle to prevent obesity.

5.7 Conclusion

This chapter provided the findings of an interpretive analysis of stakeholder interviews using Bacchi's (2009) framework. There were three main problem representations; individual responsibility, clinician responsibility and government responsibility. These different problem representations have underpinning assumptions about government being responsible to address public health issues. The

neoliberal perspective supports reduced government intervention and places more responsibility on the pregnant woman to address the issue, whereas the socioeconomic perspective places more responsibility on government to change the social structural context of maternal obesity, such as providing support with transport to attend antenatal care and assistance with relocation costs for women with high BMI.

These problem representations produce various effects such as obesity related stigma and pregnant women with high BMI not attending antenatal care for fear of being referred to maternity units away from their families and communities. Different stakeholders attached different values and beliefs to maternal obesity. The chapter included how the academic literature, the media and obesity policies can influence the production and reproduction of these problem representations. Lastly, the next chapter ties the findings in this chapter with the previous chapters and demonstrates how the outcomes of the study contributes to public health practice and policy.

Chapter 6: Conclusions, reflections and research transfer

6.1 Introduction

This chapter brings together the findings of the study and aims to compare and contrast emerging themes from stakeholder responses with the literature. In examining the similarities and differences in stakeholder responses and the literature findings, I have demonstrated the importance of employing local evidence to increase the understanding of an issue and provide more contextualised and feasible solutions. The previous chapter demonstrated that during the policy making process, tensions existed between views, resulting in the silencing of potential policy options. This chapter will also discuss the advantages and limitations of employing a consultation method to developing public health policy such as the South Australian policy. The process by which research findings are transferred to the stakeholder and policy making community will be presented. This chapter will be organised in the following way:

6.2 Stakeholder views compared and contrasted with literature

6.3 Advantages and limitations of the research design

6.4 Reflexivity

6.5 Areas for further research

6.6 Research transfer plan

6.2 Stakeholder views compared and contrasted with literature

Some of the themes found in the literature were reiterated by stakeholders during the interviews, however, there were some themes raised that were particularly absent from the *Standards for Management of the Obese Obstetric woman in South Australia* policy. This study took the position that policy representations cannot be framed independent of the context in which they are to be implemented. Articulation of these additional representations demonstrated the importance of local

evidence in further understanding the issues and providing contextual details that may not have appeared in evidenced based literature. Additionally, while there was often similarity between views expressed among stakeholders and within the literature, at times contention existed with alternative views being expressed. Interrogating these tensions in the study highlighted the potential for some views to be silenced by others that were more dominant.

The ideology of individualism raised by nearly all stakeholders resonated well with the literature. Baum advised us that individual ideologies became more influential in the shaping of public policy since the embrace of neo-liberal ideologies and capitalism by liberal-democratic states (Baum, 2008). In guidance documents stakeholders consistently held women responsible for their actions and consequences including obesity and poor pregnancy outcomes, alluding to the principle of autonomy (Baum, 2008). Framed as autonomous, pregnant women were considered to have the capacity to make choices regarding the foods they consumed, and the physical activity required to maintain a healthy pregnancy weight. A small number of stakeholders suggested that some of the women were choosing to eat in an unhealthy manner, despite the availability of healthier options. Other stakeholders held families responsible for this unhealthy behaviour and one stakeholder even went further to attribute it to the women's indigenous background. This focus on the woman places responsibility on an individual and supports the notion of free market economies. This neoliberal perspective encouraged food corporations to provide unhealthy food options and silenced the role of government to make socio structural changes so that healthy food options or 'choices' were more accessible and affordable to all population groups.

Public health advocates advise on interventions that have the potential to change the physical, economic, educational, policy and social environments to support healthy diets and physical activity to effectively prevent obesity (Public health Association of Australia, 2016). They recommend a whole of systems approach as well as targeted strategies across the life course, from pregnancy to old age, and for disadvantaged communities with high prevalence of obesity (Public health Association of

Australia, 2016). An example of such efforts was the National Partnership Agreement on Preventive Health (NPAPH) established in 2008, and extended in 2012, that set out to address the increasing prevalence of chronic disease by recommending and supporting programs and initiatives that promoted lifestyle and behaviour changes, such as healthy school canteens, mass media campaigns, and healthy food policies for work places (Council of Australian Governments, 2008b).

In 2008, the Commission on the Social Determinants of Health, with an aim to tackle inequalities, recommended improvement in the lives of girls and women and the circumstances in which their babies were born by developing supportive social policies involving government and civil society (Commission on Social Determinants of Health, 2008). Secondly, the Commission recommended tackling the inequitable distribution of money, power and resources by strengthening governance from community level up to global institutions and establishing national and global health equity surveillance systems to monitor equity and ensure that the social determinants of health are acted upon (Commission on Social Determinants of Health, 2008). The United Nations Millennium Declaration, endorsed in 2000, challenged world leaders to combat disease, illiteracy, poverty, and discrimination against women, among other determinants of health and wellbeing (United Nations, 2015). In 2015, following these efforts, the global maternal mortality rate decreased by forty four percent over a period of twenty-five years, with countries such as Cambodia, Maldives and Cabo Verde reporting over eighty percent reduction in mortality rates (WHO, 2015b). Most countries that reported little or no progress in reduction of maternal mortality, such as some African countries, attributed this to a break down in health systems and epidemics such as HIV/AIDS (WHO, 2015b). However even in countries with good overall progress like Australia, extreme inequities were observed, where the rates of maternal mortality among indigenous women were twice as those of non-indigenous women (WHO, 2015b).

Additionally, over the past few years, progress is reported in women's educational access, with improvement in educational attainment and adult literacy (United Nations Statistics Division, 2015). However, nearly 781,000,000 people over the age of 15 remain illiterate with two thirds of them being

women, a proportion that has remained the same for nearly two decades (United Nations Statistics Division, 2015). Furthermore, gender inequities were reported to occur more widely at the secondary school level than at the primary school level, with factors such as poverty, rurality and ethnicity identified as contributory factors to lack of access and participation in education (United Nations Statistics Division, 2015). In Australia, although improvements have been made in educational access for women, there remains inequities between attendance rates for indigenous and non-indigenous students (Commonwealth of Australia, 2018). Furthermore, although minimal improvements have been reported, there remains wide disparities in employment rates between indigenous and non-indigenous Australians (Commonwealth of Australia, 2018). Social determinants of health were held responsible for nearly one- third of the health gap between indigenous and non-indigenous Australians and health risk factors such as obesity were estimated to account for nearly one-fifth of the health gap (Australian Institute of Health and Welfare, 2018).

These findings were consistent with the views of only a small proportion of stakeholders who acknowledged the role of socioeconomic barriers such as language and cultural, lack of transport, low education attainment, and financial status in hindering access and affordability to healthier food options and healthcare (Corcoran et al., 2017; Lalonde et al., 2009; Ministry of Health, 2016). Problematisation of maternal obesity in this way reinforced the role of government to make social and public policy changes so that physical activity, healthier food options and health services were readily available, accessible and affordable, particularly for women from disadvantaged communities. The UK government has demonstrated such changes in policy with the premise that poor maternal nutrition was associated with maternal deprivation and supported pregnant women on low incomes with food vouchers and coupons for vitamins under the Healthy Start scheme (Lucas et al., 2013; McFadden et al., 2014; National Institute for Health and Care Excellence, 2008). Several women reported that the scheme improved the range and quantity of the fruits and vegetables they had and the quality of their families' diets (McFadden et al., 2014).

Obesity cannot be attributed solely to an individual's lifestyle and behaviour, but to major factors such as accessibility, affordability, availability, appropriateness and practicality of healthy food options (WHO, 2007). As several factors contribute to obesity, no single intervention can halt its rise, but a range of factors which over time can interact with the individual, social and environmental determinants of health (Australian Medical Association, 2018; National Preventative Health Taskforce, 2009; Public health Association of Australia, 2016).

Nearly all stakeholders held the women responsible for addressing the issue of obesity with significant numbers also attributing this responsibility to clinicians, the community, the health system, business and industry and government (Department for Health, 2011; National Institute for Health and Care Excellence, 2010; National Preventative Health Taskforce, 2009; Public health Association of Australia, 2016; The Scottish Government, 2010; WHO, 2004). Roles and responsibilities proposed for each sector included: individuals making healthy choices about their lifestyles and behaviours; community offering support and taking advocacy action; the health system providing adequate preventative services particularly to disadvantaged communities; business and industry regulating production and pricing of quality goods; and services and government developing social and public health policies to enable socio structural changes so that healthy food choices and physical activity environments are more affordable and accessible (Department for Health, 2011; National Institute for Health and Care Excellence, 2010; National Preventative Health Taskforce, 2009, 2010; Public health Association of Australia, 2016; Swinburn, 2008; WHO, 2004).

Policy making involves problem identification, agenda setting, adoption, implementation and policy evaluation (Althaus, Bridgman, & Davis, 2013). However, this process is not linear and may not strictly adhere to a logical pursuit but is instead a complex matrix of economic, political, cultural and social factors (Althaus et al., 2013). Interpretive methods of policy analysis are based on the presumption that there are different ways in which to view or understand the social world in which we live and therefore there are no absolute truths (Althaus et al., 2013). Policies represent problems in the various ways

through which they offer solutions. Interpretive policy analysis identified the underpinning beliefs, meanings and values attached to problem representations (Yanow, 2000). As more powerful groups in society usually dominate policy development, the beliefs, meanings, values and beliefs being represented are usually those of the most powerful, wealthy or influential (Baum, 2008). Stakeholders expressed concern that policy makers were from urban centres, far removed from rural and remote settings and with little or no consultation, lacked the understanding of the context in which the women lived, and they worked.

Despite nearly half of the world's population living in rural areas, they are underserved with total nursing and physician workforces (Gibbons, Lancaster, Gosman, & Lawrenson, 2016; Miller et al., 2012; National Rural Health Alliance, 2015; WHO, 2010b). The situation is worse in low to middle income countries, but even high income countries such as Canada and Australia report challenges with recruiting and retaining physician, midwife and nurse workforces in rural and remote areas (Advancing Rural Family Medicine: The Canadian Collaborative Taskforce, 2017; Australian Health Ministers' Advisory Council Rural Health Standing Committee, 2012; Canadian Institutes for Health Information, 2013; Crowther, 2016; Crowther, Smythe, & Spence, 2018; Gorsche & Woloschuk, 2012; Shabnam et al., 2017; Terry, Baker, & Schmitz, 2017; WHO, 2010b).

Work force shortage has been cited as a long-standing barrier to provision of quality maternity care in Australia with a shortage of General Practitioners Obstetricians, Obstetricians and General Practitioner Anaesthetists (Department for Health, 2010). To improve access to maternity care, the Council of Australian Governments (COAG) agreement of 2008 was established to increase training of health professionals including GPs, obstetricians and allied health workers (Council of Australian Governments, 2008a; Kornelsen & McCartney, 2015). Additionally, the maternity services review recommended the expansion of collaborative modes of care, improved access for indigenous and rural mothers, and additional support to attract and retain a rural maternity workforce (Corcoran et al., 2017; Department for Health and Ageing, 2009; Kornelsen & McCartney, 2015; Kruske et al., 2016;

Miller et al., 2012). To further address the shortage of maternity providers, particularly in high needs areas, the General Practitioner Procedural Training Support Program was established to increase anaesthetics and obstetrician training for rural and remote general practitioners (Department for Health, 2010).

Despite these efforts, wide disparities, inequalities or inequities continue to exist between rural and remote populations and those in urban centres with the latter having higher levels of injury and disease as well as poorer access and use of health services, such as general practitioner and maternity care services (Advancing Rural Family Medicine: The Canadian Collaborative Taskforce, 2017; Australian Health Ministers' Advisory Council Rural Health Standing Committee, 2012; Australian Institute of Health and Welfare, 2017c; Brown, 2017; Canadian Institutes for Health Information, 2013; Gibbons et al., 2016; Rolfe et al., 2017; Wakerman et al., 2008; Wang et al., 2018). This is demonstrated in countries such as Australia and New Zealand, where smaller rural birthing units have been closed, compelling women to seek maternity care outside of their communities (Barclay & Kornelsen, 2016; Brown & Dietsch, 2013; Gibbons et al., 2016; Grzybowski, Stoll, & Kornelsen, 2011; Kildea, McGhie, Gao, Rumbold, & Rolfe, 2015; Longman et al., 2017; Sweet, Boon, Brinkworth, Sutton, & Werner, 2015). This has led to significant socioeconomic challenges for the women and their families related to separation, and an increase in births before arrival to hospitals and other larger maternity centres (Gibbons et al., 2016; Grzybowski et al., 2011; Kildea et al., 2015).

While stakeholders offered a great breadth of knowledge and understanding around the issue of managing a woman with obesity in country South Australia, by providing contextual details, it is important to consider the political environment and legislation to identify the most realistic policy options. The impetus for change to address obesity requires significant political commitment and leadership with defined policy directions (Swinburn, 2008). There are two suggested approaches; the 'soft paternalism' approach using health promotion programs, social marketing and advocacy for changes in government and individual behaviour; and the 'harder paternalism' options of enforceable

policies, laws, regulations and fiscal instruments (Swinburn, 2008). Although the softer approach maybe preferred by most governments, interventions such as health education may further increase health inequalities among communities that are already disadvantaged if they are more affordable and accessible to higher income groups (Swinburn, 2008). For instance, developing more electronic health information related to obesity may benefit pregnant women who have computers and internet access, but further disadvantage women who do not have those resources. On the other hand, laws and regulations can be applied more widely, and contribute to a decrease in health inequalities; taxation and subsidy policies apply across the board and have a positive impact on affordability of healthier food options. However, despite the global rise in obesity and all the national and global policy recommendations Australia has chosen to take a slower, delayed response (National Preventative Health Taskforce, 2009; Public health Association of Australia, 2016; Swinburn, 2008) and framed the issue as individual responsibility; the result of poor choices and individual failure of self-restraint. Furthermore, Australia has previously been successful in addressing public health threats through national legislation, such as establishing smoke free areas, reducing drink driving, seatbelt enforcement and workplace safety, yet it opts for a softer, self-regulatory approach to address obesity, such as supporting media campaigns, social marketing and health education (Haynes, Hughes, & Reidlinger, 2017; Mackay, 2011; Swinburn, 2008). The role of governments and the law in addressing unhealthy eating and obesity is highly contentious and has sparked heated political and ideological debate about individual autonomy and free market economies versus collective benefit and public health (Haynes et al., 2017; Mackay, 2011; Swinburn, 2008). Australian governments are reluctant to enact legislative solutions to unhealthy eating and obesity and have little legislation to date to that effect, such as the amendment of the New South Wales Food Act that requires displaying of the kilojoule content of products on menus (Haynes et al., 2017; Mackay, 2011; Swinburn, 2008). Furthermore, the Federal Government did not support the recommendations of the National Preventative Health Taskforce Force to review economic concepts such as taxation and restriction on marketing of unhealthy foods to children (Haynes et al., 2017).

Nevertheless, global and national efforts continue towards curbing the obesity epidemic. For instance, more recently the global sugar tax campaign revealed that taxing of sugar sweetened beverages has a significant impact on reduction in consumption and potential efforts to encourage healthier diets, increase in physical activity, improvements in healthcare systems thus preventing obesity and obesity related diseases (WHO, 2015a, 2016). Additionally, the Australian Medical Association, recommends that eating patterns and nutrition be made a priority for all levels of Australian Governments, particularly for Aboriginal and Torres Strait Islander people (Australian Medical Association, 2018).

Comparing and contrasting of the key emerging themes from stakeholder interviews with the literature illustrates how local evidence can provide more understanding of an issue and context specific detail to help guide the development of realistic policy solutions. The study has also demonstrated how presentation of proposed solutions can result in others remaining silent, and hence the need for broader consultation and consideration is required during policy development and implementation.

6.3 Advantages and limitations of the study design

Consultation enables policy makers to structure debate about how an issue is framed and problematized and develop solutions that are more likely to be adopted because they reflect the realities, lived experiences and the competing interests of those involved. It also allows for input and the exchange of differing perspectives of stakeholders regarding the feasibility of a policy option (Althaus et al., 2013). However, consultation has its drawbacks, including costs and delays associated with managing a reasonable consultative process, and the risk of the debate being dominated by visible but unrepresentative voices (Althaus et al., 2013). Extrapolating from the consultation process, interviews were conducted with maternity providers, using their views and experiences to enable the identification of the complex interplay between the women's medical needs and their social barriers such as education, employment and income. This allows for maternity providers to act as advocates for women, who are both objects and agents of health care policy and whose views may have otherwise

been silenced or misrepresented (Hoffman, Tomes, Grob, & Schlesinger, 2011). Although, maternity providers intended to represent the views of the women, interviews were not held directly with the women. Eliciting feedback from women and engaging them directly in their care and maternity care delivery affords an opportunity to identify and address aspects of their care that require improvement (LaVela, 2014; Sagoe, 2012).

One advantage of using the telephonic method to gather stakeholder views was that stakeholders were in familiar environments and able to speak freely regarding their views on implementation of the *Standards for the Management of the Obese Obstetric Woman in South Australia* policy. Discussions were independent of other participant views, unlike in focus groups where dominant views can eclipse others, depending on knowledge, experience and confidence on the issue (Acocella, 2012; Sagoe, 2012) Additionally, telephone interviews were also a more convenient and cost-effective way of talking to stakeholders who are geographically dispersed (Bolderston, 2012).

Interview respondents appeared to be more receptive to being interviewed and to the nature of the questions, given the researcher's background as a Primary Care Clinician. This alluded to the notion that that when interviewing participants from a group in which the researcher belongs, the interviewer is considered an insider (Quinney, Dwyer, & Chapman, 2016). As a result, a connectedness develops which cultivates trust and rapport, two key factors that facilitate deep participation (Quinney et al., 2016). Participants easily slipped into the everyday language which was understood by the researcher and together with the shared experience of Primary Care, promoted further understanding of the issues (Quinney et al., 2016). However, the duality of both roles of clinician and researcher had the potential to result in role conflict (Quinney et al., 2016). There were frequently responses from the participants that the researcher could identify with and the automatic response was to respond to fellow clinicians. However, research ethical boundaries required the interviewer to remain in their role as the researcher (Quinney et al., 2016). To avoid confusion or role conflict, I clarified my interviewer's role as one of a researcher and I maintained the stance of a researcher in attitude and language (Quinney et al., 2016).

Also advantageous was that participants were not provided with literature findings and asked to comment or select suitable solutions but were rather asked to offer potential strategies based on their experience and knowledge of the communities and the issue. This is not to say that stakeholders' views on the management of the pregnant woman with obesity was not influenced by existing literature in channels such as the media, publications or continuing medical education and peer group meetings (Bauchner, Simpson, & Chessare, 2001)**.** Some stakeholders drew on their personal experience when trying to make sense of the issue. Another advantage of this method of consultation was that emerging themes could be raised in subsequent interviews to gauge their adaptability and discuss ways in which they could be implemented.

A limitation of the study was the representativeness of participants. A small group of 28 potential participants were approached to participate in the study and 17 agreed to participate in the study. Not only was there a 60% response rate, but the actual number of stakeholders who agreed to participate was relatively small. The snowballing methodology of identifying additional key stakeholders used had the potential to frame particular issues and disregard others. However, interview responses were consistent among stakeholders and no themes appeared to be outliers.

From this study, the use of consultation appears to have been an effective way of gathering a range of views and context specific information from maternity providers charged with compliance of the *Standards for the Management of the Obese Obstetric Woman in South Australia* policy. Additionally, the process helped in identifying new stakeholders and discuss various aspects of managing a pregnant woman with obesity within the South Australian context.

6.4 Reflexivity, limitations and recommendations for further research

Bacchi (2009) and Taylor and White (2000) advise that as a health professional conducting policy analysis I need to conduct self-scrutiny or self-reflexivity about how my own experiences, understandings, knowledge and social and political ideologies impact on how particular issues are

perceived (Bacchi, 2009; Taylor & White, 2000). This is in keeping with the study's constructionist perspective that advises that there is no absolute truth, but instead meaning is socially constructed and dependent on my interactions with the world (Bacchi, 2009). In keeping with 'reflexivity', my own views have had an impact on the research process and its findings. This may have occurred in several ways including the collection and analysis of data, the policy analysis, and development of potential policy options. Firstly, the way I presented the interview questions and cultivated discussions among stakeholders with a similar professional background as previously mentioned. Secondly, the type of policy chosen for analysis and the study participants reflects my background as a health practitioner in General Practice and Public Health, who has worked in the areas of maternal and child health for several years both in clinical and non-clinical roles with Indigenous communities and low-income population groups. Bacchi emphasizes how choosing a policy for analysis is in itself part of the interpretive process (Bacchi, 2009).

As an outsider to the policy process I was not involved in the development of the *Standards for the Management of the Obese Obstetric Woman in South Australia* policy and had no documentation pertaining to the policy development process. Furthermore, I had no knowledge of the undocumented discussions that occurred during policy development. While this may allow for some neutrality in interpretation, one's previous knowledge and experience unavoidably impacts on the analysis (Taylor & White, 2000). I was not privy to the more insider interactions of stakeholders and policy makers, nor to issues raised and prioritizations of proposed solutions, discussions held, disputes resolved, and the source of data and research that led to identification of problems. Knowledge of these aspects could have improved my understanding of the decision and policy-making processes and further improved the analysis.

Following collection of research data in 2015, the policy was reviewed and amended in 2016, making my research a snapshot of the policy cycle. It is beyond the scope and timeline of this study to evaluate the recent policy review process. An analysis of the 2016 version of the policy using stakeholder

responses from the same group of stakeholders or from other maternity health providers working in country South Australia would be worthwhile. Additionally, in the future it will be valuable to examine the process of policy development to understand why it came up with the silences and stigmatizations and suggest an alternative process. A critical analysis of other policies such as social and economic policies may also provide valuable insight into issues pertaining to maternal obesity.

Lastly, in addition the small size of representation, other stakeholders providing care to pregnant women with obesity were not represented. Some of the study participants mentioned that they were working or planned to work more closely with Aboriginal health workers, namely the Aboriginal Maternal and Infant Care (AMIC) workers. These workers were not engaged in this project. Additionally, the policy stipulates that pregnant women with obesity need to be seen from twenty weeks by an Anesthetist and Obstetrician. Although the project engaged Obstetricians and GP Anesthetists, it did not engage Anesthetists in the larger maternity facilities. These groups of stakeholders should be engaged with in future research.

6.5 Research Transfer Plan

The main findings from this research plan were summarised, documented and sent to the stakeholders who participated in this study (Appendix 6). They were written in the form of policy briefs in language designed to communicate clearly and concisely. This provides the opportunity to translate research findings. The findings will be disseminated to the South Australia Maternal and Child and Neonatal Clinical Network that is responsible for revision of these standards and particularly as the next revision is due in March 2019. The findings will also be sent to other interest groups including the Country South Australia Primary Health Network (PHN), the Rural Doctors' Association, the Country Women's Association of Australia (CWAA), the Australian Nursing and Midwifery Federation and the National Aboriginal and Torres Strait Islander Health Worker Association (NATSIHWA). In addition, an adapted form of the policy analysis section will be submitted for publication in peer reviewed Australian journals

with GPs and midwives as the primary readership. By circulating this document through various channels, it is hoped that research findings will benefit a broader audience within South Australia. Additionally, a practice brief was attached to the document to further enhance the research transfer process. It argued for holistic care, dialogue between mothers, health providers and policy makers and systematic inclusion of the evidence on social determinants of obesity into practice. The importance of cultural safety was also incorporated into these briefs.

6.6 Conclusion

This study investigated the issue of the management of the pregnant woman with obesity, from the perspective of maternity providers charged with compliance of the *Standards for the Management of the Obese Obstetric Woman in South Australia* policy. The study highlighted policy silences and provided an understanding of the local context in which the policy was implemented. The study was not focused on the physiological determinants of obesity, but rather on the underlying determinants of obesity and access to care for the pregnant woman with obesity. A constructionist perspective provided various understandings of the issue from the stakeholders' perspective. The stakeholders provided a varied range of potential policy options, some of which resonated with literature findings and others that were more specific to the South Australian context. Bacchi's interpretive analysis of stakeholder responses helped uncover several ways in which stakeholders viewed the problem, mainly as individual, community, government, and public health responsibility. Stakeholders proposed that government's responsibility to address issues pertaining to maternal obesity were structured under two main categories, namely the healthcare system and the socio structural environment. Problem representations demonstrated different underlying assumptions about the role of government with some proposed solutions demanding more intervention and others requiring less of it. This had various effects which depended upon which strategies were prioritised and which ones were silenced. Nowhere is society's core value system more visible than in the cultural treatment of the human body, when that body is giving birth to new society members who will ensure the future of that society (Davis-

Floyd, 1994). Ensuring this future not only means ensuring its physical environment, but the belief system that shapes the way society members understand the world around them (Davis-Floyd, 1994). Obstetrical procedures form part of the culturally specific system of rituals and myths that attempt to resolve the dilemmas confronted by society around the natural process of birth, a form of technocracy (Davis-Floyd, 1994). Using Reynold's "One-Two Punch" (Davis-Floyd, 1994) in a technocratic sense in relation to childbirth, the first punch was the medicalisation of obesity in pregnant women, signified by a single marker of BMI. The second punch came from neoliberalism which encourages and permits a global push by corporations towards unhealthy diets, combined with the dire nature of the health care system in rural areas transmitting responsibility to individual mothers at such a difficult time. The real issue was not what was "best" in an absolute sense, but what aspects of culture were expressed and perpetuated and what cultural lessons were taught and learned during the production of new society members (Davis-Floyd, 1994).

Although this study analyzed the *Standards for the Management of the Obese Obstetric Woman in South Australia policy* 2012, it was later reviewed in 2016. The perspectives of the stakeholders expressed in this study can be considered by policy makers and used to inform the next policy review in 2020. Additionally, the set of policy options proposed by stakeholders can be applied to other jurisdictions outside of South Australia and the research study can be applied to other areas of public health.

Reference List

Acocella, I. (2012). The focus groups in social research: advantages and disadvantages. *Quality and Quantity, 46*(4), 1125-1136. doi:10.1007/s11135-011-9600-4

Advancing Rural Family Medicine: The Canadian Collaborative Taskforce. (2017). *The Rural Road Map for Action – Directions.* Retrieved from https://www.cfpc.ca

Alaska Native Medical Centre. (2016). Obesity in Pregnancy - ANMC Guideline.

Althaus, C., Bridgman, P., & Davis, G. (2013). *The Australian policy handbook*. Crows Nest, N.S.W: Allen & Unwin.

Andersson, T., & Liff, R. (2012). Does patient-centred care mean risk aversion and risk ignoring? Unintended consequences of NPM reforms. International Journal of Public Sector Management, *25*(4), 260-271.

Artal, R., Lockwood, C. J., & Brown, H. L. (2010). Weight Gain Recommendations in Pregnancy and the Obesity Epidemic. *Obstetrics & Gynecology, 115*(1), 152-155. doi:10.1097/AOG.0b013e3181c51908

Australian Health Survey: First Results, 2011-12, (2011).

Australian Bureau of Statistics. (2015) National Health Survey. First Results Australia 2014-15.

Australian Health Ministers' Advisory Council Rural Health Standing Committee. (2012). *National Strategic Framework for Rural and Remote Health.* Retrieved from https://www.aci.health.nsw.gov.au

Australian Institute of Health and Welfare. (2008). *Rural, regional and remote health Indicators of health status and determinants of health* Retrieved from https://www.aihw.gov.au

Australian Institute of Health and Welfare. (2016). *Healthy Communities: Overweight and obesity rates across Australia, 2014-15*. Retrieved from https://www.myhealthycommunities.gov.au

Australian Institute of Health and Welfare. (2017a) Australia's mothers and babies 2015—in brief. Perinatal statistics series no. 33. Cat no. PER 91. Canberra: AIHW.

Australian Institute of Health and Welfare. (2017b). *Impact of overweight and obesity as a risk factor for chronic conditions: Australian Burden of Disease Study*. Retrieved from Canberra: https://www.aihw.gov.au

Australian Institute of Health and Welfare. (2017c). Rural and Remote Health. *Australian Institute of Health and Welfare. Australian Government.* Retrieved from https://www.aihw.gov.au/reports/rural-health/rural-remote-health/contents/health-risk-factors-and-remoteness

Australian Institute of Health and Welfare. (2018). *Australia's health 2018: in brief.* Retrieved from Canberra: AIHW: www.aihw.gov.au

Australian Medical Association. (2018). *Nutrition*. Retrieved from https://ama.com.au/position-statement/nutrition-2018

Australian National Preventive Health Agency. (2014). *Obesity Prevalence Trends in Australia. Promoting a Health Australia*. Retrieved from https://sydney.edu.au/medicine/research/units/boden/ANPHA%20Obesity%20Prevalence%20T rends.pdf

Aveyard, H. (2014). Doing A Literature Review in Health and Social Care: A Practical Guide (3rd ed). Bacchi, C. (2009). Analysing Policy: What's the problem represented to be? (1st ed.): Pearson Australia.

Baker, C. (2017). *Obesity Statistics*. Retrieved from www.parliament.uk/commons-library

Barclay, L., & Kornelsen, J. (2016). The closure of rural and remote maternity services: Where are the midwives? *Midwifery* (38), 9-11. doi:https://doi.org/10.1016/j.midw.2016.03.007

Bauchner, H., Simpson, L., & Chessare, J. (2001). Changing physician behaviour. *Archives of Disease in* Childhood, 84(459-462).

Baum, F. (2008). *The new public health* (3rd ed.). South Melbourne: Oxford University Press.

Baum, F., & Simpson, S. (2006). Building healthy and equitable societies: what Australia can contribute to and learn from the Commission on Social Determinants of Health. *Health Promotion Journal of Australia, 3*(17), 174-179.

Beck, C. T. (2013). Routledge International Handbook of Qualitative Nursing Research.

Birch, J., Ruttan, L., Muth, T., & Baydala, L. (2009). Culturally Competent Care for Aboriginal Women: A Case for Culturally Competent Care for Aboriginal Women Giving Birth in Hospital Settings. *Journal of Aboriginal Health, 4*(2), 24-34.

Bissell, P., Peacock, M., Blackburn, J., & Smith, C. (2016). The discordant pleasures of everyday eating: Reflections on the social gradient in obesity under neo-liberalism. *Social Science & Medicine* (159), 14-21.

Bolderston, A. (2012). Conducting a Research Interview. *Journal of Medical Imaging and Radiation Sciences* (43), 66-76. doi:http://dx.doi.org/10.1016/j.jmir.2011.12.002

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Brown, L. J., Williams, L., & Capra, S. (2012). Developing dietetic positions in rural areas: what are the key lessons? *Rural Remote Health, 12*(1).

Brown, M., & Dietsch, E. (2013). The feasibility of caseload midwifery in rural Australia: A literature review. *Women and Birth, 26*(1), e1-e4. doi:https://doi.org/10.1016/j.wombi.2012.08.003

Brown, P. (2017). Mental Health in Rural Australia. *The Australian Journal of Rural Health, 25*(5), 258-259. doi:10.1111/ajr.12402

Buckley, J. (2016). Exercise self-efficacy intervention in overweight and obese women. *Journal of Health Psychology, 21*(6), 1074-1084.

Burr, V. (2015). *Social Construction*. London: Routledge.

Cahill, D. C. (2004). The radical neo-liberal movement as a hegemonic force in Australia, 1976-1996. (PHD thesis), University of Wollongong Retrieved from http://ro.uow.edu.au/theses/193

Canadian Institutes for Health Information. (2013). Hospital Births in Canada: A Focus on Women Living in *Rural and Remote Areas.* Retrieved from http://www.cihi.ca

Canadian Obesity Network. (2013). 5As of Healthy Pregnancy Weight Gain.

Centers for Disease Control and Prevention. (2016). *Defining Adult Overweight and Obesity*. Retrieved from https://www.cdc.gov/obesity/adult/defining.html

Centre for Maternal and Child Enquiries, & Royal College of Obstetricians and Gynaecologists. (2010). MACE/RCOG Joint Guideline. Management of Women with Obesity in Pregnancy. Retrieved from https://www.rcog.org.uk/globalassets/documents/guidelines/cmacercogjointguidelinemanagementwomenobesitypregnancya.pdf

Centres for Disease Control and Prevention. (2016). *Defining Adult Overweight and Obesity*. Retrieved from https://www.cdc.gov/obesity/adult/defining.html

Cheney, K., Berkemeier, S., Sim, K. A., Gordon, A., & Black, K. (2017). Prevalence and predictors of early gestational weight gain associated with obesity risk in a diverse Australian antenatal population: a cross-sectional study. *BMC Pregnancy and Childbirth, 17*, 296.

Cinelli, R. L., & O'Dea, J. A. (2009). Body image and obesity among Australian adolescents from indigenous and Anglo-European backgrounds: implications for health promotion and obesity prevention among Aboriginal youth. *Health Education Research, 24*(6), 1059-1068.

Colebatch, H. K. (2002a). Government and Governmentality: Using Multiple Approaches to the Analysis of Government. *Australian Journal of Political Science, 37*(3), 417-435. doi:10.1080/1036114021000026346

College of Midwives of Manitoba. (2011). *Guideline for Providing Care To Women With a High Body Mass Index*. Retrieved from http://www.midwives.mb.ca/policies_and_standards/guideline-providing- care-women-w-high-body-mass-index.pdf

Collyer, F. (2015). The Palgrave Handbook of Social Theory in Health, Illness and Medicine: Palgrave Macmillan.

Commission on Social Determinants of Health. (2008). Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health.: Geneva, World Health Organization.

Commonwealth of Australia. (2008). *Improving Maternity Services in Australia; A discussion paper from the Australian Government*. Retrieved from https://www.health.gov.au

Commonwealth of Australia. (2009a). Australia: the healthiest country by 2020. Technical Report No 1

Obesity in Australia: a need for urgent action. Including addendum for October 2008 to June 2009 Retrieved from http://www.health.gov.au

Commonwealth of Australia. (2009b). Improving Maternity Services in Australia. The Report of the *Maternity Services Review*. Retrieved from https://www.health.gov.au

Commonwealth of Australia. (2011). Australian Health Ministers Conference. National Maternity Services *Plan 2010*. Retrieved from Canberra: Commonwealth of Australia: https://www.health.gov.au

Commonwealth of Australia. (2018). *Closing the Gap: Prime Minister's Report 2018*. Retrieved from http://www.dpmc.gov.au/government/its-honour

Confidential Enquiry into Maternal and Child Health. (2007). Confidential Enquiry into Maternal and Child Health. Perinatal Mortality 2005: England, Wales, and Northern Ireland. CEMACH: London; 2007. Retrieved from London:

Cooper, H., Camic, P., Long, D., Panter, A., Rindskopf, D., & Sher, K. (2012). APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological

Corcoran, P. M., Catling, & Homer, C. S. E. (2017). Models of midwifery care for Indigenous women and babies: A meta-synthesis. *Women and Birth, 30*, 77-86.

Council of Australian Governments. (2008a). *COAG meeting 29 November 2008: Attachment A - Health and Ageing.* Retrieved from Canberra:

Council of Australian Governments. (2008b). National Partnership Agreement on Preventive Health. Retrieved from http://www.federalfinancialrelations.gov.au/content/npa/health/_archive/health_preventive_national_partnership.pdf

Crotty, M. (1998). The foundations of social research: meaning and perspective in the research process: London : SAGE Publications.

Crow, D. A., & Lawlor, A. (2016). Media in the Policy Process: Using Framing and Narratives to Understand Policy Influences. *Review of Policy Research, 33*(5), 472-491.

Crowther, S. (2016). Providing rural and remote rural midwifery care: an 'expensive hobby' *New Zealand* College of Midwives Journal (52).

Crowther, S., Smythe, L., & Spence, D. (2018). Unsettling moods in rural midwifery practice. *Women and Birth, 31*(1), e59-e66. doi:https://doi.org/10.1016/j.wombi.2017.06.019

CSDH. (2008). Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health. Geneva, World Health Organization.

Davis-Floyd, R. E. (1994). The Technocratic Body: American Childbirth as Cultural Expression. *Social Science & Medicine, 38*(8), 1125-1140. doi:https://doi.org/10.1016/0277-9536(94)90228-3

Department for Health. (2010). *National Maternity Services Plan* Retrieved from Commonwealth of Australia: https://www.health.gov.au

Department for Health. (2011). Healthy Lives, Healthy People: A call to action on obesity in England. London, England.

Department for Health and Ageing. (2009). Improving maternity services in Australia *PANDORA electronic collection.* Retrieved from http://nla.gov.au/nla.arc-95661

Department of Health. (2011). *National Maternity Services Plan 2010*. Retrieved from Canberra, ACT: https://www.health.gov.au

Department of Health. (2016). Standards for the Management of the Obese Obstetric Woman in South Australia. Government of South Australia, Department of Health.

Department of Heath and Ageing. (2010). *National Women's Health Policy 2010*. Retrieved from Barton, ACT: https://www.health.gov.au

Durey, A., & Thompson, S. C. (2012). Reducing the health disparities of Indigenous Australians: time to change focus. *BMC Health Services Research, 12*(6), 151-161.

Ferrari, R. (2015). Writing narrative style literature reviews. *Medical Writing*, 24(4). doi:10.1179/2047480615Z.000000000329

Fielden, A. L., Sillence, E., & Little, L. (2011). Children's understandings of obesity, a thematic analysis. International Journal of Qualitative Studies on Health and Well-being, 6(3). doi:10.3402/qhw.v6i3.7170

Fisher, M., Baum, F. E., MacDougall, C., Newman, L., & McDermott, D. (2016). To what Extent do Australian Health Policy Documents address Social Determinants of Health and Health Equity? *Journal of Social Policy, 45*(3), 545-564.

Fisher, S. C., Kim, S. Y., Sharma, A. J., Rochat, R., & Morrow, B. (2013). Is obesity still increasing among pregnant women? Pre-pregnancy obesity trends in 20 states, 2003–2009. *Preventive Medicine, 56*, 372-378.

Frost, S. S., Goins, R. T., Hunter, R. H., Hooker, S. P., Bryant, L. L., Kruger, J., & Pluto, D. (2010). Effects of the Built Environment on Physical Activity of Adults Living in Rural Settings. *American Journal of Health Promotion, 24*(4), 267-283.

Gardner, S. (2015). Delivering midwifery care in difficult to access areas. *British Journal of Midwifery, 23*(3), 156.

Gelber, R. P., Gaziano, J. M., Orav, E. J., Manson, J. E., Buring, J. E., & Kurth, T. (2008). Measures of obesity and cardiovascular risk among men and women. Journal of the American College of Cardiology, 52(8), 605-615. doi:10.1016/j.jacc.2008.03.066

Giacobbi, P. R., Zautra, N. T., Dreisbach, K. A., & Liguori, K. R. (2016). Exercise for overweight and obese women: A multimodal pilot intervention comparing in-person with phone-based delivery of guided imagery. *International Journal of Sport and Exercise Psychology*.

Gibbons, V., Lancaster, G., Gosman, K., & Lawrenson, R. (2016). Rural women's perspectives of maternity services in the midland region of New Zealand. *New Zealand Journal of Primary Health Care, 8*(3), 220-226.

Gorsche, R. G., & Woloschuk, W. (2012). Rural Physicians' skills enrichment program: A cohort control study of retention in Alberta. *Australian Journal of Rural Health, 20*(5), 254-258. doi:https://doi- org.ezproxy.flinders.edu.au/10.1111/j.1440-1584.2012.01298.x

Gray, D. E. (2014). Doing research in the real-world London: SAGE.

Grzybowski, S., Stoll, K., & Kornelsen, J. (2011). Distance matters: a population-based study examining access to maternity services for rural women. *BMC Health Services Research* (11), 147. doi:https://dx.doi.org/10.1186%2F1472-6963-11-147

Hales, C. M., Carroll, M. D., Fryar, C. D., & Ogden, C. L. (2017). *Prevalence of obesity among adults and youth: United States, 2015–2016*. Retrieved from https://www.cdc.gov/nchs/data/databriefs/db288.pdf

Hammond, R. A., & Levine, R. (2010). The economic impact of obesity in the United States. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy, 3*, 285-295.

Harper, A. (2015). Reducing morbidity and mortality among pregnant obese *Best Practice & Research* Clinical Obstetrics and Gynaecology, 29, 427-437.

Hawley, N. L., Johnson, W., Hart, C. N., Triche, E. W., Ching, J. A., Muasau-Howard, B., & McGarvey, S. T. (2015). Gestational weight gain among American Samoan women and its impact on delivery and infant outcomes. *Pregnancy and Childbirth, 15*, 10.

Haynes, E., Hughes, R., & Reidlinger, D. P. (2017). Obesity prevention advocacy in Australia: an analysis of policy impact on autonomy. *Australia and New Zealand Journal of Public Health, 41*, 299-305. doi:10.1111/1753-6405.12660

Health Service Executive. (2016). Clinical Practice Guideline. Nutrition for Pregnancy. Dublin, Ireland: Institute of Obstetricians and Gynaecologists, Royal Collegeof Physicians of Ireland and Directorate of Clinical Strategy and Programmes.

Henderson, J., Gao, H., & Redshaw, M. (2013). Experiencing maternity care: the care received and perceptions of women from different ethnic groups. *BMC Pregnancy and Childbirth, 13*, 196.

Heslehurst, N., Lang, R., Wilkinson, J. R., & Summerbell, C. D. (2007). Obesity in pregnancy: a study of the impact of maternal obesity on NHS maternity services. *BJOG* (114), 334-342.

Heslehurst, N., Russell, S., McComark, S., Sedgewick, G., Bell, R., & Rankin, J. (2013). Midwives perspectives of their training and education requirements in maternal obesity: A qualitative study. *Midwifery, 29*(7), 736-744.

Hill, M., & Varone, F. (2012). *The Public Policy Process* Retrieved from https://ebookcentral-proquest- com.ezproxy.flinders.edu.au/lib/flinders/detail.action?docID=1688919.

Hoffman, B., Tomes, N., Grob, R., & Schlesinger. (2011). *Patients as Policy Actors : A Century of ChangingMarkets and Missions* Retrieved from http://www.jstor.org/stable/j.ctt5hj15t

Honein, M. A., Devine, O., Sharma, A. J., Rasmussen, K., Park, S., Kucik, J. E., & Boyle, C. (2013). Modeling the Potential Public Health Impact of Pre-pregnancy Obesity on Adverse Fetal and Infant Outcomes. *Obesity, 21*, 1276-1283.

Hupe, P. L. (2012). Autonomy in Health Care Practice: A Paradise Lost? In: Dickinson H., Mannion R. (eds) The Reform of Health Care. Organizational Behaviour in Health Care series. Palgrave Macmillan, London).

Institute of Medicine and National Research Council. (2009). Implementing Guidelines on Weight Gain & Pregnancy. Washington, DC: The National Academies Press.

Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland, & Clinical Strategy and Programmes Directorate. Health Service Executive. (2011). *Obesity and Pregnancy Clinical Practice Guideline*. Retrieved from Dublin, Ireland: http://www.hse.ie/eng/services/publications/Clinical-Strategy-and-Programmes/Obesity-and-Pregnancy-Clinical-Practice-Guideline.pdf

Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland, & Directorate of Clinical Strategy and Programmes and Health Service Executive. (2013). *Clinical Practice Guideline. Nutrition for Pregnancy*. Retrieved from Dublin, Ireland: https://rcpi-live-cdn.s3.amazonaws.com/wp-content/uploads/2016/05/22.-Nutrition-during-Pregnancy.pdf

Ireland, S., Narjic, C. W., Belton, S., & Kildea, S. (2011). Niyith Nniyith Watmam (the quiet story): Exploring the experiences of Aboriginal women who give birth in their remote community. *Midwifery, 27*, 634-641.

Israel, B. A., Coombe, C. M., Cheezam, R. R., Schulz, A. J., McGranaghan, R. J., Lichtenstein, R., . . . Burris, A. (2010). Community-Based Participatory Research: A Capacity-Building Approach for Policy Advocacy Aimed at Eliminating Health Disparities. *American Journal of Public Health, 100*(11), 2094-2102.

Kapaya, H., Mercer, E., Boffey, F., Jones, G., Mitchell, C., & Anumba, D. (2015). Deprivation and poor psychosocial support are key determinants of late antenatal presentation and poor fetal outcomes-a combined retrospective and prospective study. *BMC Pregnancy and Childbirth, 15*, 09.

Keane, S., Lincoln, M., & Smith, T. (2010). Retention of allied health professionals in rural New South Wales: a thematic analysis of focus group discussions. *BMC Health Services Research*(12). doi:10.1186/1472-6963-12-175

Kelly, M. P., Health, I., Howick, J., & Greenhalgh, T. (2015). The importance of values in evidence-based medicine. *BMC Medical Ethics, 16*.

Kilbourne, A. M., Neumann, M. S., Waxmonsky, J., Bauer, M. S., Kim, H. M., Pincus, H. A., & Thomas, M. (2012). Public-Academic Partnerships: Evidence-Based Implementation: The Role of Sustained Community-Based Practice and Research Partnerships. *Psychiatric Services, 63*(3), 205-207.

Kildea, S., McGhie, A. C., Gao, Y., Rumbold, A., & Rolfe, M. (2015). Babies born before arrival to hospital and maternity unit closures in Queensland and Australia. *Women and Birth, 28*(3), 236-245. doi:https://doi.org/10.1016/j.wombi.2015.03.003

Kim, T., Burn, S. C., Bangdiwala, A., Pace, S., & Rauk, P. (2017). Neonatal Morbidity and Maternal Complication Rates in Women with a Delivery Body Mass Index of 60 or Higher. *Obstetrics & Gynecology, 130*(5), 988-993.

King Edward Memorial Hospital Obstetrics and Gynaecology. (2016). *Clinical Practice Guideline: Increased Body Mass Index: management of a woman with, Western Australia*. Retrieved from Government of Western Australia. North Metropolitan Health Service. Women and Newborn Health Service:

http://www.kemh.health.wa.gov.au/development/manuals/O&G_guidelines/sectionb/2/b2.21.pdf

Knox, S., Crowther, S., McAra-Couper, J., & Gilkison, A. (2018). Health policy and its unintended consequences for midwife-woman partnerships: Is normal pregnancy at risk when the BMI measure is used? New Zealand College of Midwives Journal (54), 30-37. doi:https://doi.org/10.12784/nzcomjnl54.2018.4.30-37

Kolbe, L. J., Allensworth, D. D., Potts-Datema, W., & White, D. R. (2015). What Have We Learned From Collaborative Partnerships to Concomitantly Improve Both Education and Health? *The Journal of School Health, 85*(11), 766-774.

Kornelsen, J., & McCartney, K. (2015). *The Safety of Rural Maternity Services without Local Access to Cesarean Section*. Retrieved from http://www.perinatalservicesbc.ca/Documents/Resources/SystemPlanning/Rural/SafetyRuralMaternityServicesWithoutLocalAccessCsection_2015.pdf

Kralj, B. (2008). Measuring Rurality - RIO2008_BASIC: Methodology and Results Retrieved from Toronto ON: https://www.oma.org/wp-content/uploads/2008rio-fulltechnicalpaper.pdf

Kruske, S., Kildea, S., Bec, J., Pilcher, J. M., Robin, S., Rolfe, M., . . . Barclay, L. (2016). Primary maternity units in rural and remote Australia: Results of a national survey. *Midwifery, 40*(C), 1-9. doi:https://doi-org.ezproxy.flinders.edu.au/10.1016/j.midw.2016.05.004

Lalonde, A. B., Butt, C., & Bucio, A. (2009). Maternal Health in Canadian Aboriginal Communities: Challenges and Opportunities. *Journal of Obstetrics and Gynaecology Canada, 31*(10), 956-962.

LaVela, S. L. (2014). Evaluation and measurement of patient experience. *Patient Experience Journal, 1*(1), Article 5.

Lavie, C. J., Milani, R. V., & Ventura, H. O. (2009). Obesity and cardiovascular disease risk factor, paradox, and impact of weight loss. *Journal of the American College of Cardiology, 53*(21), 1925-1932. doi:10.1016/j.jacc.2008.12.068

Litwin, S. E. (2008). Which Measures of Obesity Best Predict Cardiovascular Risk? *Journal of the American College of Cardiology, 52*(8), 616-619. doi:10.1016/j.jacc.2008.05.017

Longman, J., Kornelsen, J., Pilcher, J. M., Kildea, S., Kruske, S., Grzybowski, S., . . . Barclay, L. (2017). Maternity services for rural and remote Australia: barriers to operationalising national policy. Health Policy, 121(11), 1161-1168. doi:https://doi-org.ezproxy.flinders.edu.au/10.1016/j.healthpol.2017.09.012

Lucas, P. J., Jessiman, T., Cameron, A., Wiggins, M., Hollingworth, K., & Austerberry, C. (2013). *Healthy Start Vouchers Study: The Views and Experiences of Parents, Professionals and Small Retailers in England*. Retrieved from http://www.bristol.ac.uk/media-library/sites/sps/migrated/documents/finalreport2.pdf

Lupton, D. (1999). *Risk (Key ideas)*. Abingdon, Oxon: Routledge.

McCaffree, K. (2018). A sociological formalization of Searle's social ontology. Journal for the Theory of Social Behaviour, 48, 330-349. doi:10.1111/jtsb.12172

MacKay, M. F., Haffner, S. M., Wagenknecht, L. E., D'Agostino Jr, R. B., & Hanley, A. J. G. (2009). Prediction of type 2 diabetes using alternate anthropometric measures in a multi-ethnic cohort: the insulin resistance atherosclerosis study. *Diabetes Care, 32*, 956-958. doi:http://link.galegroup.com/apps/doc/A200504475/AONE?u=flinders&sid=AONE&xid=6cf941 a9

Mackay, S. (2011). Legislative solutions to unhealthy eating and obesity in Australia. *Public Health, 125*, 896-904.

Marini, M. G. (2016). Evidence-Based Medicine and Narrative Medicine: A Harmonic Couple. In: Narrative *Medicine* doi:https://doi-org.ezproxy.flinders.edu.au/10.1007/978-3-319-22090-1_1

Maternity and Newborn Clinical Network. (2011). Maternity & Newborn Clinical Network Statewide Clinical Guideline. Care of the Obese Pregnant Woman and Weight Management in Pregnancy. Queensland, Australia.

Mauri Ora Associates. (2008). A resource booklet prepared for the Medical Council of New Zealand by Mäuri Ora Associates: A resource best health outcomes for Maori: Practice implications. Retrieved from https://www.mcnz.org.nz/assets/News-and-Publications/Statements/Best-health- outcomes-for-Maori.pdf

McDonald, K., Amir, L. H., & Davey, M.-A. (2011). Maternal bodies and medicines: a commentary on risk and decision-making of pregnant and breastfeeding women and health professionals. *BMC Public Health, 11*(Suppl 5), S5.

McFadden, A., Green, J. M., Williams, G., McLeish, J., McCormick, F., Fox-Rushby, J., & Renfrew, M. J. (2014). Can food vouchers improve nutrition and reduce health inequalities in low-income mothers and young children: a multi-method evaluation of the experiences of beneficiaries and practitioners of the Healthy Start programme in England. *BMC Public Health, 14*, 148.

McGiveron, A., Foster, S., Pearce, J., Taylor, M. A., McMulllen, S., & Langley-Evans, S. C. (2015). Limiting antenatal weight gain improves maternal health outcomes in severely obese pregnant women: findings of a pragmatic evaluation of a midwife-led intervention. *Journal of Human Nutrition and Dietetics, 28*(Suppl.1), 29-37. doi:10.1111/jhn.12240

McHugh, T.-L., Coppola, A. M., & Sabiston, C. M. (2014). "I'm thankful for being Native and my body is part of that": The body pride experiences of young Aboriginal women in Canada. *Body Image, 11*(3), 318-327.

Medical Council of New Zealand. (2006). Statement on best practices when providing care to Maori patients and their whanau, Medical Council of New Zealand. Retrieved from https://www.mcnz.org.nz/assets/News-and-Publications/Statements/Statement-on-best-practices-when-providing-care-to-Maori-patients-and-their-whanau.pdf

Meier, A., Boivin, M., & Meier, M. (2006). The treatment of depression: A case study using theme-analysis. Counselling and Psychotherapy Research, 6(2). doi:10.1080/14733140600718877

Miller, K. J., Couchie, C., Ehman, W., Graves, L., Grzybowski, S., Medves, J., . . . Wootton, J. (2012) SOGC Joint Position Paper. Rural Maternity Care. *Vol. No. 282*.

Ministry of Health. (2014a). *Annual Update of Key Results 2013/14 New Zealand Health Survey*. Retrieved from http://www.moh.govt.nz

Ministry of Health. (2014b). Guidance for Healthy Weight Gain in Pregnancy. Wellington: Ministry of Health.

Ministry of Health. (2016). *Annual Update of Key Results 2015/16: New Zealand Health Survey*. Retrieved from Wellington: Ministry of Health: https://www.health.govt.nz

Minkler, M. (2010). Linking Science and Policy Through Community-Based Participatory Research to Study and Address Health Disparities. *American Journal of Public Health, 100*(S1), S81-S87.

Mone, F., Adams, B., Manderson, J. G., & McAuliffe, F. M. (2015). The East Timorese: a high-risk ethnic minority in UK obstetrics: a cohort study. *The Journal of Maternal-Fetal & Neonatal Medicine, 28*(13), 1594-1597.

National Center for Health Statistics. (2017). *Health, United States, 2016: With Chartbook on Long-term Trends in Health*. Retrieved from Hyattsville, MD.: https://www.ncbi.nlm.nih.gov/books/NBK453374/

National Heart, L., and Blood Institute,. (2013). *Managing Overweight and Obesity in Adults: Systematic Evidence Review from the Obesity Expert Panel*. Retrieved from https://www.nhlbi.nih.gov/sites/www.nhlbi.nih.gov/files/obesity-evidence-review.pdf

National Institute for Health and Care Excellence. (2008). *Maternal and Child Nutrition*. Retrieved from https://www.nice.org.uk/guidance/ph11/resources/maternal-and-child-nutrition-pdf-1996171502533

National Institute for Health and Care Excellence. (2010). *Weight Management before, during and after pregnancy*. Retrieved from NICE 2010: https://www.nice.org.uk

National Institutes of Health. (1998). NHLBI Obesity Education Initiative Expert Panel on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: the Evidence Report (NIH Publication No. 98-4083). Retrieved from Bethesda, MD: https://www.nhlbi.nih.gov/files/docs/guidelines/ob_gdlns.pdf

National Obesity Task Force (Australia). (2008). *Healthy Weight 2008: Australia's Future the National Action Agenda for Children and Young People and Their F amilies*. Retrieved from http://www.healthyactive.gov.au/internet/healthyactive/publishing.nsf/Cotent/publications

National Preventative Health Taskforce. (2009). *Australia: The Healthiest Country by 2020 – National Preventative Health Strategy – the roadmap for action*. Retrieved from Canberra, ACT: http://www.health.gov.au

National Preventative Health Taskforce. (2010). A response to Australia: the healthiest country by 2020. Retrieved from Commonwealth of Australia: https://trove.nla.gov.au/work/37303999

National Rural Health Alliance. (2015). *The little book of rural health numbers.* Retrieved from http://www.ruralhealth.org.au/book/little-book-rural-health-numbers

Navaneelan, T., & Janz, T. (2014). *Adjusting the scales: Obesity in the Canadian population after correcting for respondent bias*. Retrieved from https://www150.statcan.gc.ca

Nelson, S. M., Matthews, P., & Poston, L. (2010). Maternal metabolism and obesity: modifiable determinants of pregnancy outcome. *Human Reproduction Update, 16*(3), 255-275.

O'Brien, O. A., Lindsay, K. L., McCarthy, M., McGloin, A. F., Kennelly, M., Scully, H. A., & McAuliffe, F. M. (2017). Influences on the food choices and physical activity behaviours of overweight and obese pregnant women: A qualitative study. *Midwifery*(47), 28-35. doi:10.1016/j.midw.2017.02.003.

O'Driscoll, T., Payne, L., Kelly, L., Cromarty, H., Pierre-Hansen, N. S., & Terry, C. (2010). Traditional First Nations Birthing Practices: Interviews With Elders in Northwestern Ontario. *Journal of Obstetrics and Gynaecology Canada, 33*(1), 24-29.

Ogden, C. L., Lamb, M. M., Carroll, M. D., & Flegal, K. M. (2010) Obesity and Socioeconomic Status in Adults: United States, 2005–2008. *NCHS Data Brief* (No. 50 ed.).

Opie, R. S., Neff, M., & Tierney, A. C. (2016). A behavioural nutrition intervention for obese pregnant women: Effects on diet quality, weight gain and the incidence of gestational diabetes. *Australian and New Zealand Journal of Obstetrics and Gynaecology*(56), 364-373. doi:10.1111/ajo.12474

Organisation for Economic Co-operation and Development. (2014). *Obesity Update 2014*. Retrieved from http://www.oecd.org/health/Obesity-Update-2014.pdf

Otero, G., Pechlaner, G., Liberman, G., & Gurcan, E. (2015). The neoliberal diet and inequality in the United States. Social Science & Medicine, 142, 47-55.

Patton, M. Q. (2015). *Qualitative research & evaluation methods: integrating theory and practice* (4th Ed ed.). Thousand Oaks, Calif: Sage Publications.

Porter, C., Skinner, T., & Ellis, I. (2011). What is the impact of diabetes for Australian Aboriginal women when pregnant? *Diabetes Research and Clinical Practice, 93*(1), e29-e32.

Porter, M. E. (2010). What is value in health care? *The New England Journal of Medicine, 363*(26), 2477-2481. doi:10.1056/NEJMp1011024

Public health Association of Australia. (2016). *Policy-at-a-glance – Prevention and Management of Overweight and Obesity in Australia Policy*. Retrieved from https://www.phaa.net.au/documents/item/1701

Puhl, R., & Suh, Y. (2015). Health Consequences of Weight Stigma: Implications for Obesity Prevention and Treatment. Current Obesity Reports, 4(2), 182-190.

Puhl, R. M., & Heuer, C. A. (2010). Obesity Stigma: Important Considerations for Public Health. *American Journal of Public Health*, 100(6), 1019-1028.

Queensland Clinical Guidelines. (2015). Maternity and Neonatal Clinical Guideline. Obesity in Pregnancy. Retrieved from Queensland: https://www.health.qld.gov.au/data/assets/pdf_file/0019/142309/g-obesity.pdfQueensland

Quinney, L., Dwyer, T., & Chapman, Y. (2016). Who, Where, and How of Interviewing Peers: Implications for a Phenomenological Study? *Sage Open, 6*(3). doi:10.1177/2158244016659688

Rasmussen, K., Catalano, P., & Yaktine, A. (2009). New guidelines for weight gain during pregnancy: what obstetrician/gynecologists should know. *Current Opinion in Obstetrics and Gynecology, 21*, 521-526.

Rasmussen, K. M., Abrams, B., Bodnar, L. M., Butte, N. F., Catalano, P. M., & Maria Siega-Riz, A. (2010). Recommendations for Weight Gain During Pregnancy in the Context of the Obesity Epidemic. *Obstetrics & Gynecology, 116*(5), 1191-1195. doi:10.1097/AOG.0b013e3181f60da7

Renouard, C. (2011). Corporate Social Responsibility, Utilitarianism, and the Capabilities Approach. *Journal of Business Ethics*(98), 85-97.

Ristovski-Slijepcevic, S., Bell, K., Chapman, G. E., & Beagan, B. L. (2010). Being 'thick' indicates you are eating, you are healthy and you have an attractive body shape: Perspectives on fatness and food choice amongst Black and White men and women in Canada. *Health Sociology Review, 19*(3), 317-329. doi:10.5172/hesr.2010.19.3.317

Rolfe, M., Donoghue, D. A., Longman, J. M., Pilcher, J. M., Kildea, S., Kruske, S., . . . Morgan, G. G. (2017). The distribution of maternity services across rural and remote Australia: does it reflect population need? *BMC Health Services Research, 17*, 163. doi:https://doi.org/10.1186/s12913-017-2084-8

Roy, S. C. (2008). 'Taking charge of your health': discourses of responsibility in English-Canadian women's magazines. *Sociology of Health & Illness, 30*(3), 463-477.

Royal Australian and New Zealand College of Obstetricians and Gynaecologists. (2013). Management of Obesity in Pregnancy (Vol. College Statement C-Obs 49). The Royal Australian and New Zealand College of Obstetricians and Gynaecologists.

Ryan, M. C., Fenster, H. M., Abassi, F., & Reaven, G. M. (2008). Comparison of Waist Circumference Versus Body Mass Index in Diagnosing Metabolic Syndrome and Identifying Apparently Healthy Subjects at Increased Risk of Cardiovascular Disease. *The American Journal of Cardiology, 102*(1), 40-46. doi:https://doi-org.ezproxy.flinders.edu.au/10.1016/j.amjcard.2008.02.096

Sagoe, D. (2012). Precincts and Prospects in the Use of Focus Groups in Social and Behavioral Science Research. *The Qualitative Report, 17*(Article 29), 1-16.

Sandelowski, M., Voils, C. I., & Knafl, G. (2009). On Quantitizing. journal of mixed method research, 3(3), 208-222. doi:10.1177/1558689809334210

Saldana, J. (2009). *The Coding Manual for Qualitative Researchers*: SAGE Publications Ltd. Saldana, J. (2011). *Fundamentals of Qualitative Research*: Oxford University Press.

Scheil, W., Joll, K., Scott, J., Catcheside, B., Sage, L., & Kennare, R. (2017). *Pregnancy Outcome in South Australia 2015*. Retrieved from https://www.sahealth.sa.gov.au

Schmied, V. A., Duff, M., Dahlen, H. G., Mills, A. E., & Kolt, G. S. (2011). 'Not waving but drowning': a study of the experiences and concerns of midwives and other health professionals caring for obese childbearing women. *Midwifery*, 424-430.

Shabnam, A., Aubrey-Bassler, K., Godwin, M., Rourke, J., Matthews, M., Barnes, P., . . . Walczak, A. (2017). Factors influencing choice to practise in rural and remote communities throughout a physician's career cycle. *Canadian Journal of Rural Medicine, 22*(3).

Shah, P. S., Zao, J., Al-Wassia, H., Shah, V., & Knowledge Synthesis Group on Determinants of Preterm/LBW. (2011). Pregnancy and Neonatal Outcomes of Aboriginal Women: A Systematic Review and Meta-Analysis. *Women's Health Issues, 21*(1), 28-39.

Shub, A., Huning, E. Y.-S., Campbell, K. J., & McCarthy, E. A. (2013). Pregnant women's knowledge of weight, weight gain, complications of obesity and weight management strategies in pregnancy. *BMC Pregnancy and Childbirth, 6*, 278.

Smith, D. M., Cooke, A., & Lavender, T. (2012). Maternal obesity is the new challenge; a qualitative study of health professionals' views towards suitable care for pregnant women with a Body Mass Index (BMI) ≥30 kg/m2. (12), 157.

Society of Obstetricians and Gynaecologists of Canada. (2010a). SOGC Clinical Practice Guideline. Obesity in Pregnancy.

Society of Obstetricians and Gynaecologists of Canada. (2010b). SOGC Policy Statement. Returning Birth to Aboriginal, Rural, and Remote Communities. *Journal of Obstetrics and Gynaecology Canada, 32*(12), 1186-1188.

South Australia Dept. for Health and Ageing. (2015). *Standards for maternal and neonatal services in South Australia* Retrieved from Government of South Australia: https://www.sahealth.sa.gov.au

South Australia Dept. of Health. (2012). *Standards for the Management of the Obese Obstetric Woman in South Australia*. Retrieved from Department of Health, Government of South Australia:

South Australia Dept. of Health and Ageing. (2014). Standards for Maternal and Neonatal Services in South Australia Government of South Australia, Department of Health and Ageing.

South Australia Dept. of Health and Ageing. (2015). Standards for maternal and neonatal services in South Australia 2009 / South Australia. Dept. for Health and Aging. (Vol. 362.19820099423). Government of South Australia.

Spatig, L., Swedberg, A., Legrow, T., & Flaherty, P. (2010). The power of process: a story of collaboration and community change. *Journal of the Community Development Society, 41*(1), 3-20.

St George/Sutherlands Hospitals and Health Service. (2015). *Obese Women, Management of in Maternity*. Retrieved from Health South Eastern Sydney Local Health District: https://www.cesphn.org.au/preview/antenatal-shared-care-1/gp-resources/1550-obese-women-management-of-in-maternity/file

Stanley, K. (2017). The Management of Women with Obesity during Pregnancy (High BMI >/= 30 kg/m2. Norfolk and Norwich University Hospitals. NHS Foundation Trust.

Statistics Canada. (2016). Health at a Glance. Difficulty accessing health care services in Canada (ISSN 1925-6493). Retrieved from http://www.statcan.gc.ca/pub/82-624-x/2016001/article/14683- eng.pdf

Stepien, M., Stepien, A., Wlazel, R. N., Paradowski, M., Manfredi, R., Banach, M., & Rysz, J. (2014). Predictors of Insulin Resistance in Patients with Obesity. *Angiology, 65*(1), 22-30. doi:https://doi-org.ezproxy.flinders.edu.au/10.1177%2F0003319712468291

Stewart, J. (2009). *Public Policy Values.* Retrieved from https://ebookcentral-proquest-com.ezproxy.flinders.edu.au/lib/flinders/detail.action?docID=515068

Storey, J. (2006). Cultural theory and popular culture: an introduction. (4th ed.). Athens: University of Georgia Press.

Sui, Z., Turnbull, D., & Dodd, J. (2013). Enablers of and barriers to making healthy change during pregnancy in overweight and obese women. *Australasian Medical Journal, 6*(11), 565-577.

Sweet, L. P., Boon, V. A., Brinkworth, V., Sutton, S., & Werner, A. F. (2015). Birthing in rural South Australia: The changing landscape over 20 years. *The Australian Journal of Rural Health, 23*(6), 332-338. doi:https://doi.org/10.1111/ajr.12214

Swinburn, B. A. (2008). Obesity prevention: the role of policies, laws and regulations. *Australia and New Zealand Health Policy, 5*(12). doi:https://anzhealthpolicy.biomedcentral.com/articles/10.1186/1743-8462-5-12

Tanton, C., Geary, R. S., Clifton, S., Field, N., Heap, K. L., Mapp, F., . . . Mercer, C. H. (2017). Sexual health clinic attendance and non-attendance in Britain: findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *Sexually Transmitted Infections* (94), 4. doi:10.1136/sextrans-2017-053193

Taylor, C., & White, S. (2000). Knowledge, Truth and Reflective Practice. In Practising Reflexivity in Health and Welfare: making knowledge. P 19-36. Buckingham: Open University Press.

Terry, D. R., Baker, E., & Schmitz, D. F. (2017). Community assets and capabilities to recruit and retain GPs: the Community Apgar Questionnaire in rural Victoria *Rural and Remote Health, 16*(3990).

The Royal Hospital for Women. (2014). *Clinical Policies, Procedures & Guidelines*. Retrieved from NSW, Australia:

The Scottish Government. (2010). *Preventing Overweight and Obesity in Scotland. A Route Map Towards Healthy Weight*. Retrieved from Edinburgh: http://www.gov.scot/Resource/Doc/302783/0094795.pdf

Trivedi, T., Liu, A., Probst, J., Merchant, A., Jhones, S., & Martin, A. (2015). Obesity and obesity-related behaviors among rural and urban adults in the USA. *Rural Remote Health, 15*(4), 3267.

United Nations. (2015). *The Millennium Development Goals Report 2015*. Retrieved from http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf

United Nations Statistics Division. (2015). *The World's Women 2015: Trends and Statistics*. Retrieved from https://unstats.un.org/unsd/gender/worldswomen.html

Viscomi, M., Larkins, S., & Gupta, T. S. (2013). Recruitment and retention of general practitioners in rural Canada and Australia: a review of the literature. *Canadian Journal of Rural Medicine, 18*(1), 13-23.

Wakefield, M. A., Brennan, E., Durkin, S. J., McLeod, K., & Smith, K. C. (2012). Making News: The Appearance of Tobacco Control Organizations in Newspaper Coverage of Tobacco Control Issues. *American Journal of Health Promotion, 26*(3), 166-171.

Wakerman, J., Humphreys, J. S., Wells, R., Kuipers, P., Entwistle, P., & Jones, J. (2008). Primary health care delivery models in rural and remote Australia – a systematic review. *BMC Health Services Research*(8), 276.

Wang, H., Gregg, A., Qiu, F., Kim, J., Chen, B., Wan, N., . . . Chen, L.-W. (2018). Breast Cancer Screening for Patients of Rural Accountable Care Organization Clinics: A Multi-Level Analysis of Barriers and Facilitators. *Journal of Community Health, 43*(2). doi:10.1007/s10900-017-0412-x

Weinberg, D. (2014). *Contemporary Social Constructionism: Key Themes* (pp. 215). Retrieved from http://www.jstor.org/stable/j.ctt14btbsd

Wilkinson, S. A., Poad, D., & Stapleton, H. (2013). Maternal overweight and obesity: a survey of clinicians' characteristics and attitudes, and their responses to their pregnant clients. *BMC Pregnancy and Childbirth, 13*.

Willcox, J. C., Campbell, K. J., Plight, P. V. D., Hoban, E., & Pidd, D. (2012). Excess gestational weight gain: an exploration of midwives' views and practice *BMC Pregnancy and Childbirth, 12*.

Willis, J. (2007). Foundations of Qualitative Research: Interpretive and Critical Approaches: Thousand Oaks, CA: SAGE Publications.

Women and Newborn Health Service. (2009). *Management of Pregnancy and Childbirth in Women with a Body Mass Index Above 35*. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=BC7CA7A51646EB58DBB31E731A82297D?doi=10.1.1.394.5140&rep=rep1&type=pdf

World Health Organization. (1995). WHO Expert Committee on Physical Status. Physical Status: The Use and Interpretation of Anthropometry. WHO Technical Report Series No. 854. Retrieved from Geneva: World Health Organisation:

World Health Organization. (2000). WHO Consultation on Obesity, & World Health Organization. Obesity: Preventing and managing the global epidemic (Technical report series (World Health Organization); 894). Retrieved from Geneva: World Health Organisation:

World Health Organization. (2004). *Global Strategy on Diet, Physical Activity and Health*. Retrieved from http://www.who.int/dietphysicalactivity/strategy/eb11344/strategy_english_web.pdf

World Health Organization. (2007). The challenge of obesity in the WHO European region and the strategies for response. Retrieved from http://www.euro.who.int/data/assets/pdf_file/0008/98243/E89858.pdf

World Health Organization. (2010a). *Gender, women, and the tobacco epidemic*. Retrieved from http://apps.who.int/iris/bitstream/10665/44342/1/9789241599511_eng.pdf

World Health Organization. (2010b). *Increasing access to health workers in remote and rural areas through improved retention*. Retrieved from Geneva: http://apps.who.int/iris/bitstream/handle/10665/44369/9789241564014_eng.pdf;jsessionid=2C3DBA7904AD18405F763379B97FFD95?sequence=1

World Health Organization. (2014). *Global status report on noncommunicable diseases 2014*. Retrieved from Geneva: http://apps.who.int/iris/bitstream/10665/148114/1/9789241564854_eng.pdf?ua=1

World Health Organization. (2015a). Fiscal Policies for Diet and Prevention of Noncommunicable Diseases. *Technical Meeting Report 5–6 May 2015, Geneva, Switzerland*. Retrieved from http://apps.who.int/iris/bitstream/10665/250131/1/9789241511247-eng.pdf?ua=1

World Health Organization. (2015b). Trends in Maternal Mortality: 1990 to 2015 Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Retrieved from Geneva:

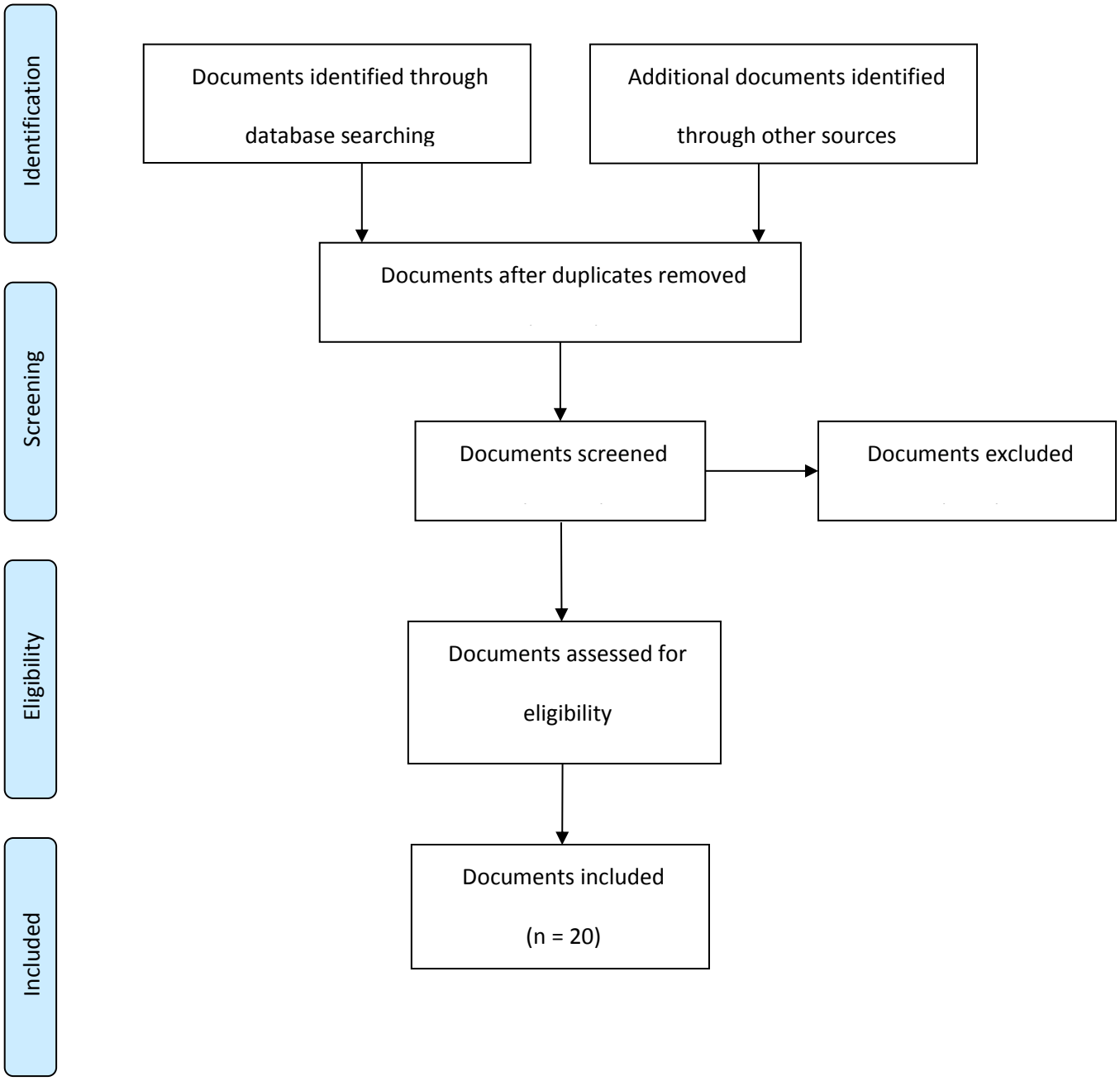
World Health Organization. (2016). *Taxes on sugary drinks: Why do it?* Retrieved from http://apps.who.int/iris/bitstream/10665/250303/1/WHO-NMH-PND-16.5-eng.pdf

World Health Organization. (2017) *Obesity and Overweight*. Retrieved from http://www.who.int/mediacentre/factsheets/fs311/en/

Yanow, D. (2000). Conducting interpretive policy analysis. Vol. 47.

Appendices

Appendix 1: Prisma chart of literature search outcomes



Appendix 2: Professional Guidance Documents on Management of Maternal Obesity

Country	Clinical Practice Guidelines	Healthy Weight Gain in Pregnancy	Maternal Nutrition	Reference
Australia	X			Department for Health and Ageing 2016
	X			Maternity & Newborn Clinical Network 2011
	X			The Royal Hospital for Women 2014
	X			King Edward Memorial Hospital. Obstetrics and Gynaecology 2016
	X			Queensland Clinical Guidelines 2015
	X			Women and Newborn Health Service 2009
	X			Saint George/Sutherlands Hospital and Health Services 2015
Australia/NZ	X			Royal Australian and New Zealand Obstetricians and Gynaecologists 2013
New Zealand		X		Ministry of Health 2014
United Kingdom	X			Centre for Maternal and Child Enquiries 2010
	X			Stanley 2017; Norfolk and Norwich University Hospital
		X		National Institute for Health and Care Excellence 2010
			X	National Institute for Health and Care Excellence 2008
Ireland	X			Health Service Executive 2011
			X	Health Service Executive 2013
United States of America	X			Alaska Native Medical Centre 2016
		X		IOM 2009
Canada	X			Society of Obstetricians and Gynaecologists of Canada 2010
	X			College of Midwives of Manitoba 2011
		X		Canadian Obesity Network 2013

Appendix 3: A summary of the major components of each document

	Policy	Guidelines																		
Country	Australia	Australia	Australia	Australia	Australia	Australia	Australia	Australia/NZ	NZ	UK	UK	UK	UK	Ireland	Ireland	USA	USA	Canada	Canada	Canada
By reference	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Gestational weight monitoring:																				
(a) BMI <30	Y	Y		Y	Y		Y	Y	Y		Y				Y		Y	Y	Y	Y
(b) BMI >30	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y
Pre-pregnancy weight optimization	Y	Y	Y		Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Advise risks associated with Maternal Obesity	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
Screen for gestational diabetes		Y	Y	Y	Y	Y	Y	Y		Y		Y		Y		Y		Y	Y	
Blood pressure monitoring	Y	Y	Y	Y	Y	Y	Y	Y		Y		Y		Y		Y		Y	Y	
Counselling, information, advice on healthy lifestyle (diet and exercise)	Y	y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Counselling on decreasing excess GWG	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y
Refer to other health professionals for weight management		Y	Y	Y	Y	Y		Y		Y	Y	Y		Y	Y	Y	Y		Y	Y
Refer to social services for assistance with social needs (food, housing, transport)													Y						Y	
Transfer of care to a larger center	Y	Y		Y	Y	Y														
Refer to local initiatives (weight loss programs, cooking classes)		Y									Y		Y							

1. Australia - (South Australia. Dept of Health and Ageing 2016)
2. Australia - (Maternity & Newborn Clinical Network 2011)
3. Australia - (The Royal Hospital for Women 2014)
4. Australia - (King Edward Memorial Hospital. Obstetrics and Gynaecology 2016)
5. Australia - (Queensland Clinical Guidelines 2015)
6. Australia - (Women and Newborn Health Service, 2009)
7. Australia - (St George/Sutherlands Hospitals and Health Service, 2015)
8. Australia/New Zealand - (RANZCOG 2013)
9. New Zealand - (Ministry of Health 2014)
10. UK - (CMACE 2010)
11. UK - (National Institute for Health and Care Excellence, 2010)
12. UK - (Stanley 2017)
13. UK - (National Institute for Health and Care Excellence, 2008)
14. Ireland- (Institute of Obstetricians and Gynaecologists et al., 2011)
15. Ireland - (Health Service Executive, 2016)
16. USA - (Alaska Native Medical Centre, 2016)
17. USA - (IOM 2009)
18. Canada - (College of Midwives of Manitoba, 2011)
19. Canada - (Society of Obstetricians and Gynaecologists of Canada, 2010a)
20. Canada - (Canadian Obesity Network, 2013)

Appendix 4: Participant Information

Dr Linda Sweet
School of Nursing and Midwifery
Flinders University
GPO Box 2100
Adelaide SA 5001

Tel: 08 8201 3270
Fax: 08 8201
linda.sweet@flinders.edu.au

CRICOS Provider No. 00114A

INFORMATION SHEET

Title: 'An investigation of the implementation of the *SA Obese Obstetric Woman policy'*

Investigators:
Associate Professor Linda Sweet
School of Nursing and Midwifery
Flinders University
Ph: 8201 3270

Dr Steve Scroggs
Clinical Director of Obstetrics and Gynaecology
Flinders Medical Centre
Ph: 8204 4577

Description of the study:
This study is part of the project entitled 'An investigation of the implementation of the *SA Obese Obstetric Woman policy'.* This project will investigate maternity care providers' perceptions of the policy and its perceived influence on their clients and the care they are provided, and any implementation strategies, including the barriers and enablers to compliance with the policy. This project is supported by Flinders University School of Nursing and Midwifery.

Purpose of the study:
The specific aims related to the Standards for the Management of the Obese Obstetric Woman in SA policy are to:

- qualitatively explore maternity care providers' perceptions of the policy and its perceived influence on their clients and the care they are provided
- identify implementation strategies, and the barriers and enablers to compliance with the policy for practitioners outside of the tertiary referral centres.

What will I be asked to do?
You are invited to participate in one telephone interview with an experienced researcher who will ask you a few questions about your views about the policy and any implementation strategies you have employed. The interview will take about 30 minutes. The interview will be recorded using a digital voice recorder to help with looking at the results. Once recorded, the interview will be transcribed (typed-up) and stored as a computer file and then destroyed once the results have been finalised. This is voluntary.

What benefit will I gain from being involved in this study?
This project will have little value to you individually, however you may benefit from the knowledge that you are making a significant contribution to maternity service policy review and development. You may feel a sense of having your concerns listened too and acted upon appropriately for future policy review and development.

Will I be identifiable by being involved in this study?
We do not need to retain your name or contact and what you provide will be anonymous. Once the interview has been typed-up any identifying information will be removed and the file stored on a password protected computer that only Associate Professor Linda Sweet and the research assistant Dr Jennifer Njenga will have access to. Your comments will not be linked directly to you.

Dr Steve Scroggs (2nd researcher) is the Clinical Director of Obstetrics and Gynaecology at Flinders Medical Centre and has been a member of the committee which was responsible for the development of the policy under study and is currently leading to the establishment of a bariatric clinic to care for women transferred under the requirements of this policy. We recognise this is a potential conflict of interest, and to manage this Dr Scroggs will not be involved in any of the participant recruitment or interviews, and will only have access to the de-identified data. Your confidentiality and anonymity is assured.

Are there any risks or discomforts if I am involved?
The researchers anticipate few risks from your involvement in this study. If you have any concerns regarding anticipated or actual risks or discomforts, please raise them with the researchers.

How do I agree to participate?
Participation is voluntary. You may answer 'no comment' or refuse to answer any questions and you are free to withdraw from the interview at any time without effect or consequences. A consent form accompanies this information sheet please read this carefully. If you agree to participate please

- sign the consent form and post back to me at the above address or
- respond by email including the specific wording of

  "I declare I have read the provided participant information sheet and consent form, and hereby consent to the conditions outlined in these documents to participate in a single telephone interview with A/Prof Linda Sweet for research purposes".

How will I receive feedback?
Outcomes from the project will be summarised and given to you by the investigators upon request.

Thank you for taking the time to read this information sheet and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number 6806). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au

Appendix 5: Participant Consent form

CONSENT FORM FOR PARTICIPATION IN RESEARCH BY INTERVIEW

An investigation of the implementation of the SA Obese Obstetric Woman policy

I

….....

.....

being over the age of 18 years hereby consent to participate as requested in the email introduction and participant information sheet for the research project on the implementation of the SA Obese Obstetric Woman policy.

1. I have read the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio recording of my information and participation.
4. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.
5. I understand that:
    - I may not directly benefit from taking part in this research.
    - I am free to withdraw from the project at any time and am free to decline to answer particular questions.
    - While the information gained in this study will be published as explained, I will not be identified, and individual information will remain confidential.
    - I may ask that the recording be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.
6. I agree/do not agree* to the tape/transcript* being made available to other researchers who are not members of this research team, but who are judged by the research team to be doing related research, on condition that my identity is not revealed. ** delete as appropriate*

Participant's signature……Date……...

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Researcher's

name…….....

Researcher's

signature……...Date……

Appendix 6: Practice Brief

Managing Obese Pregnant Women in South Australia Guided by Local Perspectives

The management of maternal obesity in rural and remote populations requires a multisectoral approach to ensure not only the safety of their babies but nurturing environments for the mothers (Davis-Floyd, 1994). It is imperative that government continues to work together with maternity care providers, mothers and all sectors to provide equitable care for obese women before, during and after pregnancy.

Backgro und

The World Health Organisation (WHO) has identified the 'epidemic of obesity' as one of today's most significant global health problems (World Health Organization, 2017). Overweight or obesity is considered weight that is more than a healthy weight for a given height. Body Mass Index (BMI), a calculation of body weight divided by height in metres squared (kg/m^2), is applied as a screening tool for overweight or obesity (Centres for Disease Control and Prevention, 2016). BMI is classified by (Centers for Disease Control and Prevention, 2016; World Health Organization, 2017) as follows

- BMI 18.5 to <25 falls within normal range
- BMI 25.0 to <30 falls within the overweight range
- BMI 30.0 or higher falls within the obese range

In 2014-15, 63.4%of Australians aged 18 years and above were reported as overweight or obese (11.2 million people), comprising of 35.5%overweight (6.3 million people) and 27.9% obese (4.9 million people) (Australian Bureau of Statistics, 2015).

The global rise in overweight and obesity is also affecting maternity care in Australia as evidenced in national prevalence data demonstrated by significant rates among childbearing women. In 2014-15, an estimated 56.3 percent of women in Australia were overweight or obese (Australian Bureau of Statistics, 2015). Since women in the reproductive years are similarly affected by the general increase in overweight and obesity, the prevalence among pregnant women has also risen (Fisher et al., 2013; Hawley et al., 2015). More than 40 percent of Australian women in reproductive years, aged 25 to 35 are overweight or

obese (Australian Bureau of Statistics, 2015), with a significant increase in prevalence among pregnant indigenous women (Australian Institute of Health and Welfare, 2017a).

Current Policy Options to Manage Obese Obstetric Women in Australia

The *Standards for the Management of the Obese Obstetric Woman in South Australia* policy was developed on the backdrop of the 2010 South Australian Department of Health and Ageing *Standards for Maternity and Neonatal Services* policy (South Australia Dept. for Health and Ageing, 2015). These were intended to provide clinical guidance for the management of the pregnant woman with obesity during the perinatal period in the public health sector, but also provide recommendations for private health services (South Australia Dept. of Health and Ageing, 2014). The policy advised that obese women may be required to travel and relocate to other communities to receive specialised maternity care.

Maternity providers reported that there was little or no consultation in the development and implementation of the policy, thus overlooking the effect of the local context in its success. Additionally, there appeared to have been little consideration of the socioeconomic and environmental determinants of maternal obesity within these policies nor definition of women who were more at risk.

Managing Obese Obstetric Women in Country South Australia – A Local Perspective

In this **Practice Brief**, the views of maternity providers in South Australia are used to develop recommendations to improve policies and care for obese obstetric women. Maternity providers were General Practitioner Obstetricians and Midwives.

Lessons from Maternity Providers in Country South Australia

"But the other side of medicine, the art of medicine is about the communication skills so that you can sensitively help an obese woman to identify that obesity is not a judgement with a social - it's not intended to be a negatively social judgement" (Angela, GP Obstetrician).

- Maternity care providers must attend appropriate training to equip themselves with communication skills that will enable them to sensitively address the issue of obesity. Upskilling should include cultural competency training so that equitable care is provided to diverse cultures including indigenous populations.

"Trying to access language that they understand – so it wouldn't matter what you were saying, you'd still have to put it in a language, and in a way that they understand. Also, in a way that they have to be able to access that information by engagement" (Gloria, Community Midwife).

- Information regarding obesity prevention and management before, during and after pregnancy should be accessible and available to culturally and linguistically diverse women and their families. Language and cultural barriers may deter pregnant women from seeking timely and appropriate care.
- Maternity providers should work closely with Aboriginal health services to provide indigenous mothers with culturally appropriate information and support around obesity prevention and management. Partnering with Aboriginal health services may foster increased trust among indigenous women and their families and encourage them to continue to engage with health services. Language and cultural barriers may deter pregnant women from seeking timely and appropriate care.

"*I utilise the dieticians locally quite a bit within my pregnant patients as well. We do have exercise physiologists that we can utilise."* (Isabelle, GP Obstetrician).

- Obese obstetric women should be referred to allied health care professionals, such as dieticians and exercise physiologists to assist them to maintain a healthy pregnancy weight.

"Two of our biggest issues or three really, is transport to the higher level – the tertiary centres. A car ride is eight hours; a bus ride's twelve hours. Big, big financial barriers because they've got to go down to a tertiary centre four week prior to birth, so that means they've got to find accommodation in Adelaide. They've also got to pay their rent and have people look after other children et cetera" (Fiona, Community Midwife).

- Obese pregnant women should be referred to social services for socio-economic support before during and after pregnancy. This support includes financial support for purchasing of healthier food options, travel to specialised maternity centres and accommodation away from their homes.
- Maternity providers should continue to advocate for the voices of pregnant women, such as those from Aboriginal communities, and their families to be heard and responded to by Government.
- Maternity providers should continue to recommend for improvement in the functioning of maternity services and outcomes of obese pregnant women. Government needs to consult with maternity care providers at various stages of policy development and implementation.