The late nineteenth and early twentieth centuries saw profound changes in social and medical attitudes towards maternity. Nowhere is this more apparent than in the rise of antenatal care, a system of monitoring the health and wellbeing of the unborn child through the surveillance of the pregnant woman. This paper will chart the emergence of such a system of surveillance in Australia around the time of the First World War, and will explore the complexities of debates over maternity, medicine and the needs of the state. In essence, the development of an antenatal regime was stimulated by fears over the declining population, and concerns over the high rate of maternal mortality during reproduction. The rise of antenatal care, however, is notable for more than being an extension of medical services to mothers. The interest in the foetus marks a significant shift in understandings about mothers and children. Based on the perceived need for population, the foetus was considered less a part of the mother, and more an independent potential person. At the same time, the development of an antenatal regime justified enormous intervention into the lives of women and mothers, extending medicalisation throughout the pregnancy and beyond.

For women in Australia in the late nineteenth and early twentieth centuries, reproduction was increasingly performed under the surveillance of the doctor. This period saw a proliferation of medical interventions into childbirth and childrearing, from control over the birthing process itself, to the management of breastfeeding and the care of infants. By the time of the First World War, such vigilance had intensified with the introduction of antenatal care, a regime
of medical supervision over both the foetus and the mother. This paper will consider two linked themes. Firstly, it will examine the emergence of antenatal care in Australia, focusing on medical attitudes towards mothers and maternity and the perceived socio-economic need for reducing maternal, infant and foetal mortality. When medical intervention into childbirth did little to decrease maternal mortality, antenatal care was seen as an effective response to wartime anxieties over the perceived decline in population. Secondly, it will suggest that the early twentieth century saw a profound shift in medical attitudes towards mothers and babies: increasingly the foetus emerged as a body worthy of medical interest. While antenatal care was premised on the idea of decreasing maternal mortality, the shift towards an interest in the foetus is of prime significance. Such a move may seem a ‘natural’ extension of earlier concerns over infants, but this paper will suggest that the drive for prenatal care was not simply a matter of ‘progress’. Instead, it was multi-faceted, formed through the interaction of fears about population, maternal morality and infant life. Antenatal care was therefore developed, regimented and extended, and the result was a more widespread medical surveillance over the potential mother than had been seen previously in Australia.

As an important signifier of attitudes towards mothers and maternity, the early development of the antenatal regime deserves a keener analysis than it has so far received. While mothers themselves have come under much consideration by Australian historians, the specifics of the interactions between mothers and medicine have been less widely considered. Kerreen Reiger, in her important work *The Disenchantment of the Home* argued that guidelines for antenatal care became more detailed in this period, as part of the ‘modernizing’ of confinement. Reiger’s more recent work has discussed the medicalisation of childbirth in the late twentieth century, including the pervasiveness of medical care during pregnancy and women’s resistance to, and complicity with this. Janet McCalman has also discussed antenatal regimes in her history of the Melbourne Women’s Hospital, suggesting that from the 1920s ‘babies began to matter’.

My analysis will diverge from previous studies in a number of key ways. Firstly, in contrast to McCalman, this paper suggests that interest in the child peaked much earlier than the 1920s, particularly within the context of the declining birth rate. By the first decades of the new century, we begin to see an interest in, not only
the child, but the foetus as well. Secondly, this paper will elucidate the ways in which wider historical processes impacted on the bodies of women. In this case, war and wartime rhetoric highlighted the ‘need’ for antenatal care to save maternal, infant and foetal lives. The discourses of war which articulated the perceived need for a replacement population were crucial to the spread of antenatal care. Medical concern was not for individual mothers per se, but was bound by wider concerns over population and race.

The main sources used in this paper are medical texts and journals, which pose the voice of the medical profession as the ‘expert’. This replicates social conditions at the time; within Australian culture, the doctor was widely acknowledged as a person of considerable significance. In developing a discursive analysis of medical texts, there is little chance of uncovering the mother’s own knowledge or beliefs. The woman’s voice is largely silent; instead, she becomes merely the object of the professional examination, discussion and conclusion. There is sometimes a hint of the voice of the mother in, for example, an individual’s refusal of antenatal care. Through such rejection of the medical model, there was some agency and some action of the woman, some indication of her opinions and how she felt in relation to her body and her baby. A more sustained analysis of how the mother responds to medical care is, however, outside the scope of this paper, with its focus on uncovering both medical attitudes towards mothers and the medical constructions of maternity through a consideration of the antenatal programme.

At the core of the emerging antenatal regime was concern over maternal mortality, which had become a pressing issue for medical science. A number of historians have noted that in the late nineteenth century the increasing medical interference in childbirth across Europe and America was positively harmful and led to significantly higher death rates amongst mothers. This was certainly also the case in Australia, where progressively mothers had been subjected to widespread medical supervision of all aspects of childbirth. During this period, confinement was pathologised; the ever-present threat of mortality and morbidity meant careful, exacting medical supervision was required. At the foundation of medical intervention was the belief that maternity was ‘fraught with many grave dangers to both mother and child.’
Thus the process of birth was medicalised, with increasing hospitalisation for childbirth and the rapid extension of surgery into the lying-in room. By the early years of the twentieth century, doctors were constructing confinement as a medical procedure, with many doctors viewing childbirth simply as a form of surgery. This served to medicalise all childbirth, whether complicated or not, and hence increased the likelihood of surgical intervention. While many women were still confined by midwives, those who were delivered by a doctor had an increasing risk of an operative procedure. The use of forceps, for example, was expanded and the ready availability of anaesthetics made it practical to intervene more frequently. By the 1920s, the forceps were used in 40 to 50 percent of confinements. Also notable was the use of the caesarean section, which rapidly increased in popularity during the first decades of the twentieth century.

The extension of surgical intervention into childbirth, however, did not necessarily decrease the relatively high levels of maternal mortality. The medical profession had gained a firmer grasp on the mechanics of childbirth, but the woman giving birth after the First World War had a chance of survival similar to her mother, and even her grandmother. By the second decade of the twentieth century, it had become clear that despite increasing medical input into the birthing process, maternal mortality had not really fallen. While infant mortality had decreased quite dramatically, and Australia was at the forefront of paediatric care, maternal mortality remained stubbornly resistant to all attempts at improvement. Deaths in childbirth were a substantial cause of overall female mortality, killing more women than all other categories except tuberculosis. Furthermore, Australian rates were high in comparison to other Western nations. Australia’s maternal mortality was 4.91 per thousand births between 1911 and 1913, while the rate for England and Wales was 3.94; Germany 3.48; Italy 2.44 and Holland 2.29.

Any decrease in maternal mortality was neither substantial nor sustained. The years 1917 and 1920 were especially severe, with doctors noting in 1920 that the death rate was still one in every 200 confinements. In 1921, out of 135,050 mothers whose pregnancies continued to full term, 643 died, with one woman in every 210 failing to survive pregnancy and birth. Deaths were from both sepsis and accidents of pregnancy, and in some years, sepsis rates improved, only to worsen again the following year. In general, there was a
slight decrease in mortality from sepsis, probably from increased care and antisepsis, but this was more than offset by an increase in deaths from other causes.\textsuperscript{21} The continuing high maternal mortality was largely a consequence of more surgery, including the induction of premature labour and the caesarean section. For many women, radical surgery inflated the risk of shock, haemorrhage and postoperative infection.\textsuperscript{22}

While doctors publicly professed an authority over the bodies of women and babies, the success of their technologies was far from complete. The emergency caesarean, for example, had a maternal mortality rate of around 30 per cent, with mortality increasing with the amount of manual interference and the lack of skill of the surgeon.\textsuperscript{23} Thus at a time when death rates had fallen more generally and infant mortality had improved markedly, the parturient woman was facing the same degree of danger as earlier women had done.\textsuperscript{24} Both doctors and the state were concerned by this; not only did the death of the mother impact on the family and the survival of the infant just born, but it meant a loss of her future utility as a breeder for the nation. It had become clear that if maternal mortality was to fall, something more had to be done. The answer, doctors believed, was antenatal care.

Antenatal advice was not entirely a twentieth-century phenomenon. As F.J. Browne suggests, most medical writers of the eighteenth and nineteenth centuries offered some general advice on pregnancy.\textsuperscript{25} The first text devoted to antenatal care, John Bull’s \textit{Hints to Mothers for the Management of Health during the Period of Pregnancy and in the Lying-in Room}, was published in 1837 and was frequently reprinted throughout the century.\textsuperscript{26} In Australia, there were a number of late nineteenth-century texts that touched on pregnancy, but the focus of such texts was on the confinement, the lying-in period and breastfeeding. The pregnancy itself was not of central significance.\textsuperscript{27}

Early in the twentieth century, however, doctors around the world began to develop a new concern for the pregnant woman. In Edinburgh in 1901, J.W. Ballantyne opened a single bed for pregnant women at the Edinburgh Royal Maternity Hospital. Soon, four more beds were added and a regime of hospital supervision and treatment was developed.\textsuperscript{28} As a consequence of Ballantyne’s early
work, interest in surveillance of pregnancy intensified, and Australia was at the forefront of such developments. T.G. Wilson of Adelaide established one of the first antenatal clinics in the world, at the Queen’s Home. Encouraged by Wilson, a clinic was established in 1912 at the Royal Hospital for Women in Sydney by the prominent obstetrician J.C. Windeyer. The clinic itself was small, dark and lacking in medical resources, but it was nonetheless crowded with women, who were checked for malrepresentations, contracted pelvis and protein in the urine.

The turn to antenatal care can be read as an extension of preventative health care more generally, and in Australia, as overseas, the ‘modern’ emphasis of medical care was increasingly on prevention. At the same time, the new emphasis on antenatal care was a specific response to a significant problem. Quite explicitly, doctors, unable to shift the high death rate of mothers during childbirth, turned to increased supervision, beginning in the antenatal period. I would suggest, however, that the development of antenatal clinics could not be solely attributed to an interest in lessening maternal mortality. It also had to do with population.

From the late nineteenth century, population was seen to be the key to developing and maintaining the vast continent of Australia, and the baby was viewed as an economic asset for the nation. As the Australasian Medical Gazette (AMG) suggested in 1914, ‘from the national standpoint, every baby was worth preserving’, and every foetus was a ‘prospective Australian citizen.’ As the infant body now held central social, economic and political significance, concern for the baby intensified, focusing not just on the first year of life, but on the first hours, and even on pregnancy itself. The interest in the foetus was in its potential: the potential for a baby, a potential citizen for the state. Protection of the infant was couched in terms of the health of the nation and the mother was urged to care for her unborn child through medical supervision. It was believed that the mother’s best chance of helping the foetus was by giving her own body over to the medical profession and antenatal care.

The effects of the World War I only intensified such developments. Australia had always aimed to populate the wide, open spaces of the continent, and the loss of soldier life on the battlefields of Europe added weight to the pronatalist demands. There was a profound and wide ranging belief in the necessity of rebuilding the nation through a substantial, sturdy population. As historians
have indicated, war is frequently ‘good for babies’\textsuperscript{35} and during the First World War demands for population growth in Australia were explicitly linked to the need to care for white mothers and babies through safe obstetrics and sound prenatal care.\textsuperscript{36}

During the war years, antenatal care was increasingly idealised as a ritualised surveillance of women during pregnancy. Women were advised by the Department of Public Health to consult a doctor at an early date during pregnancy.\textsuperscript{37} John Windeyer, the Honorary Assistant Surgeon at the Royal Hospital for Women, stressed the necessity of competent antenatal care. In particular, he liked to see the patient three weeks before labour, in order to do a thorough physical examination, including assessing pelvic capacity and checking for the presence of tumours.\textsuperscript{38} S.M. MacCulloch advocated a more strenuous regime, including a ‘systematic examination, employing inspection, palpation, percussion and auscultation.’\textsuperscript{39} The war also served to concentrate attention on venereal disease, in particular syphilis, and the Wassermann test was often utilised.\textsuperscript{40} In all, during the First World War the medical profession constructed antenatal care as crucial for pregnant women, and some doctors even suggested that the compulsory notification of pregnancy might be necessary to ensure adequate care.\textsuperscript{41}

Despite this, antenatal care was not truly effective in the prevention and treatment of the majority of conditions. Of all the causes of maternal mortality, only eclampsia could be effectively prevented and it is not surprising therefore that eclampsia served as a model justifying antenatal care. Eclampsia itself was fairly common, difficult to treat and maternal mortality was quite high.\textsuperscript{42} Much more could be done in the pre-eclamptic stage, which was readily diagnosed in a urine sample during routine prenatal care. John Harris from the Women’s Hospital in Paddington claimed eclampsia could generally be avoided if the urine was examined monthly for the final three or four months of pregnancy. He also suggested that there was some resistance to this from women themselves, who found it too difficult. The prematernity ward at the Royal, however, allowed the somewhat reluctant women to get their urine checked. This had greatly reduced the incidence of eclampsia, and the testing of urine went on to become the basis of all antenatal regimes.\textsuperscript{43}

While it is likely that testing for pre-eclampsia was the real success story of antenatal care, doctors were keen to extend the conditions that medical care could prevent and cure. Antenatal care
was full of promise. By 1917, it was claimed that routine testing could detect and overcome infant prematurity, congenital defects, atrophy and debility. For example, James Hamilton, the Honorary gynaecologist at Adelaide Hospital suggested that prenatal care reduced mortality from toxaemia, eclampsia, placenta praevia and contracted pelvis. He also claimed it could reduce foetal mortality and stillbirths. Doctors felt – rather optimistically – that all such problems could be treated, and that ‘resistance to disease during independent life may be raised and the vast amount of sickness, defect and premature death may be diminished’.

As such, the medical surveillance of the mother during confinement and infant feeding was substantially increased to cover the entire period from conception. There were multiple, even contradictory forces at work here. The dominant discourses stressed the necessity of optimum medical care for the mother and her baby. Nevertheless, in an immediate sense, the war diverted medical attention away from the mother to wider, international issues. Many doctors enlisted, and there was a real interest in treating wartime injuries. According to some medical commentators, interest and progress in obstetrics and gynaecology actually declined in this period. Furthermore, the war improved surgical theory and practice, but it is debatable whether such advances flowed through to the childbearing mother.

Perhaps a more persuasive argument can be made for wartime influence on the intervention into public health by the state. The relative privation of wartime existence, and the subsequent increase in governmental control over the populace, prompted state intervention into infant and child health. The establishment of the maternity hospital was no longer seen as the role of the private charity, but rather as the task of the government. The expense of medical care was seen as a trade off for the public good. As the editors of the Medical Journal of Australia (MJA) wrote in 1914:

Since the State gains by every healthy child born within its boundaries, and by the safe delivery of every strong, healthy mother, it is an economically sound proposition that it should supply the means for the safeguarding of the lives of expectant mothers and their unborn infants.
The extension of government interest into the private sphere of home and family and the welfare of infants was notable in this period. The various state departments began to produce literature regarding infant and child health. In New South Wales, for example, the Department of Public Health published *Notes for Mothers*, which was compiled under the supervision of George Black, the Director General of Public Health. While the majority of the text dealt with the care and feeding of babies, a significant proportion was concerned with maternity and advice to pregnant women. As Black noted, ‘[it is] the duty of every expectant mother to seek and preserve good health, for everything which influences her – whether for good or evil – affects the unborn babe.’ This located responsibility for the foetus and child solely and unequivocally with the mother. For the baby to thrive, even to survive, the mother must follow a strict regime: she must be ‘absolutely regular in her habits’, paying particular attention to exercise, rest and sleep. Advice was also given on the emotional side of pregnancy, with frequent warnings that excitement and worry should be avoided. This was ultimately a conservative response, for it failed to allow for poverty and economic distress as factors causing ill health. In one sense, it gave the mother much perceived power, for she was in control over the destiny of her unborn child. At the same time, it limited any control the mother may have had, for such a responsibility was intimidating and bounded by impossibly high expectations. Furthermore, and most importantly for my argument here, to do the best for her child the mother must give herself over to the expert, the doctor.

The other most tangible form of government intervention in the antenatal period (and one that particularly aligned with medical ideologies) was the establishment of Baby Clinics. Such clinics were initially established in the working class suburbs of Sydney, and in this period they spread outwards, to the suburbs, to some regional areas of New South Wales, and finally to other districts across Australia. The supervision of working class women was no doubt a part of the trend towards the institutionalising of women’s health and the rise of the ‘expert’. The focus of the clinic was clearly infant health but antenatal care was nevertheless an important aspect of their work. The clinics were a place where pregnant women of the poorer classes could be ‘advised in regard to the best means of keeping well and of safeguarding the lives of their unborn infants.’ In November of 1916, the *MJA* laid out the ‘Objects of the
Baby Clinic’. While the majority of the ten recommendations were concerned with the young child, the first three were formed regarding antenatal care. In particular, the Clinic should ‘advise pregnant women to keep in touch with the doctors and nurses up to the time of confinement.’

Infant clinics were a public priority. The government certainly employed a strong rhetoric regarding the importance of infant and maternal health, but the costs were considerable. The government could not always finance such facilities and often accommodation was substandard. For example, in Alexandria in 1917, the building was entirely inadequate. It was very small, and on the afternoon of the Doctor’s attendance, there was no room for the women themselves. In good weather, they could utilise a small bush hut at the rear of the premises, but as the Nurse Inspector noted, this ‘was only suitable for use on fine days.’ The Broken Hill Baby Clinic, which had been established in 1918, was run from a badly ventilated two-room building with no water or gas, rented at 15 shillings per week. In 1921 a new Clinic was built, at a cost of almost £3000, paid for jointly by the Mine Managers Association and the Department of Public Health. So while the public discourses affirmed the necessity of the baby clinic and antenatal care, there was not always enough money to adequately fund such a system of surveillance for the child and foetus, particularly when the war effort was the priority.

While poor women were treated in the clinic, by 1914, some doctors were also attempting significant intervention amongst private patients. There are fewer records of this type of care available to the historian, but some doctors kept the MJA informed of their progress. The experience of E.E. Moule, a general practitioner in the small township of Wagin, in the south of Western Australia, can be shown to indicate the key methodologies of the doctor committed to the antenatal programme. Moule attempted to get his patients to engage him no later than the sixth month of pregnancy. In order to substantiate his own knowledge of the case, Moule took a case history, including previous pregnancies and a family history. He then made a general medical examination, including the heart, lungs and abdomen. A vaginal exam was done if deemed necessary, and the urine checked for albumin and sugar. He then asked for a urine specimen to be sent every month, and if there was any swelling or discharge, the woman was to contact him immediately for additional medical treatment, which Moule would provide at an additional cost.
This paper has so far outlined the ideal of antenatal care, and some of its applications in both private medicine and the public sphere. The assumption of the mainstream medical profession was that antenatal care was both necessary and successful. It is now useful to suggest that the notion of antenatal care was less coherent than the discourses would suggest. The medical profession stridently and confidently stressed the vital nature of antenatal care, however the practical application of prematernal surveillance was more difficult than the public voice of medicine may indicate. There is a substantial gap between the rhetoric and reality. In his comprehensive 1925 survey of obstetrics, Sydney Morris noted that neither the general public nor all doctors were entirely convinced of the necessity of antenatal work.\textsuperscript{63} For some, it took up too much of the practitioner’s time and could be ‘obnoxious’ to the patient.\textsuperscript{64} Other doctors admitted antenatal care was ‘rarely carried out, and even when it was carried out it was usually perfunctory.’\textsuperscript{65}

Certainly women were not necessarily enthusiastic about antenatal care, and it is likely that even in the early 1930s, only about 20 per cent of pregnant women received ‘proper’ supervision.\textsuperscript{66} Much of the problem was the lack of funding. The two main women’s hospitals in Melbourne and Sydney had fine prematernity wards. In Brisbane in 1922, however, there was no proper antenatal clinic and other capital cities faced the same difficulties.\textsuperscript{67} Women of means may have used their local doctor for basic antenatal care, and poorer women received advice from baby welfare centres, bush and district nurses, and private doctors.\textsuperscript{68} Even so, it is clear that the system was not as extensive as the ideal proposed in various medical sources. Wartime events highlighted the necessity of intervention, and the trend was towards an increasing interest in the antenatal period.\textsuperscript{69}

In conclusion, I would suggest that in many ways, antenatal care was well meaning, if over-optimistic. Doctors, as purveyors of authority and perceived knowledge, used scientific discourse to establish the ‘necessity’ of antenatal care, in an effort to improve maternal and foetal mortality. Doctors proposed that the medical regime would alleviate both death and discomfort. As one doctor claimed, ‘You can lighten the whole burden of pregnancy, and teach her that many of the discomforts which she thinks are the unavoidable consequences of her state, are really avoidable.’\textsuperscript{70} Just how successful doctors were in lightening the load is questionable, for real improvements in maternal health were certainly not as profound as
had been hoped. The medical profession was quite sincere in their desire to help women; this was not simply a regime of authority and control. Prenatal care was clearly designed to benefit the mother, not simply provide patients for the doctor. The fear of eclampsia in many ways had taken over from worries about puerperal fever. The discussion of eclampsia was far greater, even while puerperal fever remained a significant risk. Prenatal care could help prevent eclampsia and assist doctors to diagnose a limited range of other potential problems.

At the same time, discourses surrounding antenatal care justified an enormous, fundamental intervention in the lives of women and mothers. Women’s maternity had been subject to public judgment for some time; nineteenth-century debates over medicalised childbirth and infant feeding are evidence of that. Developments in prenatal care, however, went even further than this. Women were subject to scrutiny before the child was born, and such surveillance was maintained throughout pregnancy, lactation and increasingly even into the school years. Prenatal care ensured the increasing power of the medical profession. While doctors’ control over birth in this period was becoming more comprehensive, in some ways the control over pregnancy was even more fundamental. Initially, it established the doctor as the correct birthing assistant. But it also allowed for a more complete medicalisation of women, not just during the confinement, but also throughout much of their adult lives.

Furthermore, the turn to antenatal care marked a significant shift in terms of the maternal and foetal relationship. No longer was the maternal body the only point of medical concern; the foetus came to play an increasingly important role. The medical attitude towards pregnancy and confinement was neatly encapsulated by Sydney Morris. Morris, a Medical Officer for the Department of Public Health had won the prestigious prize of the Melbourne Medical Committee for Postgraduate Work. In his essay on the causes and prevention of maternal mortality and morbidity, Morris wrote:

Antenatal supervision will eventually be regarded as the key to success in preventative midwifery ... In recommending the establishment of antenatal clinics it should be borne in mind that their influence will extend beyond the mother. They really represent the aim of child welfare and baby health centres carried
to its logical conclusion; because by caring for the pregnant mother you are caring for the child prior to its birth, thus increasing its chances of survival beyond the deadly first month and the succeeding perilous eleven months of its life.\textsuperscript{72}

As Morris suggested, the bodies of both mother and foetus were key. The value of the foetus – seen in terms of the future white population – helped to intensify the call for antenatal care; doctors suggested that for the foetus to survive, the mother must participate in the regime of antenatal care. Thus with population of central significance to the nation and to the race, antenatal care was developed as a panacea to gynaecological and obstetric ills. Without the ability to cure a variety of problems, the medical profession pinned its hopes on the ever-increasing medicalisation of pregnancy and beyond.

\textbf{Notes}


\textsuperscript{2}Kerreen Reiger, \textit{The Disenchantment of the Home: Modernizing the Australian Family 1880-1940}, Oxford University Press, Melbourne, 1985, p.84.


\textsuperscript{5}T.S. Pensabene, \textit{The rise of the medical practitioner in Victoria}, The Australian National University, Canberra, 1980, pp.127, 177.

\textsuperscript{6}Hilary Marland, ‘Childbirth and Maternity’ in Roger Cooter & John Pickstone (eds), \textit{Medicine in the Twentieth Century}, Harwood Academic Publishers, Amsterdam, 2000, p.567; Judith Walzer Leavitt, “Science” enters the birthing room: Obstetrics


18 Barrington, p.235.


20 ‘Morris, p.302.

21 ibid., p.302.


24 Morris, p.304.


Anon, ‘Infantile Mortality’, *AMG*, March 1914, p.208; Cuthbert Hall, ‘Smallpox in foetus in fourth month’, *AMG*, January 1914, p.3.


Mackellar, p.7.

Hamilton, p.431.


Editorial, ‘Doctors for the Front’, *MJA*, 1 May 1915, p.409; see also ‘Shortage of


51 ibid., p.350.

52 Notes for Mothers, pp.5–10.

53 ibid., p.4.

54 ibid., p.7.

55 ibid., p.8.

56 On the expert, see Reiger, The Disenchantment of the Home.


59 Commonwealth Parliamentary Papers, p.1012.


62 Moule, pp.361–362. Such care could be more expensive for the mother: the urine examination was covered in the general confinement fee, but further medical attention was charged.

63 Morris, p.333.

64 Moule, pp.361–362.

65 MacCulloch, p.398.


67 Allan, p.74.


72 Morris, p.333.