

**Perinatal Healthcare in Prison  
A Scoping Review of Policy and  
Provision**

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## Introduction

This report is a scoping review of perinatal<sup>1</sup> healthcare in prisons in England and Wales<sup>2</sup>.

The research on which the report is based is one of three projects commissioned by the Primary Care section of the newly-established Prisons' Healthcare Research Network (PHRN) <http://www.phrn.nhs.uk/> to investigate various aspects of the healthcare and welfare of prisoners.

The other research areas are:

- child & adolescent health
- chronic disease & care of older people

Although this research focuses primarily on provision of healthcare for pregnant and recently-delivered women in prison in England and Wales, a review of the international literature was also undertaken in order to place current UK policy and practice in a wider context.

## ***Structure of the Report***

The report commences with an introductory section outlining the development of perinatal healthcare in prisons in England and Wales. This section also contains a necessarily brief overview of the legal framework, national policies, and guidance which have informed development and delivery of maternal and child health services in prisons. The subsequent section reviews the available research into perinatal healthcare in prisons. The report concludes by making recommendations for future research.

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<sup>1</sup> Perinatal refers to the antenatal (pregnancy), intrapartum (childbirth) and postnatal (early motherhood) periods.

<sup>2</sup> Scotland and Northern Ireland assumed responsibility for the management of their prison health services during the process of devolution.

## List of Abbreviations

<b>AIMS</b>	Association for Improvement of Maternity Services
<b>BMA</b>	British Medical Association
<b>BME</b>	Black & Minority Ethnic
<b>BMJ</b>	British Medical Journal
<b>CPT</b>	European Committee for the Prevention of Torture
<b>DH</b>	The Department of Health
<b>HNA</b>	Health Needs Assessment
<b>HImP(s)</b>	Health Improvement Partnership(s)
<b>LDP</b>	Local Development Plan
<b>MBU(s)</b>	Mother & Baby Unit(s)
<b>NGO</b>	Non-governmental Organizations
<b>NHS</b>	National Health Service
<b>NOMS</b>	National Offender Management Scheme
<b>NSF</b>	National Service Framework
<b>PCT</b>	Primary Care Trusts
<b>PHImP(s)</b>	Prison Health Improvement Partnership(s)
<b>PHRN</b>	Prison Health Research Network
<b>PSO(s)</b>	Prison Service Order(s)
<b>UN</b>	United Nations
<b>WHO</b>	World Health Organization

## **Executive Summary**

### **Background**

Imprisoned women have been delivering babies for over a century. However, in England and Wales, perinatal healthcare (the care of women during pregnancy, childbirth, and the early postnatal period) was not formalized until the early 1980's – a period which has coincided with unprecedented and ongoing reform of the National Health Service (NHS).

Of particular relevance to this study is the decision to merge prison and community healthcare systems in response to persistent reports of deficiencies in prison healthcare. In consequence, the National Health Service (NHS) assumed responsibility for prison healthcare in England and Wales in April, 2006. In reforming prison healthcare, the government espoused an explicit commitment to providing prisoners with healthcare equivalent to that received by other citizens.

In order to examine the impact of prison healthcare reform, the Department of Health (DH) has funded the development of the Prison Health Research Network to examine various aspects of prison healthcare. This report focuses on issues relating to healthcare in the perinatal period.

As the number of women in prison has continued to grow, there has been an inevitable increase in the number of imprisoned pregnant women and mothers. However, despite growing numbers, women represent a relatively small percentage (less than 6%) of the prison population. Their minority status means that the specific healthcare needs of women prisoners and those of their children may be overlooked and/or remain unmet within a system designed principally for men and whose primary function/focus is security rather than healthcare.

Although a significant proportion of women in prisons are mothers; pregnant, labouring, or recently-delivered women represent a minority within this gendered prison minority. In the current climate of inexorable change, competing priorities, and limited resources; the perinatal healthcare needs of women and their children may not be to the fore when reconfiguring and redesigning services to meet government targets. This research has therefore been commissioned to identify key issues in the care and support of imprisoned women and their children in the perinatal period and to suggest areas for future research.

### **Research Aim**

1. To undertake a review of the nature and scope of current provision of perinatal healthcare in prisons in England and Wales.
2. To highlight strengths and areas for development in current provision.
3. To identify gaps in the literature and make recommendations for a future research agenda.

## **Method**

In addition to electronic searches of national and international literature (peer-reviewed publications), hand searches of relevant journals and policy documents were undertaken. References from key publications and correspondence from authors were used to supplement searches. Grey literature and unpublished research were accessed by searching the National Research Register and NHS Centre for Reviews and Dissemination via the Google search engine (accessed April, 2006).

## **Key Findings**

- Women who require perinatal healthcare in prison are predominantly poor, under-educated, and single. Women from Black and minority ethnic (BME) backgrounds – a significant proportion of whom are foreign nationals – are over-represented.
- Pregnant inmates are likely to have experienced childhood neglect, trauma, and victimization.
- 82% of pregnant prisoners said their pregnancies were unplanned.
- Women's experience of pregnancy, childbirth and early motherhood in prison is generally negative. Women report feeling unsafe, uncared for, uncomfortable and hungry.
- Imprisoned women experienced significant levels of emotional and psychological distress during the perinatal period – two-thirds were depressed and 56% of women (80% foreign nationals) said they were lonely.
- The escalating number of pregnant and recently-delivered women imprisoned in England and Wales is reflected in the increasing provision of places on prisons' Mother & Baby Units.
- Specialist perinatal services in prison (for example, Mother & Baby Units) received mixed reviews. However, many are in their infancy.
- Pregnant, imprisoned women responded positively to health promotion advice. For example, they were more likely than community controls to reduce smoking, alcohol use, and intake of illicit drugs.
- There is evidence that longer bouts of imprisonment (compared with multiple short sentences) during pregnancy significantly improves pregnancy/birth outcomes. For example, women were less likely than other disadvantaged women to have low birth weight babies or experience stillbirth. One study reported that every day spent in prison increased babies' birth weight by 2g and decreased the odds of delivering low birth weight babies by 2%.
- Women's concerns for their children appear to be well-founded. Children of imprisoned mothers experienced physical, emotional, psychological, social and cognitive problems and are at increased risk of neglect and victimization. They are also more likely to develop anti-social behaviours with associated risk of involvement with criminal justice and mental health systems.

## **Conclusions**

Imprisonment has potentially deleterious consequences not only for individual women but also for their families and wider society. Imprisonment during the perinatal period is particularly challenging not least since some women will be separated from their babies and most will have difficulties maintaining meaningful contact with their children. However, despite the challenges of giving birth and arranging childcare whilst imprisoned, there is evidence that children are able to form secure attachments to their imprisoned mothers and that prisons could offer opportunities for improving both the perinatal and general health of this group of 'high-risk' women.

## **Recommendations for Future Research**

1. Collection of baseline data and agreement about a common dataset should be undertaken as soon as possible. These data would form the basis for measuring the impact of reforms of the prison healthcare system.
2. The number of women giving birth whilst in prison or entering prison shortly thereafter is relatively small. Agreement on a common dataset would also facilitate comparisons across sites and amalgamation of national and international data to enable meaningful quantitative studies to be undertaken.
3. Further research is required to examine the outcomes of perinatal healthcare in prison. Such research should:
  - a. Focus on outcomes for both mothers and children
  - b. Go beyond pregnancy, childbirth, and the early postnatal period. For example, undertaking longitudinal studies to examine the long-term impact of imprisonment on: Children's growth and physical development; Children's social and educational development and achievement; Mother's health and well-being; Impact of health promotion, parenting advice, and other skills learned whilst in prison
  - c. Compare outcomes from prison Mother and Baby Units (MBUs) with MBUs in the community.
  - d. Compare outcomes from prison MBUs with pregnant and child-bearing women elsewhere in the prison system.
4. Research into women's experience of perinatal health care in prison should be undertaken. Focusing on the most vulnerable inmates such as foreign nationals and Young Offenders could help to identify their particular healthcare needs, reduce disparities, and improve mental health and well-being.
5. Service Evaluation (including Users and Carers' perspectives) and complex intervention studies should be undertaken to identify the elements of perinatal healthcare in prison which are effective and to understand why some interventions are more effective than others.
6. In light of concerns about the feasibility of delivering effective healthcare in prisons, research should be undertaken which focuses on both structural and process issues. For example, research might explore:
  - a. The impact of the NHS (PCTs) assuming responsibility for prisons healthcare
  - b. Alternative ways of working
  - c. Development and efficacy of new professional roles

# Background

## 1.1 *Prison Healthcare in the UK*

Unlike the United States (US) where prisoners' rights of access to healthcare are constitutionally guaranteed (Hutchinson, 1998; de Ravello *et al*, 2005) the statutory providers of healthcare in the United Kingdom (UK) – the National Health Service (NHS) – have not, until recently, been obliged to consider the particular healthcare needs of prisoners (Smith, 1999; Birmingham, 2003). This has led to the development of parallel health services in prisons and the wider community – including separate processes for commissioning healthcare.

The quality of prison healthcare in England and Wales has been a source of concern for some time (Home Office, 1964; HM Prison Service, 1991; Court, 1996; Smith, 1999; Shaw, 2002). For example, most of the healthcare provided in prisons is at the primary care level. However, as recently as 1997, Reed and Lyne reported that, among 42% of the prisons they surveyed, healthcare was provided by doctors who had not completed primary care training. In addition to concerns about the quality of primary care provision, deficiencies in access to secondary and tertiary care have also been highlighted (Reed & Lyne, 1997). Additionally, the mental health of prisoners (Fazel & Danesh, 2002; Singleton *et al*, 1998), structural factors such as the quality of the physical environment; tensions between competing demands of security and healthcare (Marshall *et al*, 2000); and the capacity of staff to deliver effective healthcare (de Viggiani *et al*, 2005) have given cause for concern.

Central commissioning of prison healthcare ceased in 1992. Since that time, prison governors have been responsible for purchasing healthcare for their individual prisons (Home Office, 1995). In 1996, a review by Her Majesty's Inspectorate of Prisons concluded that the standard of prison healthcare was substantially inferior to that provided in the community – thereby increasing the social exclusion and disenfranchisement of prisoners. The inspectorate recommended merger of prison and community healthcare systems in order to address inequities experienced by prisoners (HM Inspectorate of Prisons, 1996).

The government's response to the inspectorate's conclusions and recommendations was to institute joint working arrangements between the Home Office who have responsibility for the Prison Services and the Department of Health who are responsible for the National Health Service (NHS). In 2001, the Directorate of Health Care for Prisons was replaced by the Prison Task Force and Prison Health Policy Unit at the Department of Health (DH). Whilst acknowledging that provision of healthcare is a secondary function of prison (Home Office, 1991), this strategy was intended to address inequalities in prison healthcare by ensuring 'equivalence of care' – the right of prisoners to have standards of healthcare equal to those provided for the remainder of the community – a principle upheld by the United Nations (United Nations, 1981), the UK's Health Advisory Committee for the Prison Service (1997), the World Health Organization (WHO, 2003) and detailed in Prison Standard 22 (HM Prison Service, 2004). The principle is also enshrined in Article VIII of the US Constitution (Weatherhead, 2003).



The outcome of the reform of prison healthcare is that, in April 2006, the NHS – specifically Primary Care Trusts (PCTs) – formally assumed responsibility for healthcare in prisons. In order to facilitate this process, PCTs in England and Wales (working with prisons in their catchment areas via the Prison Health Development Network) were expected to have produced Prison Healthcare Development Plans (similar to community-based Local Development Plans (LDP)) by 2004 (DH, 2004a). Not all were able to do so. Perhaps not surprisingly therefore, recent reports suggest that, despite considerable progress in this area, it is unlikely that services will be sufficiently well-developed for equivalence of prison healthcare to become a reality for some time (British Medical Association, 2004; Birmingham, 2003).

Lack of equivalence in healthcare has particular salience for the healthcare of women in prison whose gender-specific needs may be overlooked within prisons – establishments designed primarily for men in which women are in the minority<sup>3</sup> (International Centre for Prison Studies, 2004).

Pregnant or recently-delivered women in prisons are a minority within this minority. Accordingly, issues relating to health care during pregnancy, childbirth, and the early postnatal period may not be to the fore, especially in the context of competing priorities and limited resources as services are being developed or redesigned in response to the emergent policy agenda and practice guidance (Awofeso, 2005). This may result in significant levels of unmet healthcare and welfare needs not only for this relatively small sub-group of prisoners but also for their children and other dependants who inevitably experience the unintended consequences of women's incarceration (Shaw, 2003).

Despite research such as the systematic reviews published by Knight & Plugge (2005a, 2005b) and a review of psychiatric morbidity among women in prisons' Mother and Baby Units by Birmingham and colleagues (2004), relatively little is known about the current state of perinatal healthcare and welfare of women and children in prison in England and Wales. This scoping review has therefore been commissioned as a first step towards highlighting the particular issues associated with pregnancy, childbirth, and the early postnatal period in a prison context.

## **1.2 Aims of the Research**

The purpose of the scoping exercise was:

- To generate a picture of the current state of prison healthcare provision in England and Wales for women and children in the perinatal period
- To identify key issues in perinatal healthcare – including evidence of good practice and areas for development in service provision
- To identify gaps in the literature
- To make recommendations for the future research agenda in relation to perinatal healthcare in prisons

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<sup>3</sup> Despite rising numbers, women account for just 5.6% of the total prison population (75,030) in England and Wales (HM Prison Service, 2006).

## **2 Methods**

A scoping review of the literature on pregnancy, childbirth, and motherhood in prison was undertaken by the principal investigator. Unlike systematic reviews which use prescribed review and data extraction strategies (NHS CRD, 2001); scoping reviews enable researchers to adopt a more flexible, 'broad brush' approach to the literature in order to present as complete a picture as possible of the information available on this subject. This approach is particularly useful where the quality and/or quantity of the available information is unknown. In completing this scoping review, an inclusive rather than exclusive approach was therefore taken at the outset. Accordingly, in addition to peer-reviewed and other academic papers, the 'grey literature' such as policy, practice, and guidance documents was also examined.

### **2.1 Search Strategy**

Literature searches of the following databases were carried out:

- Medline - biomedical information from 1966 to May 2006
- Psycinfo - psychology and psychiatry literature from 1967 to May 2006
- CINAHL – nursing literature from 1982 to May 2006
- EMBASE - biomedical and pharmacological database 1974 to May 2006
- Applied Social Sciences Abstracts (ASSIA) – applied social science literature from 1987 to May 2006
- Campbell Collaboration (C2-Spectr) - randomised controlled trials and systematic reviews in the areas of social welfare, crime and justice and education and (C2-RIPE) Register of Interventions and Policy Evaluation from 1950 to May 2006
- SOSIG – social science information gateway 1994 to May 2006
- Caredata – social work and social care literature from 1986 to April 2006
- Health Management Information Consortium (HMIC) - health management information from 1983 to May 2006
- Zetoc – provides access to the British Library's Electronic Table of Contents – 1993 to May 2006

### 2.1.1 Procedure

The table below shows examples of the terminology used for each concept in the literature search.

Search Terms	Additional/Alternative Terms/MESH Headings
<b>Pregnan*</b>	Pregnant Pregnancy Pregnancy-outcome Pregnant-women
<b>Birth*</b>	Birth Childbirth Parturition
<b>Prison*</b>	Prison Prisoner Imprison Imprisonment Jail Gaol Incarceration/Incarcerated

\*Searches for word beginning with stem or including

#### Stage 1: Applying Search Strategy

Combinations of thesaurus terms for each database and free text words to describe research into perinatal healthcare in prisons were combined with Boolean operators and used to identify as much relevant literature as possible. Searches were limited to: a) English b) Human Subjects.

In addition to electronic searches, hand searches of relevant journals and policy documents were undertaken to supplement searches which were not comprehensively covered by accessing databases and to check for recent studies. References from key publications and correspondence from authors were also used to supplement searches. Grey literature and unpublished research were accessed by searching the National Research Register and NHS Centre for Reviews and Dissemination via the Google search engine (accessed May, 2006).

#### Stage 2: Applying Inclusion and Exclusion Criteria

Decisions about inclusion/exclusion were made by the principal investigator and independently verified by a colleague not attached to the project but with considerable experience of undertaking both systematic and scoping reviews.

1. To be included in the first phase of the review, publications had to refer to:
  - Women or adolescents
  - Prison (and related terms such as 'jail/gaol' or 'incarceration / incarcerated')
  - Prisoner (and related terms such as 'inmate')
  - Healthcare or health
  - Pregnancy, birth, or childbirth (and related terms such as 'parturition')
  - Maternity or maternal (and related terms such as 'mother' and 'motherhood')

Although the explicit reason for undertaking a scoping exercise (as opposed to a systematic review) was to maximise the available literature, it was nevertheless important to assure the quality, relevance, and currency of the publications that were eventually included. Accordingly, the decision was taken to exclude books and unpublished theses at this stage.

2. The second stage of the process involved further refining the search in order to identify relevant peer-reviewed publications on research undertaken in this area. At this stage, the grey literature, opinion pieces and letters were also excluded. In light of the rate and volume of change in prison healthcare, the decision was taken to include only publications made in the last decade – that is, only publications between 1995 and 2005/6.

### **Stage 3: Data extraction**

Data were extracted by the principal investigator and recorded using data extraction tables (See Appendix 4, Page 51), which were then checked by an independent assessor.

### **Stage 4: Reporting Findings**

The information extracted from the first round of searches was used to develop the background/introductory section of the report and Part 1 of the results section; which presents information about the development and current status of perinatal healthcare in England and Wales (See Page 13).

Publications from phase 2 of the literature search form the basis of Part 2 of the results section '*Research into Pregnancy in Prison*' (See Page 25). For this section of the report, only peer-reviewed publications were examined. Findings were grouped together under emergent themes and reported using relevant sub-headings.

### **Stage 5: Drawing Conclusions & Making Recommendations**

Finally, conclusions were drawn about the current status (nature and scope) of perinatal healthcare in prisons in England and Wales and recommendations made for future research.

## **3 Results**

Initially, four hundred and twenty-two publications which referred to women's health and pregnancy/childbirth in prison were found. However, when they were scrutinised, some were found to refer to women's general health and/or reproductive health and not specifically to perinatal healthcare in prison. A total of one hundred and forty-two publications met the inclusion criteria and are the basis of the findings which are presented in the two parts of this section of the report. Findings 1 (Section 3.1) draws primarily on the grey literature to outline current provision, policy, and practice in perinatal health care in prisons in England and Wales. In Section 3.2 (Findings 2)

relevant national and international peer-reviewed publications in the last decade are summarized and presented thematically.

### **3.1 *Findings 1: Perinatal Healthcare in England & Wales***

#### **3.1.1 Women in Prison**

There are currently more than 139 prisons in England and Wales<sup>4</sup>. Fifteen<sup>5</sup> of these are women's prisons<sup>6</sup>. As with forensic mental health services, the size of the female population relative to the male prison estate (ratio 1:16) increases the likelihood of women's particular needs remaining overlooked/unmet within systems designed primarily for men (Reed, 1992; DH, 1999; Weatherhead, 2003; International Centre for Prison Studies, 2004).

#### **3.1.2 Epidemiology**

The number of women in prison in England and Wales has demonstrated an inexorable rise in recent times. According to data taken from the World Prison Population List (Home Office, 2004) the UK has the highest rate of imprisonment in the European Union. Although the overall prison population has risen by 75% in little over a decade (Hedderman, 2005) the rate of increase has been far greater among women (Fawcett Society, 2004). To illustrate, data from the Home Office website indicates that, in 1992, there were 1,577 women in prisons in England and Wales <http://www.homeoffice.gov.uk/rds/pdfs2/prissep03.pdf>. Within a decade, that number had virtually trebled reaching 'an all time high' of 4,672 in May 2004. In the twelve months between October 2004 and October 2005, there was a 7% increase in the female prison population. Figures for May 2006 show a slight decline in numbers to 4,435. However, further increases are predicted in 2006/7 (HM Inspectorate of Prisons, 2005).

According to Safyer & Richmond (1995), the United States (US) has the highest rate of imprisonment in the industrialised world. Figures from the US also show year-on-year increases in the female imprisoned population (of around 9%) during the past decade (US Department of Justice, 2004). In both the US and the UK, the rising female prison population has been largely attributed to changes in sentencing policy – such as increasing use of mandatory and gender-neutral sentencing (Dalley, 2002). The Home Office suggests that explanations for the growing number of women in prison are likely to be multi-factorial and may result from interaction between factors such as: increasing numbers of women entering the criminal justice system, increasing likelihood of women being sent to prison, and women receiving longer prison sentences (HM Inspectorate of Prisons, 2005).

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<sup>4</sup> Although provision is for women in England and Wales, services are all located in England.

<sup>5</sup> There were 17 women's prisons until 2005 when Buckley Hall (North West) and Durham (North East) were 're-rolled' to accommodate men (HM Inspectorate of Prisons, 2005).

<sup>6</sup> In May 2006, The National Offender Management Service announced that another two women's prisons (HMP Brockhill in Redditch and HMP Bullwood Hall in Essex) are to be 're-rolled' as male Category C establishments.

The UK government's explicit agenda to get "tough on crime" has led to a decrease in the use of fines and corresponding increase in the severity of sentencing and imprisonment of women who would not previously have received custodial sentences (DH, 2006, HM Prison Service 2006a). For example, in 1991 8% of women convicted of motoring offences received a custodial sentence. By 2001 that figure had risen by more than a factor of five to 42%. Since 1991, women convicted at Crown Court of theft or handling stolen goods are twice as likely to receive custodial sentences (Home Office, 2003) and there has been a seven-fold increase in the likelihood of women being sentenced to prison terms at Magistrates' Courts (Carter, 2004). As in the US (Mullen *et al*, 2003; Hiller *et al*, 2005), the UK's growing female prison estate has also been partially attributed to the 'deinstitutionalization' of psychiatric care which has been linked with increasing numbers of prisoners with serious mental illness.

### 3.1.3 Characteristics of Women in Prison

Although there has been a trend towards women receiving longer prison sentences, the nature of the crimes women commit means that, whilst increasingly likely to be sent to prison, they are also likely to receive shorter sentences than men – 41% of women (compared with 31% of men) receive sentences of less than eighteen (18) months (Caddle & Crisp, 1997). In 1995, only one-third (34%) of women who had been remanded in custody eventually received prison sentences and 61% of those who were sent to prison received sentences of less than 6 months. This means that there is a rapid turnover of women prisoners (90% at Holloway for example) with associated difficulties in ensuring that women receive appropriate rehabilitation, treatment, and/or support.

In addition to sentencing, the characteristics of prisoners reveal other marked gender differences. According to HM Prison Service (2006a), the composition of the women's prison population differs in virtually every respect from the male estate. For example:

- **Offending Behaviour**

Although women are convicted of serious crimes such as murder or manslaughter, in general, they tend to be imprisoned for less serious crimes than men and to exhibit lower rates of recidivism (Amnesty International, 2000). For example, women are less likely to commit crimes involving violence against the person – 75% of crimes committed by women are described as 'non-violent or minor' and 71% of women in prison have no previous convictions (DH, 2006: 9). They are, however, significantly more likely than men to be charged with breaches of discipline (DH, 2006). More than a third of women (36%) in prison have committed drugs-related offences (an increase on the 23%<sup>7</sup> reported by Caddle & Crisp in their report for the Home Office published in 1997).

- **Ethnicity**

As with the male prison population, women from Black and minority ethnic (BME<sup>8</sup>) backgrounds are over-represented in the prison system. However, the proportion of

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<sup>7</sup> Only 9% male prisoners were jailed for drug offences in the same period.

<sup>8</sup> Although other terms such as Black and Ethnic Minority (BEM) and Black, Asian and Minorities Ethnic (BAME) are sometimes used, Black and Minority Ethnic (BME) is currently most commonly used both in the literature and clinical practice to describe people from these ethnic groups and is therefore used throughout this report.

Black women exceeds that of their male counterparts – 30% of women prisoners belong to minority ethnic groups (compared with 24% of men). Twenty percent (20%) of women currently imprisoned in England and Wales are foreign nationals – almost double the proportion of men (11%). In 1997, the Home Office reported that whereas the majority of UK-based female prisoners received sentences of less than three years only 3% of foreign nationals did so - 97% received sentences of three years or more (Caddle & Crisp, 1997). In the US, non-White women are also disproportionately represented among female prisoners. According to Amnesty International (2000), across the US, Hispanics are four times and African Americans eight times as likely to be jailed as White American women. White women are also more likely to be sentenced to probation and, in some states; African American women are up to eighteen times more likely than their White counterparts to receive custodial sentences (Schroeder & Bell, 2005a).

- **Caring Responsibilities**

As with the general population, women prisoners are more likely than their male counterparts to be primary care-givers – both for their children and other dependants. Research undertaken for the Prison Reform Trust suggests that more than half of all women prisoners (55%) have children under sixteen years of age (Kay, 2004), one-third (33%) have at least one child under five, and 20% are lone parents. Whereas children tend to remain with their mothers when their fathers are jailed, the children of female prisoners face considerable disruption in virtually every area of their lives. For example, 71% of women in England and Wales<sup>9</sup> had been living with their children<sup>10</sup> prior to sentencing and for 85% of these children, their mothers' imprisonment represents the first period of prolonged separation from their mothers (Caddle & Crisp, 1997). According to HM Prison Inspectorate, only around five percent (5%) of the children separated from their mothers due to imprisonment each year remain in their family homes once their mothers have been sentenced.

Black and colleagues (2004) reporting on 2003 data from the UK, noted that almost thirty-two thousand children under sixteen years had been separated from their mothers due to imprisonment. Among them were almost three thousand (2,888) children under the age of eighteen months. However, there is little reliable information about the number of children born shortly before or during their mothers' prison sentences. Neither is there current and/or reliable data about the long-term outcomes of pregnancy, childbirth, and early motherhood in prison for women and their children.

### **3.1.4 The Health of Women in Prison**

It has been suggested that prisoners in general (de Viggiani *et al*, 2005 Feron *et al*, 2006) and women prisoners in particular (Marshall *et al*, 2001) place high demands on available prison health services because their pre-sentencing lifestyles increases the likelihood of women neglecting their health and engaging in 'risky behaviours' which threatens both their own health and that of their unborn children (Fogel, 1993); Mullen *et al*, 2003; Clarke *et al*, 2006). For example, in the US, Mullen and colleagues (2003) reported that 47% of women prisoners had traded sex for drugs or money in the six months prior to incarceration. Among adolescent detainees, 40% reported sex with a

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<sup>9</sup> Figures (70%) are almost identical in the US (Safyer & Richmond, 1995)

<sup>10</sup> 33% of children living with their mothers only before mothers imprisoned.

casual partner and 34% had not used any form of contraception (Crosby *et al*, 2004) – activities which increased the risk of both unplanned pregnancies and sexually transmitted infections.

Perceptions of high levels of service use among women in prison is endorsed by research (Young, 2000) suggesting that, in addition to gender-specific healthcare issues, women prisoners appear to have higher levels of medical need compared with women in the community – especially in relation to their mental health. For example, whereas population-base studies in the UK suggest that around 20% of women in the community experience symptoms of mental illness; 90% of women in prison have been found to have a diagnosable mental illness, substance misuse problem, or both (DH, 2006). This, despite deficiencies in screening (Parsons *et al*, 2001; Birmingham, 2003). Fifty-four percent (54%) of women on remand and 41% of those sentenced to prison are drug-dependent and national statistics suggest that 40% of women prisoners received treatment for mental illness in the year prior to imprisonment (Owen *et al*, 2004; Kesteven (nacro), 2002). Two-thirds (66%) have been reported as having a form of neurotic disorder such as anxiety or depression. Findings from the Confidential Enquiry into Maternal Deaths (1997 – 1999): Why Women Die<sup>11</sup> (2001) suggest that the women most at risk of suicide are poor, young women and those from Black and Minority Ethnic (BME) backgrounds. It has also been noted that whereas women account for less than 6% of the prison population, they account for 15% of completed and more than half attempted suicides (House of Commons & House of Lords, 2004; Fawcett Society, 2005).

These issues have potentially serious implications for women who are pregnant at the time of sentencing, women who deliver their babies whilst serving prison sentences, and those who enter prison in early motherhood since research has found strong and consistent associations between stressful life events and difficulties during the perinatal period and the increased risk of neurotic disorders such as antenatal and postnatal depression (See for example, Brown & Harris, 1978; O'Hara & Swain, 1996; Bhatia & Bhatia, 1999; Eberhard-Gran *et al*, 2001; Oates *et al*, 2004).

### **3.1.5 Pregnancy in Prisons in England & Wales**

Women in England and Wales have been giving birth and caring for their babies whilst serving prison sentences for well over a hundred years but arrangements were not formalised until the 1980's (Black *et al*, 2004). Until 1948, women delivered their babies in prisons. However, concerns about the safety of mothers and babies and stigmatization of children born in prison ('prison babies') resulted in changing practice. Currently, except in emergencies, all women deliver their babies in NHS maternity hospitals.

The practice of enabling women prisoners to care for their babies and young children in England and Wales is premised on the belief the best place for such young children is with their mothers (HM Prison Service, 2005). However, this is not the case in

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<sup>11</sup> The Confidential Enquiry into Maternal Deaths (CEMD) in conjunction with Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI) has been re-branded as The Confidential Enquiry into Maternal And Child Health (CEMACH) [www.cemach.org.uk](http://www.cemach.org.uk)



many places in the world (including most of the United States) where women continue to receive such 'cruel and unusual punishment' such as being shackled during and after birth (Wilson & Leasure, 1991; Wilson, 1993; Amnesty International 2000) – a practice which contravenes the European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (European Committee for the Prevention of Torture, 2001) and the US Constitution (Weatherhead, 2003). The practice was finally outlawed in the UK as recently as the late 1990's following vociferous campaigns by advocates for women (see for example, Kitzinger, 1994 & 1997) Non-Governmental Organizations (NGOs) such as The Howard League for Penal Reform, Maternity Alliance, the Association for Improvement of Maternity Services (AIMS); and professional groups such as the Royal College of Midwifery.

### 3.1.6 Pregnancy in Prison: Policy Framework

In the last decade, there have been a number of policies and government initiatives that have helped to shape perinatal healthcare in prisons in England and Wales. These include:

- ***Patient or Prisoner?*** (HM Inspector of Prisons, 1996)

This 1996 review of prison healthcare concluded that parallel NHS and Prison Health services were no longer tenable for the provision of appropriate healthcare in prisons. They recommended joint working between prison and the Nation Health services to reduce the disadvantages experienced by prisoners as a result of fragmented and sometimes incompatible ways of working. The report specifically highlighted deficiencies in healthcare provisions for pregnant women and juveniles (Young Offenders).

- ***The Future Organisation of Prison Healthcare*** (DH & HM Prison Service, 1999)

The findings of a Working Group of Officials from the Prison Service and the NHS Executive – jointly established by the Home Secretary and the Secretary of State for Health to review and develop prison health services in response the issues raised in '*Patient or Prisoner*'. The document identified strategies for raising the standard of prison healthcare to a level equal to that provided for the remainder of society.

- ***Improving Healthcare Services for Prisoners*** (DH, 2000a)

Details the programme of work established in response to the recommendations in the joint Prison Service/NHS Executive report, '*The Future Organisation of Prison Health Care*' (DH & HM Prison Service, 1999).

- ***Framework for the Assessment of Children in Need and their Families*** (DH, 2000b)

Informed by the Children Act (1989), this framework document provides a systematic way of analysing, understanding, and recording what is happening to children and young people both in their families and the wider communities in which they live.

- ***The NHS Plan: A plan for investment. A plan for reform*** (DH, 2000c).

Outlines the government's vision of a patient-centred health service. It also signals new and more complimentary ways of working between health and social services, a move

away from hospital- to community-based care, increasing involvement of the private sector in delivering NHS targets and new roles/ways of working for professionals.

- ***Changing the Outlook: A Strategy for Modernising Mental Health Services in Prisons*** (DH & HM Prison Service, 2001)

Outlines the joint Department of Health and Prison Service strategy for modernising mental health services in prisons.

- ***Developing and Modernising Primary Care in Prisons*** (DH & HM Prison Service, 2002)

Presents a guidance framework for developing primary care services in prisons in England and Wales. Whilst not endorsing any one model of care, it highlights key principles and characteristics of good quality primary care health services.

- ***Guidance on developing prison health needs assessments and health improvement plans*** (DH, 2002a)

Provides guidance on how to develop existing NHS Health Needs Assessments (HNAs) and Health Improvement Plans (HImPs) to meet the needs of prisoners by developing and implementing Prison Health Improvement Plans (PHImPs) under the guidance of Local Prison Health Steering Groups (PHSGs). PCTs and prisons in their catchment areas were required to produce Prison Health Improvement Action Plans by 30 September 2002.

- ***Women's Mental Health: Into the Mainstream*** (DH 2002b) & ***Mainstreaming Gender and Women's Mental Health – Implementation Guidance*** (DH, 2003)

The consultation document (DH, 2002a) and subsequent guidance (DH, 2003) highlight deficiencies at every level of service provision for the mental health of women. The documents outline strategies for developing women-centred services capable of meeting the needs of women from a range of backgrounds and in different contexts – including primary care and the Criminal Justice System.

- ***Choosing Health: Making Healthier Choices*** (DH, 2004b)

In line with their focus on health and wellbeing, this Government White Paper outlines the government's approach to 'supporting the public to make healthier and more informed choices in regards to their health'.

- ***National Service Framework (NSF) for Children, Young People & Maternity Services*** (DH 2004b)

The Kennedy Report (2001) into children's heart surgery at Bristol Royal Infirmary and the Laming report into the death of Victoria Climbié (2003) were key drivers in expediting the Department's commitment to developing a NSF for children which was first proposed in 2001. Published on 15 September 2004, this NSF sets standards for children's health and social services, and the interface of those services with education. It also highlights the issues facing children 'living away from home' in prison settings and the care of Young Offenders.

- ***Women at Risk: The mental health of women in contact with the judicial system*** (DH, 2006)

This report examines factors affecting the mental health of women in prison, gives guidance, and raises awareness of good practice within the NHS which could be used to improve the mental health of women prisoners.

In the context of this research it is worth noting that two key objectives of the report were to enable organisations to:

- a) maintain the optimum mental of health of women in the criminal justice system
- b) help prevent re-offending

- ***The Management of Mother & Baby Units: PSO 4801 (3<sup>rd</sup> Ed.)*** (HM Prison Service, 2005)

Provides details of the requirements for operating Mother & Baby Units (MBU's). It also gives guidance on the care of babies and children in prisons, and provides instructions and advice on separating mothers and their children.

### **3.1.7 Mother and Baby Units in Prisons in England & Wales**

According to the Home Office, “specialist medical services provided for women [in prison] are the same as those that you would expect outside prison including breast and cervical screening, family planning, and sexual health services” (HM Prison Service, 2006a: p). However, there are important differences between pregnant and childbearing women in prison and those in the community particularly in terms of their ability to exercise choice and control over the care/services they receive. For example, the implementation of initiatives such as ‘Changing Childbirth’ (DH, 1993) means that, at a community level, most women are able to exercise choice over whether they have their babies in hospital or at home. There is no ‘at home’ option for women prisoners. Pregnant prisoners must, except in emergencies, deliver their babies outside prison – specifically, in the NHS maternity hospital local to the prison. This appears to contradict the government’s focus on choice, practice guidance on individuals’ rights to exercise genuine choice in healthcare (DH, 2004) and the Prison Service’s assertion that women are supported “according to individual need” (HM Prison Service, 2005).

In 1998, the Director General of HM Prison Service instituted a multi-disciplinary review of the nature and scope of provision for the care of mothers and babies in prison. The recommendations made in the ‘Report of a Review of Principles, Policies, and Procedures on Mothers and Babies/Children in Prison’<sup>12</sup> (HM Prison Service, 1999) were largely accepted. Subsequent Prison Service Orders (PSOs) have provided instruction, advice, and good practice guidance for the management of Mother and Baby Units (MBUs) in prisons in England. The latest of these (PSO 4801, 3<sup>rd</sup> Edition) was published in 2005 (HM Prison Service, 2005).

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<sup>12</sup> See Appendix 1 for information about the Legal framework for establishing and running prison Mother & Baby Units in England & Wales.

A Mother and Baby Unit has been defined by the Prison Service as:

*“...designated separate living accommodation within a women’s prison, which enables mothers to have their children with them whilst in prison”* (HM Prison Service, 2005: Page 6).

Although mothers retain parental responsibility for their children (Scott & Blanter, 1998), MBUs exist “first and foremost for the benefit of the children who are not prisoners and have committed no offence” (HM Prison Service, 2005: Page 6). Prison MBUs are intended to promote healthy child development in “a calm and peaceful environment” (HM Prison Service, 2005: Page 6). In this context, whilst a mother’s rights are recognised, those of babies and children predominate. Moreover, the rights of individual children “may exceptionally have to take second place to the best interests of other children on the Unit” (HM Prison Service, 2005: page 6).

### **MBUs in Prison and the Community**

There are important differences between Mother and Baby Units in prisons and those within the National Health Service (NHS). For example, in the NHS, MBUs are part of psychiatric rather than acute services. MBUs in psychiatric units deal with women suffering acute episodes of perinatal mental illness such as severe postnatal depression or puerperal psychosis or recurrence/first episode of other serious mental illnesses such as schizophrenia or psychosis. In prison, women with mental illnesses are unlikely to be allocated places on Mother & Baby Units (See Box 1, Criteria for Admission to MBUs: Page 23). Instead, the focus is on providing a suitable environment for the care and development of babies and young children whose mothers are imprisoned. In addition, MBUs in prisons are not ‘places of safety’. Unlike MBUs in the community, MBUs in prisons do not admit women and babies ‘for assessment’ – the process by which Social Services determine the fitness or otherwise of mothers to care for their babies or whether to take children into the care of the Local Authority (HM Prison Service, 2005).

## **3.1.8 The Scope of MBU Provision in England and Wales**

### **i) Number of Places**

Despite lack of clear statistics about the number of pregnant<sup>13</sup> and recently-delivered women in prison in England and Wales, the growing female prison population is reflected in increasing numbers of places in prison MBUs. There are now seven prison MBUs (Table 2) compared with four in 2003/4. The number of places available for women has risen accordingly and currently stands at 114<sup>14</sup> places for women and 120 for babies (HM Prison Service, 2005) virtually doubling the number of places available (64) just a few years ago (Birmingham *et al*, 2004). All but one of the MBUs (Askham

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<sup>13</sup> In the first quarter of 2006, one hundred (100) women prisoners were known to be pregnant. However, women do not have to disclose pregnancy. Neither can they be subjected to medical treatment and/or examination without their consent except in emergencies. According to anecdotal evidence from prison staff, some women claim to be pregnant but refuse pregnancy testing. Accordingly, women on remand and those serving short sentences may enter and leave the service without their pregnancies being confirmed and/or recorded. Only 26% of pregnant women interviewed in 1997 expected to deliver whilst in prison (Caddle & Crisp, 1997).

<sup>14</sup> In addition, a 3-bedded unit is currently being developed at Rainsbrook Centre near Rugby in the Midlands.

Grange) are located in closed prisons. Peterborough (run by the independent sector), Bronzfield, Eastwood Park and Askham Grange are purpose-built and are therefore said to provide substantially better accommodation and facilities than the remainder of the units<sup>15</sup>.

Although the number of places in MBUs has increased, the geographical spread of women's prisons mean that many women will be imprisoned a long way from their homes or the prisons into which they were first received. This raises concerns about women's ability to maintain contact with their families – including small children and babies who might have been delivered during women's sentences but subsequently cared for in the community (Acoca, 1998; Marshall *et al*, 2000).

### ii) **Number of Births**

In 1997, Levy noted that there was “almost universal absence of the prison population from national health statistics” (Levy, 1997: 1395). Almost a decade later, little has changed. There remains a lack of available data on aspects of prison health provision such as perinatal healthcare. Indeed, systematic data collection in relation to imprisoned women, pregnancy, and childbirth only began in 2005. Perhaps unsurprisingly, when the Women's Team and Juvenile Group at HM Prison Service began to collect these data, there were gaps in the information supplied for analysis in the first year of data collection. Indeed, some prisons failed to return any data at all. However, in the first quarter of 2006, nineteen (19) babies were born to imprisoned women<sup>16</sup> in England and Wales (Adams Young, 2006).

### iii) **Length of Stay**

The maximum age at which babies can remain with their mothers in England and Wales is 18 months<sup>17</sup> (Bronzefield, Peterborough, Styal, Eastwood Park and Askham Grange). In the remaining units (New Hall and Holloway) women can keep their babies with them up to the age of 9 months. Appendix 2 outlines current MBU provision in England and Wales and places findings in an international context. It shows that there is significant international variation in lengths of stay for children and babies – ranging from 6 months in Hungary to 7 years in Turkey. The majority of countries are clustered around the mid-point (3 years) – twice the maximum length of stay in the UK.

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<sup>15</sup> Information about the prisons with Mother and Baby Units (MBUs) can be found at <http://www.hmprisonservice.gov.uk/prisoninformation/locateaprison/>

<sup>16</sup> Babies are not born in prisons but in the nearest NHS maternity hospitals.

<sup>17</sup> There is some flexibility. For example, babies who are 18 months old before the end of their mothers' sentences are unlikely to be separated from their mothers where sentences are nearing completion.

**Table 1: The Nature and Scope of MBU Provision in England & Wales**

PRISON & (LOCATION)	PRISONER STATUS	SECURITY CATEGORY	NUMBER of PLACES		BABIES' UPPER AGE LIMIT
			Mothers (n=114)	Babies (n=120)	
<b>Askham Grange (Near York)</b>	Sentenced	Open	30	33	18 Months
<b>Bronzefield (London)</b>	Remand, Convicted & Sentenced	Closed	12	13	18 Months
<b>Eastwood Park * (Gloucestershire)</b>	Remand, Convicted & Sentenced	Closed	12	12	18 Months
<b>Holloway (London)</b>	Remand, Convicted & Sentenced	Closed	17	17	9 Months
<b>New Hall * (Near Wakefield)</b>	Remand, Convicted & Sentenced	Closed	9	10	9 Months
<b>Styal (Wilmslow, Cheshire)</b>	Remand, Convicted & Sentenced	Closed	22	23	18 Months
<b>Peterborough (Peterborough)</b>	Remand, Convicted & Sentenced	Closed	12	12	18 Months

\*Facilities for Young Offenders under 18

Adapted from HM PSO 4801 (HM Prison Service, 2005)

### 3.1.9 Applying for a Place on the Mother & Baby Unit (MBU)

Applications for admission to MBUs are assessed (See Box 1 for Admission Criteria) on an individual basis by multi-disciplinary teams whose primary focus must be on what will be in the best interests of the child (HM Prison Service, 2005). Every women's prison in England and Wales should have a designated Mother and Baby Liaison Officer (Prison Reform Trust & HM Prison Service, 2003; Ash, 2003) whose role is partly to support women (many of whom have poor literacy and/or special educational needs) (Birmingham *et al*, 2004) with the application process.

#### **Box 1: Criteria for Admission to Mother & Baby Units (HM Prison Service, 2005)**

- It is in the best interests of the child/children to be placed in a Mother and Baby Unit.
- The mother is able to demonstrate behaviours and attitudes which are not detrimental to the safety and well-being of other Unit residents (or the good order and discipline of the Unit).
- The mother has provided a urine sample which tests negative for illicit drugs.
- The mother is willing to remain illicit drug-free.
- The mother is willing to sign a standard compact, which may be tailored to her identified individual needs.
- The mother's ability and eligibility to care for her child is not impaired by poor health, or for legal reasons such as the child being in care or on the Child Protection Register as the result of the mother's treatment of that child, or other children being in care.

Scott & Blanter (1998) suggest the following additional admission criteria:

Babies must be less than 18 months old

Mothers must be willing to assume full parental (including caring) responsibility for their children<sup>18</sup>.

Mothers must consent to their babies being searched when required to do so.

In the first quarter of 2006, one hundred and three applications were made for places on prison MBUs. If a woman's application for an MBU place is successful, she will usually remain on 'normal location' – that is the prison to which she has been remanded or sentenced – until it is time to deliver her baby. Following delivery at the local NHS Hospital, women and their babies are either moved to the MBU or separated (the mothers returning to prison and their babies being placed in the community) once medically stable. Since applications are not made to individual

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<sup>18</sup> Mothers' parental rights and responsibilities are protected under the Children Act, 1989. They can only be transferred or removed by the courts.

MBUs but to the service as a whole, successful applicants might be placed at significant distances from their home<sup>19</sup> or receiving/local prisons depending on the availability of places. This is especially the case for young offenders for whom there are only two designated MBUs – New Hall in Wakefield, Yorkshire and Eastwood Park in South Gloucestershire – for the whole of England and Wales.

### **3.1.10 Alternatives to Accessing Mother & Baby Units**

Clearly not all applications to the MBUs will be successful. In addition, not all women want or will be allowed to keep their babies with them in prison. Alternatives include:

1. Women opt to have their children cared for by relatives or friends and make arrangements accordingly (subject to the approval of Social Services).
2. If refused a place on the Mother & Baby Unit<sup>20</sup>, Prison and Social Services will liaise with the woman to determine where to place her child/children.
3. Social Services may decide that it is not in the best interest of the child to remain with its mother. Under these circumstances, the child would be placed in the care of the Local Authority who will subsequently determine long term care arrangements.

Full details of the processes and procedure governing the management of prisons' MBUs such as: the legislative framework, staffing and accommodation, admission (including temporary admission), managing refusals and the separation of mothers and babies/children ([Prison Service Order 4801 Edition 3](#)) can be found on the Prison Service website <http://www.hmprisonservice.gov.uk>

## **3.2**

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<sup>19</sup> In 2005, NOMS found that 33% of women in the North West were from outside the region (NOMS, 2005).

<sup>20</sup> Ideally women who wish to breastfeed should be encouraged to do so – even when they are refused access to MBUs. However, where women and their babies are separated by large distances, this is clearly not possible.



## **Findings 2: Research into Pregnancy, Childbirth, and Early Motherhood in Prison**

Reform of the criminal justice and prison healthcare systems in England and Wales has gathered momentum in the last decade. This has had a significant impact on the number of pregnant and recently-delivered women entering prison and associated provision of perinatal healthcare. For example, the rising female prison population has been accompanied by an increase in the provision of places on Mothers and Baby Units in England and Wales (there are currently 114 places for babies compared with 48 in 1997). These changes have meant that, whilst historically interesting and important for contextualizing current provision, publications before 1995 relate to services which are likely to have been fundamentally different to those which have emerged in the past decade. Accordingly, the decision was taken to include only papers that had been published in the last decade (1995 to 2005/6) in this section.

Data were extracted from the twenty-three selected papers (Table 2) which met search criteria (See Methods section (Page 10) for details), analysed, and grouped into themes, which are presented below under relevant sub-headings. The nature/content of some papers means that they are included in more than one theme. Brief details of the papers are presented in tables within the text. More detailed summaries can be found in matrices in Appendix 4, page 51.

**Table 2: Papers Included in the Review**

<b>Type of Article</b>	<b>Country of Origin</b>		<b>Total</b>
	<b>UK</b>	<b>US</b>	
<b>Reviews</b>	3	0	<b>3</b>
<b>Papers</b>	2	18	<b>20</b>
<b>Total</b>	5	18	<b>23</b>

The main themes that emerged from the peer-reviewed publications presented here were:

- Demographics and Risk Factors for Pregnancy in Prison
- Perinatal Health Needs and Service Provision
- Outcome of Pregnancy in Prison
- Imprisoned Mothers and their Children
- Pregnant Adolescents in Prison

### **Theme 1: Demographics and Risks Factors for Pregnancy in Prison**

Findings from the US (five papers), UK (two papers) and international literature (one paper) suggest that, as with the wider prison population, there are consistent associations between ethnicity, poverty and likelihood of imprisonment (Schroeder & Bell, 2005a; Knight & Plugge, 2005a). Although the proportions varied, minority ethnic women in general and women of African decent in particular were at significantly increased risk of being pregnant and in prison. In their study of Mother & Baby Units in

England, Birmingham and colleagues (2004) reported that over half their sample were women from Black and minority (BME) backgrounds. They concluded that women in prison MBUs formed a distinct sub-set of the female prison population with different demographic profiles from the remainder of the women's prison estate. These differences were partly attributed to the selection criteria which appeared to favour BME women (specifically foreign nationals) who may be regarded as relatively stable (more likely to have longer sentences, less likely to have mental illness, more likely to be able to assume caring responsibility for their babies) and therefore preferred candidates for admission. In the US, Fogel & Belyea (2001) also found that women in their study were predominantly, young, poor, single, under-educated and Black with little access to social support and Siefert & Pimlott (2001) reported that 71% of their sample was African American.

**Table 3 Demographics and Risks Factors for Pregnancy in prison – Papers in this theme**

Paper	Country	Participants	Method
Eliason & Arndt (2004) Pregnant Inmates: A Growing Concern	US	53 pregnant and 1160 non-pregnant prisoners	Secondary data analysis of Iowa Medical & Classification Center (IMCC) dataset (1996 – 2001)
Knight & Plugge (2005a) Risk factors for adverse perinatal outcomes in imprisoned pregnant women: a systematic review	UK (Review international literature)	13 papers (1504 imprisoned pregnant women and 4571 population controls)	Systematic review
Fogel & Belyea (2001) Psychosocial risk factors in pregnant inmates: a challenge for nursing	US	63 pregnant prisoners (3 <sup>rd</sup> trimester) (1993 – 95)	Mixed method, prospective study
Siefert & Pimlott (2001) Improving pregnancy outcome during imprisonment: a model residential care programme	US	a. 50 'key individuals' from relevant agencies b. Women prisoners	1. Telephone interviews 2. review 120 prisoners' medical records 3. Focus groups with women prisoners
Birmingham <i>et al</i> (2004) Psychiatric morbidity and mental health treatment needs among women in prison MBUs	UK	55 women in prison MBUs (122 children between them - 25% born before mothers imprisoned)	<ul style="list-style-type: none"> <li>Survey of women and prison staff to determine nature and prevalence of psychiatric treatment needs</li> <li>Review Inmate Medical Record (IMR)</li> <li>Mental health/illness assessment via standard psychiatric interview.</li> </ul>
Sable <i>et al</i> (1999) Violence victimization experiences of pregnant prisoners	US	80 pregnant prisoners; matched with 1,623 non-incarcerated pregnant women	Secondary data analysis (care records) and self-reports from screening interviews
Schroeder & Bell (2005a) Labor support for incarcerated pregnant women : the Douala Project	US	18 women (12 ethnic minorities) & 40 prison staff	Qualitative interviews with 14 women Survey (prison staff)

Pregnant women in prisons were also likely to have had difficult childhoods characterised by victimization and neglect (Sable *et al*, 1999; Knight & Plugge, 2005a). In their study of the psychosocial risks associated with pregnancy in prison, Fogel & Belyea (2001) found that more than three-quarters (76%) of inmates had experienced violence as children. Strong and consistent links between the experience of violence in childhood and substance misuse were reported which, in turn, was

associated with increased likelihood of imprisonment. For example, 88% of pregnant women in a study by Eliason & Arndt (2004) reported having a problem with drugs, alcohol, or both – of these 90% used illicit or ‘street drugs’. Interestingly, 66% of pregnant prisoners (compared with 37% of non-pregnant prisoners) abstained from drug use in the previous 6 months and, among those who continued to use drugs there were reports of women switching from narcotics such as crack cocaine or methamphetamines to perceived ‘safer’ alternatives such as marijuana. The authors concluded that, despite challenging circumstances, drug-using pregnant prisoners appeared to adopt health promotion advice.

In addition to substance misuse, Birmingham *et al* (2004) found associations between prison and other forms of social exclusion – more than one-third (36%) of women in their study had experienced homelessness and nearly one-quarter had IQ scores of less than 70. In their systematic review, Knight & Plugge (2005a) found that, despite medical and other known risk factors for poor pregnancy/birth outcomes, 30% of imprisoned pregnant women received inadequate care.

Reports by Birmingham and colleagues (2004) that the majority of pregnancies (82%) in their sample were unplanned are in line with other findings suggesting that women who have troubled childhoods demonstrate relative powerlessness and inability to assert control over their bodies and/or exercise contraceptive choice (Mason *et al*, 1998; Dalley, 2002; Clarke *et al*, 2006). In addition, the trajectory of these women lives makes it less likely that they will develop effective parenting skills thereby increasing the risk of their own children experiencing neglect, enforced separation, and eventual criminalization (Schroeder & Bell, 2005a; Fogel & Belyea, 2001; Knight & Plugge, 2005a).

## **Theme 2: Perinatal Health Needs and Service Provision**

Of the six papers reviewed, five used either qualitative or mixed method designs. Two were from the UK and four from the US. Three of the four US papers were produced by the same team of researchers. In their survey of psychiatric morbidity and mental health treatment needs in the four Mother & Baby Units that were operational in 2003/4, Birmingham and colleagues (2004) found evidence of mental disorder in almost two-thirds (60%) of their sample. They found that only three of the women with research diagnosis of depression<sup>21</sup> were receiving treatment at the time of the study and that their treatment commenced prior to imprisonment. Birmingham *et al* (2004) also report that there was little or no information about women’s mental health or treatment needs in inmates’ medical records.

In 2001, Siefert & Pimlott reported that women in their US study had little control over labour or delivery and routinely experienced infringements of their privacy and dignity. For example, women were frequently transferred to labour wards in belly chains and had armed male prison officers present throughout the labour and birthing process.

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<sup>21</sup> There were no reports of specific diagnoses of postnatal /perinatal depression.

Although women received ‘basic medical care’, there were no interventions designed to improve pregnancy outcome. Siefert & Pimlott (2001) concluded that special programmes for pregnant prisoners are warranted.

**Table 4 Perinatal Health Needs and Service Provision**

Paper	Country	Participants	Method
Price S (2005) Maternity Services for Women in Prison	UK	15 midwives	Mixed method survey
Bell <i>et al</i> (2004a) Perinatal Health Service use by Women Released from Jail	US	453 women in jail between 1993 – 1998	Retrospective cohort study
Schroeder & Bell (2005b) Douala Birth Support for Incarcerated Pregnant Women	US	18 women (12 ethnic minorities) & 40 prison staff	Qualitative interviews with 14 women Survey (prison staff)
Schroeder & Bell (2005a) Labor support for incarcerated pregnant women: The Douala Project	US	18 women & 40 prison staff	Qualitative interviews with 14 women Survey (prison staff)
Siefert & Pimlott (2001) Improving pregnancy outcome during imprisonment: a model residential care programme	US	i. 50 ‘key individuals’ from relevant agencies ii. Women prisoners	1. Telephone interviews 2. review 120 prisoners’ medical records 3. Focus groups with women prisoners
Birmingham <i>et al</i> (2004) Psychiatric morbidity and mental health treatment needs among women in prison MBUs	UK	55 women in prison MBUs	1. Survey of women and prison staff to determine nature and prevalence of psychiatric treatment needs 2. Review Inmate Medical Record (IMR) 3. Mental health/illness assessment via standard psychiatric interview.

In their research into providing support for women during delivery, Schroeder and Bell (2005a) report that pregnant women in their sample felt unsafe and were given no ‘special consideration’ by prison staff. Indeed, women reported having to fight for medical attention, being constantly hungry, and being detained in physically uncomfortable facilities. Prior to establishing their Douala birth support programme, women in Bell and Schroeder’s study went through labour and delivery alone – unless accompanied by prison officers – and received little or no emotional support. The researchers concluded that women’s reports of the high value they place on peer support might point the way forward in building imprisoned women’s confidence and self-esteem and reducing their feelings of loneliness and isolation during the perinatal period.

Findings in relation to specialist prison maternity services, although generally positive, were mixed. Whereas Price (2005) found that care in MBUs was no better than that in the remainder of the women’s estate, Bell *et al* (2004a) reported improved access to antenatal care for women prisoners compared with their use of services in the community. Schroeder & Bell (2005a) concur with previous reports over a twenty-year period suggesting that prison might improve the perinatal care women receive compared with similarly disadvantaged women in the community and that prisons therefore offer unique opportunities for improving the healthcare of this group of ‘high-risk’ women (see, for example: Elton, 1985; Elton 1987; Martin, 1997; Barkhauskas, 2002). However, Price (2005) suggests that structural and gender inequalities in the

prison system are so firmly embedded (for both women prisoners and women staff) as to undermine the healthcare of the former and professional autonomy of the latter rendering both groups of women disempowered and contributing to ongoing deficiencies in perinatal healthcare of prisoners.

### **Theme 3: Outcome of Pregnancy in Prison**

Of the eight papers reviewed in this theme, seven were studies from the US. The eighth was a systematic review of the international literature but here too studies from the US (7 out of 10) predominated. The nature of the studies also warrants mention. There was a single prospective study. The remainder were either service' reviews, secondary data analysis, or reviews of patient records. This clearly limits the authors' ability to infer causality and also has implications for the external validity/generalisability of findings.

**Table 5 Outcome of Pregnancy in Prison**

Paper	Country	Participants	Method
Knight & Plugge (2005b) The outcomes of pregnancy among imprisoned women: a systematic review	UK	10 papers (1960 pregnant women, 10,858 controls)	Systematic Review.
Mertens (2001) Pregnancy outcomes of inmates in a large county jail setting	US	71 pregnant inmates	Review of medical and support services
Barkhaus <i>et al</i> (2002) Health outcomes of incarcerated pregnant women and their infants in a community-base program	US	52 drug-dependant women	Cross-sectional case control study.
Siefert & Pimlott (2001) Improving pregnancy outcome during imprisonment: a model residential care programme	US	44 pregnant women enrolled on Women & Infants at Risk Program (WIAR)	1. Review of WIAR records (1991 – 1995) 2. Follow-up telephone calls (33 women)
Martin <i>et al</i> (1997a) Is incarceration during pregnancy associated with infant birth?	US	168 women jailed in pregnancy 630 women jailed at other times 3,910 never incarcerated	Secondary data analysis
Kyei-Aboagye <i>et al</i> (2000) Birth outcome in incarcerated, high-risk pregnant women	US	149 women (In prison n=31; on methadone program n=47; Random controls n=71)	Retrospective analysis of pregnancy outcome
Bell <i>et al</i> (2004b) Jail incarceration and birth outcomes	US	496 singleton births to prisoners compared with 4,960 births to non-prisoners	Secondary data analysis
Martin <i>et al</i> (1997b) The effect of incarceration during pregnancy on birth outcomes	US	94 women jailed during one pregnancy but not another	Data generated from prison records matched with health service records

Although a range of outcome measures were employed, the majority of the research focused on early (neonatal/perinatal) infant outcomes. Knight & Plugge (2005b), using stillbirth and birth weight as outcome measures, concluded from their systematic review of the literature that imprisoned pregnant women had better outcomes than

disadvantaged women in the community. Bell *et al* (2004b) reported that, among women in their study, every day spent in prison increased babies' weight by 2g and decreased the odds of having a low birth weight baby by 2%. They also found that the odds of preterm delivery increased with the number of incarcerations during pregnancy and that imprisoned pregnant women in their thirties were at greatest risk of having low birth weight babies. Martin *et al* (1997a) also reported an exposure-response association between the length of time spent in prison and pregnancy outcome – each additional day in prison increased a baby's birth weight by 1.4g. Intriguingly, Martin *et al* (1997a) reported that women who had spent time in prison other than during pregnancy were significantly more likely to have poorer outcomes than women who were in prison whilst pregnant.

From the papers reviewed in this theme, there emerged a broad though not universal consensus that, in comparison to other disadvantaged groups, imprisoned pregnant women had better infant outcomes. Whilst it is unclear what factors might account for this, the suggestion is that certain aspects of the prison setting such as shelter, regular meals, and 'drug-free' settings provide a relatively nurturing environment for women who are likely to have experienced difficult, 'chaotic lifestyles' in the community in which their health and well-being are likely to have been neglected.

However, Kyei-Aboagye *et al* (2000) caution against interpreting these findings to mean that imprisoning pregnant women is a good idea. Indeed, it is worth noting that not all authors reported such positive outcomes. When Siefert and Pimlott (2001) reviewed the medical records of one hundred and twenty women, they found that although 71% of women had normal deliveries, there were major complications or medical problems in 33% of cases and 14% of babies had to be admitted to neonatal intensive care units. Mertens (2001) attributed increased risk for low birth weight babies among prisoners (compared with the general population) to the short sentences some women receive, which limits opportunities for adequate perinatal care, for example: accessing screening, engaging with support services (such as counselling, education and nutrition), or for agencies to provide coordinated post-discharge care.

#### **Theme 4: Imprisoned Mothers & Their Children**

In 1997, Caddle & Crisp reported on their major survey of the women's prison estate in England, undertaken on behalf of The Home Office. *'Imprisoned Women & Mothers'* (Research Study 162) is a comprehensive 'snapshot' of all women in prison on a given day. In addition to collecting demographic data and conducting 'screening interviews' with women, they interviewed 1,082 mothers in-depth. They found that almost two-thirds of women were depressed and 56% of women reported being lonely – much of this was related to women's concerns about their children and other relationships outside prison. Not surprisingly, the proportion of women complaining of loneliness was considerably higher (80%) among foreign nationals who had two hundred and ninety (290) children between them prior to imprisonment. Nearly half the women (47%) had health problems and up to 39% reported having problems with their partners or close family.

Caddle and Crisp (1997) also found that almost three-quarters of the women (68%) had children of school age (5 – 16) and a third (30%) had children less than 5 years old. Unlike the imprisonment of fathers where children usually remain in their homes and with their mothers; the children of imprisoned mothers face significant disruption and experience the unintended consequences of their mothers' incarceration. For example, for 85% of children, their mothers' imprisonment was their first experience of separation from their mothers. Most mothers on remand (63%) and almost half of sentenced prisoners (48%) said that their children did not know they were in prison. Whilst 66% of mothers said that this was because their children were too young to understand, 32% had felt too guilty or ashamed to tell their children the truth. Instead, children had been told that their mothers were working away from home (24%) or in hospital (21%) (Caddle & Crisp, 1997). A similar picture emerged from the work of Poehlmann (2005a, 2005b) in the US. She reported that whilst half the children were given honest explanations of their mothers' absence, 20% were given distorted information (stories about their mother being away at college or in hospital etc) and a further 18% of children were given graphic and potentially frightening details by their non-maternal caregivers.

**Table 6 Imprisoned Mothers & Their Children**

Paper	Country	Participants	Method
Caddle & Crisp (1997) Imprisoned women and mothers	UK	1,596 civil, remand, sentenced prisoners	Data extraction from prison records Screening interviews & In-depth interviews
Wismont (2000) The lived pregnancy experience of women in prison	US	12 women (9 BME).	Qualitative analysis
Schroeder & Bell (2005b) Labor support for incarcerated pregnant women: The Douala Project	US	18 women 40 prison staff	Qualitative interviews with 14 women
Poehlmann (2005a) Incarcerated mothers' contact with children, perceived family relationships, and depressive symptoms	US	94 incarcerated mothers of children aged 2 – 7	Mixed method: <ul style="list-style-type: none"> <li>• Quantitative – attachment and depression scales</li> <li>• Qualitative – interviews</li> </ul>
Poehlmann (2005b) Representations of attachment relationships in children of incarcerated mothers	US	54 children (aged 2.5 – 7.5), their incarcerated mothers and caregivers	Multiple methods: Interviews, questionnaires, coded videotapes, standardised assessments

Wismont (2000) and Schroeder & Bell (2005b) undertook small qualitative studies in the US with pregnant imprisoned women. In common with most expectant mothers, women in Wismont's study expressed concerns about foetal well-being. However, they also experienced apprehension, grief, and loss as most knew they would be separated from their babies at birth. In addition, women expressed feelings of subjugation, lack of autonomy, isolation, and powerlessness – all of which have been linked to increased risk for onset of postnatal depression (O'Hara & Swain, 1996; Brown & Harris, 1978; Oates *et al*, 2004). Women in Schroeder & Bell's (2005a; 2005b) research also reported finding imprisonment a stressful, negative experience which left them feeling unsafe and uncared for. However, women report that they tried to effect positive attitudes and sought out positive situational outcomes for the sake of their children (Wismont, 2000).

There was evidence that the children of imprisoned women experienced physical, emotional, behavioural, and psychological problems. Eighty-three percent of children in a US study were said to react to separation from their mothers with prolonged periods of tearfulness, sadness, and calling for their mothers often accompanied by refusal to eat (Poehlmann, 2005b). In addition, more than half (52%) appeared to be confused whilst 40% demonstrated angry or 'acting out' behaviours. One-third (32%) of the children in the study were said to experience problems sleeping and 22% exhibited signs of developmental regression such as soiling and becoming 'clingy'. According to mothers in the UK study by Caddle and Crisp (1997), 44% of their children whose mothers were incarcerated experienced behavioural difficulties. More than one-third (37%) had difficulty settling into school and around one-quarter (26%) had difficulty with school work and school attendance. One third (30%) of children whose mothers were in prison were described as 'being withdrawn' – a similar proportion (33%) were described in a US study as being 'indifferent' to separation from their mothers (Poehlmann, 2005b). This figure doubled (65%) where children had been placed 'in care'. Twenty-seven percent of children were said to have difficulty sleeping, 26% had health problems and 22% eating disorders. Mothers' fears that their children might fall into delinquency was realised by 17% who reported that their children were 'mixing with the wrong crowd' and were involved in such activities as truancy which has been linked to educational failure and increased risk of entering the criminal justice system (Caddle & Crisp, 1997).

### **Theme 5: Pregnant Adolescents in Prison**

If pregnant prisoners are a minority within a minority, pregnant adolescents are an even smaller and potentially even less visible minority group (Acoca, 1998). All the papers reviewed in this section were from the US, there were no publications which dealt specifically with the issues encountered by pregnant adolescents and perinatal healthcare in the UK.

Although there is little reliable data, Anderson & Farrow (1998) estimated that, at any given time, there are at least 14 pregnant adolescents in Washington State alone. However, this represents less than 1% of the prison population with implications for service delivery.

**Table 7 Pregnant Adolescents/Young Offenders**

Paper	Country	Participants	Method
Breuner & Farrow (1995) Pregnant teens in prison: prevalence, management and consequences	US	261 juvenile detention and long-term correctional facilities	Survey questionnaires
Anderson & Farrow (1998) Incarcerated Adolescents in Washington State: Health Service Utilization	US	12 (out of 24) juvenile detention facilities	Monthly data collection survey
Mason <i>et al</i> (1998) Sexual and physical abuse among incarcerated youth: implications for sexual behaviour, contraceptive use, and teenage pregnancy	US	62 female and 334 male incarcerated youth	Self-report survey



In their survey of 430 US juvenile detention centres, Breuner & Farrow (1995) also highlighted the unreliability and incompleteness of available data. Although limited, the available data suggested that pregnant adolescents were being poorly served. The healthcare they received was substantially inferior to that in the wider community. In fact, such were the deficiencies in service provision that more than half the adolescent detention centres released pregnant young women because of fears of litigation. Deficiencies in provision include lack of access to antenatal care – 31% of these facilities provided no antenatal nursing care and, although 60% of adolescent correctional facilities reported at least one obstetric complication, 38% had no antenatal obstetric [medical] care. Lack of antenatal care for incarcerated pregnant adolescents is all the more surprising since it is well known that the life histories and trajectories of the girls most likely to be pregnant and in prison places them at increased risk of sexually transmitted disease and unwanted pregnancy (Crosby *et al*, 2004). For example, Mason *et al* (1998) found that 68% of girls in detention had experienced sexual abuse and that sex abuse victims were both more likely to be younger at first coitus and less likely to use birth control than girls who had not been sexually abused. In addition, childbirth at an early age is associated with significant risk for both mother and baby – including increased risk of pregnancy complications and poor pregnancy outcomes (Jolley *et al*, 2000) - particularly in the absence of effective healthcare and adequate emotional and social support (Koniak-Griffin and Turner-Pluta, 2001; Huft, 2004).

According to Breuner & Farrow (1995), postnatal healthcare and welfare of imprisoned pregnant adolescents was also deficient – 46% of detention centres had no mother-infant visitation policy and 29% of young mothers did not know where their children had been placed after delivery.

#### **4 Summary and Conclusions**

Prison health reform and the rising female prison population (particularly in the last decade) have increasingly brought to the fore issues concerning the healthcare and welfare of imprisoned women. In addition to previous concerns about the general and mental health of women in a system designed primarily for the incarceration of men, there is increasing recognition of the wider social and societal consequences of the imprisonment of women.

In most societies, women retain responsibility for the care and welfare of their immediate families and often also for members of their extended families and wider social networks. Accordingly, when a woman is sent to prison; her sentence impacts not only on her but also on those who are dependant on her for care. Since a significant proportion of imprisoned mothers are lone parents (the majority with children of school age or less) this has important implications for the needs of their children whom, as HM Prison Service (2005) point out, have committed no crime. The children of imprisoned women have been found to experience significantly higher levels of behavioural, emotional, and cognitive problems compared with other children. For many children, imprisonment represents the first bout of prolonged separation from their mothers and is frequently associated with inability to remain in their own homes. There is evidence to suggest that imprisonment of mothers may be linked with

increasing risk of antisocial behaviour and eventual criminalization of their children (Parke & Clarke-Stewart, 2001; Murray & Farrington, 2005).

Although women in England and Wales have been giving birth whilst in prison for over one hundred years, formal procedures to care for women and their children are still relatively in their infancy and the quality of provision is variable. The UK government aspires to provide perinatal and other forms of prison healthcare of a standard equivalent to that in the community. Research suggests that, whilst laudable, such an aspiration might not be realised for some time. Indeed, there are elements such as individuals' right to choose the kind of services they want and how/when to access them which appear antithetical to the purpose and philosophy of imprisonment. For example, women in the community can choose whether to deliver their babies at home or in hospital. They can also exercise choice over the hospital at which they access maternity services. These options are not available to women in prisons. Furthermore, the demographics and offending profile of women in prison suggests that there are sub-sets of women (such as foreign nationals and very young women) who warrant especially close attention if they are not to suffer even greater levels of health disparity than their contemporaries and continue to experience unmet healthcare needs.

However, there are signs of improvement in perinatal healthcare in prison in England and Wales. For example, a decade ago, standards of healthcare and welfare at Holloway (the largest of the women's prisons in England and Wales) were said to have become 'unacceptably low' and to be in urgent need of attention. Facilities for perinatal care were described as 'drab, dirty, and unsuitable for young mothers' and the regime as stressful and degrading. It is reported that conditions were so poor as to prompt the then Chief Inspector of Prisons, Sir David Ramsbotham to walk out in disgust (Court, 1996).

Subsequent prison inspections indicate that there have been significant improvements in the standard of healthcare of imprisoned women receive. However, despite creation of a Women and Young Peoples' Team by HM Prison Service and the appointment of staff dedicated to the improvement of perinatal services in prisons (such as Mother and Baby Liaison Officers) there is evidence of wide variation in the quality of care and indications that services could benefit from further reform to meet the particular needs not only of the relatively small group of women who access Mother & Baby Units but for all pregnant and recently-delivered women in prison in England and Wales.

## **5 Limitations of the Study**

It is important to emphasise that this study and the others in this programme of research represents a starting point in developing systematic evaluation of the impact of prison health reform. Research and evaluation are essential for determining whether reforming prison healthcare leads to the prisoners receiving healthcare equivalent to that provided in the community. In commissioning this body of work, the Department of Health signals its commitment to supporting research which will inform the future development, delivery, and outcome of services.

Whilst strategies were adopted to ensure methodological rigor (See Methods, Page 10), this study has a number of limitations such as:

1. The search strategy did not focus solely on primary research and may therefore be regarded as being over-inclusive.
2. The decision not to grade/score papers but to reflect/report on the available literature is valid within the context of a scoping exercise. However, this means that the report offers no indication of the quality of the papers which were reviewed.
3. The majority of the studies in this review are from the United States. There are obvious difficulties associated with extrapolating findings from the US to the UK context because of differences between the prison and healthcare systems in the two countries.
4. Additionally, selecting studies that were published only in English means that there is a limited international component. In this context, the study may be regarded as being incomplete.
5. Finally, by focusing on the literature, the study reflects the absence of service users, carers, and dependents in UK research. This is an important omission which should be addressed by ensuring that these perspectives are included in the development of the prison health research agenda (please see 'Recommendations').

## 6 Recommendations for Future Research

Much of the peer-reviewed research included in this report emanated from the United States. In light of recent and ongoing reform of the prison healthcare system, there is an urgent need to undertake research in the UK which will enable policy makers and service providers to determine whether and to what extent the outcomes of these reforms are of positive benefit for imprisoned pregnant and recently-delivered women and their children in England and Wales.

Accordingly, it is recommended that:

1. Collection of **baseline data** and agreement about a **common dataset** should be undertaken as soon as possible. These data would form the basis for **measuring the impact of reforms of the prison healthcare system**.
2. The number of women giving birth whilst in prison or entering prison shortly thereafter is relatively small. Agreement on a common dataset would also facilitate **comparisons across sites and amalgamation of national and international data** to enable meaningful quantitative studies to be undertaken.

3. Further research is required to examine the **outcomes of perinatal healthcare in prison**. Such research should:
  - i. Focus on **outcomes for both mothers and children**
  - ii. Go beyond pregnancy, childbirth, and the early postnatal period. For example, undertaking **longitudinal studies** to examine the **long-term impact of imprisonment** on:
    - Children's growth and physical development
    - Children's social and educational development and achievement
    - Mother's health and well-being
    - Impact of health promotion, parenting advice, and other skills learned whilst in prison
  - iii. **Compare outcomes from prison Mother and Baby Units (MBUs) with MBUs** in the NHS.
  - iv. **Compare outcomes from prison MBUs with pregnant and child-bearing women elsewhere** in the prison system.
4. Research into **women's experience** of perinatal health care in prison should be undertaken. Focusing on the **most vulnerable inmates** such as foreign nationals and Young Offenders could help to identify their particular healthcare needs, **reduce disparities**, and **improve mental health and well-being**.
5. **Service Evaluation** (including **Users and Carers' perspectives**) and complex intervention studies should be undertaken to identify the elements of perinatal healthcare in prison which are effective and to understand why some interventions are more effective than others.
6. In light of concerns about the feasibility of delivering effective healthcare in prisons, research should be undertaken which focuses on both **structural and process issues** in service deliver. For example, research might explore:
  - i. The impact of the NHS (PCTs) assuming responsibility for prisons healthcare
  - ii. Alternative ways of working
  - iii. Development and efficacy of new professional roles

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## 8 Appendices

## 8.1.1 Appendix 1: Example of Literature Search Strategy

### Ovid MEDLINE(R)

1966 to May Week 4 2006

#	Search History	Results
1	prison\$.mp. or exp Prisons/	12809
2	exp Prisoners/ or exp Prisons/ or jail.mp.	11724
3	limit 2 to (humans and english language)	9233
4	exp Prisons/ or exp Prisoners/ or inmate\$.mp.	11828
5	limit 4 to (humans and english language)	9245
6	exp Prisoners/ or incarcerate.mp. or exp Pregnancy in Adolescence/	12377
7	exp Juvenile Delinquency/ or exp Prisoners/ or incarcerate.mp. or exp Pregnancy in Adolescence/	16740
8	limit 7 to (humans and english language)	14054
9	3 or 5 or 6 or 8	19186
10	pregnan\$.mp.	560668
11	limit 10 to (humans and english language)	324330
12	birth\$.mp. or exp Parturition/	161948
13	limit 12 to (humans and english language)	100513
14	exp Child Development/ or exp Pregnancy/ or exp Pregnancy Complications/ or exp Infant, Premature/ or matern\$.mp.	642602
15	limit 14 to (humans and english language)	383519
16	11 and 13 and 15	44778
17	Women's Health Services/ or Adolescent Health Services/ or Women's Health/ or Public Health/	48861
18	limit 17 to (humans and english language)	31896
19	9 and 16 and 18	37

## 8.1.2 Appendix 2: The Legal Framework for MBUs in England and Wales

In England and Wales, the management and care of women with children in prison is based on international conventions and national legal frameworks since the Prison Service has to fulfil its obligations to preserving the Human and legal rights not only of mothers but also their children who have committed no crime.

Prison Service Rules/Orders and international conventions provide the principles for establishing and operating MBUs. In England and Wales this is supplemented by a number of Acts, Standards, and policy guidance which regulate and govern the way in which MBUs are operated. Examples include:

### *i) International Conventions*

- The United Nations Convention on the Rights of the Child (1989)
- The European Convention on Human Rights (1950)
- The Human Rights Act (1998) - enacted in the UK in 2002

### *ii) National Legal Obligations*

**The Children Act (DH, 1989)** and associated guidance (DH, 1991) makes explicit that the welfare of the child is of paramount importance – various sections of the Act relate to:

- The responsibility of the Prison Service (which assumes care of but not responsibility for the child)
- The Parental responsibility (which is retained by mothers caring for babies and children in prisons)

**The Care Standards Act (DH 2000)** - passed responsibility for regulation and registration of children's homes, care homes, nurses agencies and certain other establishments and agencies (including prisons) to the National Care Standards Commission. This Act makes inspections of nursery and related educational facilities in prisons by Ofsted mandatory. Supporting guidance was published in 2001 (DH, 2001).

**The Health & Safety at Work Act (1974)** and other Health & Safety regulations for example, in relation to food hygiene, fire and personal injury are also mandatory.

### *iii) Standard 35: Mother & Baby Units (HM Prison Service, 2006b)*

### *iv) Rules Governing Prison Service and Young Offenders Institutions*

**Prison Service Rules (HM prison Service, 2000<sup>22</sup>)** and subsequent consolidations and amendments detail:

- The roles and responsibilities of prison governors and their staff
- The rights of mothers and children – specifically those in relation to maintaining relationships between prisoners and their families. For example Prison Service Orders 4405 and Standard 44 make clear that prisons must ensure that regular contact is made (via telephone, letters and regular contact visits) when a mother who is the primary carer is in prison.
- The role of the Secretary of State and the Home Office

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<sup>22</sup> There have been several amendments of the original Rules governing the care of Young Offenders. The most recent (2006) may be found at:  
[http://www.hmprisonservice.gov.uk/assets/documents/10001876yoi\\_rules\\_jan\\_06.DOC](http://www.hmprisonservice.gov.uk/assets/documents/10001876yoi_rules_jan_06.DOC)



### 8.1.3 Appendix 3: International Policies & Practice on Mothers & Children in Prison

Country	Children Allowed?	Upper Age Limit	Facilities	Research Available? <sup>23</sup>	Proposed Change to Policy and/or Practice
Australia	Yes	5 years	Mostly separate MBUs. Playgroups in prisons.	No	Yes. Working with other areas to promote best interests of the child (Child Protection Act 1999)
Austria	Yes	2 years	No MBUs. Some 'arrangements' for mothers and children.	No	No
Canada	Yes	3 years	Mother & Child facilities	No	Proposals to increase length of stay being piloted.
Croatia	Yes	3 years	MBUs for pregnant women, mothers and children	Yes. No evidence of child abuse whilst mothers in prison	New legislation to improve parental rights and provide care equivalent to general community
Cyprus	Yes	2 years	'Improved living conditions'	No	No
Denmark	Yes	3 years	Sections of prison 'specially fitted out' e.g. toys/nursery furniture	No	No
Estonia	Yes	4 years	Separate MBUs. Playgrounds.	No	No
Finland	Yes	4 years (generally 2 years)	Open Prison: lakeside terraced house. Conditions similar to 'general society' Closed prison: 'special ward', play area.	No	No
Germany	Yes	3 years	Mother & Child Homes Playrooms and outdoor recreation areas	No	No
Holland	Yes	3 years	MBUs. Garden and play areas	Yes	Trying to determine if children should be able to stay in closed prisons.
Hong Kong	Yes	3 years	'Special ward'. Child Play Centre. Access to exercise and TV	No	No
Hungary	Yes	6 months	'Special health care institutions – conditions similar to hospital.	No	Yes. Extension of facilities for accommodating children with mothers.
Japan	Yes	1 year	Nursery rooms with toys. TV & tape recorder for education purposes	No	No

<sup>23</sup> Refers to research specific to provision for mothers to have their babies/children with them in prison e.g. Mother and Baby Units

<b>Lithuania</b>	Yes	2 years	Child & Mother section with yard and garden – ‘like home conditions’	No	Plans to place mothers and children outside prison in more ‘homely’ atmosphere.
<b>Moldova</b>	Yes	3 years	Separate room with toys and special menu.	No	No
<b>New Zealand</b>	No	N/A	Children up to 6 months brought in daily for bonding. Specific facilities available.	No	Plans to develop facilities for mother and babies
<b>Portugal</b>	Yes	N/A	‘Mothers’ Houses’. Increasing numbers have nurseries.		
<b>Slovenia</b>	Yes	1 – 2 years (Determined by length of sentence)	‘Special Units’	No	No
<b>Spain</b>	Yes	3 years	Special units with crèches ‘like outside world’	Yes – no results available	No
<b>Sweden</b>	Yes	1 year	Special ‘visiting apartments’	No	Proposals to postpone sentences of single parents until child is 2 years old.
<b>Switzerland</b>	Yes	3 years	Larger, ‘more comfortable’ cells. Playgroups.	No	No
<b>Turkey</b>	Yes	7 years	Kindergartens in new prisons. Inmates from older prisons can access facilities. Regular contact with family/other children facilitated.	No	New prisons’ projects
<b>England &amp; Wales</b>	Yes	18 months	7 designated MBUs	Yes. Birmingham <i>et al</i> , 2003.	New research being undertaken by Prisons Health Research Network see, for example, <a href="http://www.soton.ac.uk/mediacentre/news/2004/apr/04_54.shtml">http://www.soton.ac.uk/mediacentre/news/2004/apr/04_54.shtml</a> good practice guidance being developed in relation to: neonatal care; women who are to be deported; still births and escorting pregnant women between courts and prisons
<b>USA<sup>24</sup></b>	No	N/A	N/A	Developing policies	N/A

<sup>24</sup> Policies and procedures developed at Federal and County level therefore subject to variation.

## 8.1.4 Appendix 4: Summary of peer-reviewed publications

### Theme 1: Demographics and Risk Factors for Pregnancy in Prison

Paper/Author/Date	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
Eliason & Arndt (2004) Pregnant Inmates: A Growing Concern  Country US	53 pregnant and 1160 non-pregnant prisoners	<b>Method</b> Secondary data analysis of Iowa Medical & Classification Center (IMCC) dataset (1996 – 2001)  <b>Aim</b> To understand the needs of pregnant women and their experience of pregnancy in prison	<ul style="list-style-type: none"> <li>• 4.4% of women pregnant on admission</li> <li>• BME prison population (26%) almost 9 times larger than percentage in population (3%)</li> <li>• Self-reported psychiatric problems common</li> <li>• 87% non-pregnant and 88% pregnant women reported problems with alcohol or drugs</li> <li>• 90% women with substance misuse problem used illegal drugs – nearly 1/3 reported IV drug use.</li> <li>• 66% pregnant (compared with 37% non-pregnant) women abstained from drug use in previous 6 months.</li> <li>• Pregnant women more likely to use marijuana and less likely crack cocaine or methamphetamines</li> </ul>	<ul style="list-style-type: none"> <li>• Pregnant women appeared to decrease their substance use during pregnancy</li> <li>• May be that women consciously reduced use of stimulants (perceived as dangerous) in favour of drugs perceived as more benign</li> <li>• Pregnancy appeared to motivate women to reduce or abstain from drug use</li> </ul>
Knight & Plugge (2005) Risk factors for adverse perinatal outcomes in imprisoned pregnant women: a systematic review  Country US	13 papers (1504 imprisoned pregnant women and 4571 population controls)	<b>Method</b> Systematic review	<ul style="list-style-type: none"> <li>• Imprisoned women more likely to: <ul style="list-style-type: none"> <li>- smoke during pregnancy (OR 6.05 (95% CI 4.74 – 7.73))</li> <li>- use excess alcohol pregnancy (OR 4.82 (95% CI 3.23 – 7.19))</li> <li>- use illicit drugs (OR 25.86 (95% CI 14.06 – 47.57))</li> <li>- have medical problems likely to impact pregnancy outcome (OR 5.64 (95% CI 1.66 – 19.11))</li> <li>- be non-White (OR 3.17 (95% CI 2.39 – 4.19))</li> <li>- be under-educated (OR 3.30 (95% CI 2.42 – 4.51))</li> <li>- be single (OR 12.32 (95% CI 8.21 – 18.50))</li> <li>- have received inadequate prenatal care (OR 5.15 (95% CI 3.60 – 7.38))</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Pregnant imprisoned women more likely to be single, non-White, with limited education</li> <li>• Despite medical conditions and high risk of other factors known to adversely affect pregnancy outcome, women were less likely than population controls to receive adequate prenatal care</li> </ul>
Fogel & Belyea (2001) Psychosocial risk factors in pregnant inmates: a challenge for nursing  Country US	63 pregnant prisoners (3 <sup>rd</sup> trimester) (1993 – 95)	<b>Method</b> Mixed method, prospective study a) Quantitative <b>Psychological Measures</b> Adult-Adolescent Parenting Inventory (AAPI); Center for Epidemiological Studies – Depression Scale (CES-D); perceived Stress Scale (PSS); Norbeck Social Support Questionnaire (NSSQ)  b) Qualitative interviews.	<ul style="list-style-type: none"> <li>• Women mostly poorly educated, single, poor, young, and from Black and minority ethnic (BME) backgrounds</li> <li>• 16% pregnant for first time</li> <li>• 76% experienced violence as child</li> <li>• 70% had history of using street drugs</li> <li>• 73% smoked (fell to 60% in pregnancy)</li> <li>• Over 70% depressed</li> <li>• Significant relationship between sexual abuse and substance misuse</li> <li>• Low level social support (inversely related to age)</li> <li>• Poor parenting attitude but no additional risk related to drug use</li> </ul>	<ul style="list-style-type: none"> <li>• Childhood victimization linked to substance abuse</li> <li>• Poor parenting attitude increases risk of abuse and neglect</li> <li>• Non-traditional venues 'may be the most appropriate sites for preventative services – including prenatal care' for traditionally difficult to reach population.</li> <li>• Need for services specific to the needs of pregnant women – including: drug reduction programs, child development classes, counselling</li> </ul>

Paper/Author/Date	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
Siefert & Pimlott (2001) Improving pregnancy outcome during imprisonment: a model residential care programme  Country US	a. 50 'key individuals' from relevant agencies b. Women prisoners	<b>Methods</b> 1. Telephone interviews 2. review 120 prisoners' medical records 3. Focus groups with women prisoners  <b>Aim</b> To undertake needs assessment	<b>Prisoner Characteristics</b> <ul style="list-style-type: none"> <li>• 76% women imprisoned for non-violent offences</li> <li>• 71% African American</li> <li>• 60% used drugs in pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>• 'Basic medical care provided' but not interventions known to improve pregnancy outcome</li> <li>• 'Review strongly supported need for special program for pregnant prisoners'</li> </ul>
Birmingham et al (2004) Psychiatric morbidity and mental health treatment needs among women in prison MBUs  Country UK	55 women in prison MBUs (122 children between them - 25% born before mothers imprisoned)	<b>Method</b> <ul style="list-style-type: none"> <li>• Survey of women and prison staff to determine nature and prevalence of psychiatric treatment needs</li> <li>• Review Inmate Medical Record (IMR)</li> <li>• Mental health/illness assessment via standard psychiatric interview.</li> </ul> <b>Instruments</b> <ul style="list-style-type: none"> <li>• Schedule for the Clinical Assessment of Neuropsychiatry (SCAN)</li> <li>• Clinical Interview Schedule (CIS-R)</li> <li>• Structured Clinical Interview for DSM-III Personality Disorder (SCID-II)</li> <li>• Alcohol Use Identification Test (AUDIT)</li> <li>• Diagnostic Interview Schedule (to identify drug abuse/dependence using DSM-IV criteria)</li> <li>• Quick Test (intellectual functioning)</li> <li>• Mother &amp; Baby Scale (MABS)</li> </ul>	<b>Demographics</b> <ul style="list-style-type: none"> <li>• Half women were BME</li> <li>• 36% homeless at some time (58% those with personality disorder)</li> <li>• 22% IQ score <math>\leq 70</math></li> <li>• Majority (82%) pregnancies unplanned</li> <li>• 73% imprisoned for drug-related offence</li> <li>• 75% women smoked in pregnancy but 31% had reduced use</li> <li>• 65% had used drugs at some point (36% dependant in year prior to admission)</li> <li>• 57% children living outside MBU – 30% with fathers, 48% with another family member</li> </ul>	<ul style="list-style-type: none"> <li>• Women on MBU atypical of wider prison population e.g.</li> <li>- 'Much lower' prevalence of mental disorder than remainder of prison population</li> <li>- Lower levels of neuroticism but higher levels of depression</li> <li>- May be related to characteristics of women who choose to apply, admission criteria and association between ethnicity and offending</li> <li>• Admission to MBU favours babies born in prison (easier to plan)</li> <li>• Drug trafficking women (75% Black Caribbean) 'likely to be good candidates for prison MBU)</li> <li>• Women may remain in prison for sometime after separation from babies – little research into impact on women or children</li> </ul>

Paper/Author/Date	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
Sable et al (1999) Violence victimization experiences of pregnant prisoners	80 pregnant prisoners; matched with 1,623 non-incarcerated pregnant women	Method Secondary data analysis (care records) and self-reports from screening interviews	<ul style="list-style-type: none"> <li>Pregnant prisoners significantly more likely to be victims of more than one types of violence (21% vs 8% had experienced both physical and sexual violence)</li> </ul>	<ul style="list-style-type: none"> <li>Still relatively little known about violence among pregnant women</li> </ul>
Schroeder & Bell (2005a) Labor support for incarcerated pregnant women : the Douala Project  Country US	18 women (12 ethnic minorities) & 40 prison staff	Method Qualitative interviews with 14 women  Survey (prison staff)  Aim To review impact and perceptions of Douala birth support	<ul style="list-style-type: none"> <li>'Intersections of race and poverty' – majority of women in study ethnic minority, poor, under-educated</li> </ul> <b>Main factors linked to incarceration:</b> <ol style="list-style-type: none"> <li><i>Early childhood traumas</i> such as: <ul style="list-style-type: none"> <li>physical, emotional and/or sexual abuse</li> <li>abandonment, chaotic lifestyles, neglect</li> <li>institutionalized care</li> <li>parental/carer substance abuse</li> </ul> </li> <li><i>Long-term effects of early trauma:</i> <ul style="list-style-type: none"> <li>Educational failure and Employment difficulties</li> <li>Emotional problems</li> <li>Early substance use and eventual addiction</li> <li>Abusive/difficult relationships with men</li> <li>Difficulty parenting</li> <li>Incarceration and loss of children</li> </ul> </li> </ol>	<ul style="list-style-type: none"> <li>Arrest in early pregnancy presents opportunity for public health intervention to improve outcome for mothers and babies</li> <li>Doula support can help women have positive birth experiences despite prison constraints</li> </ul>

## Theme 2: Perinatal Health Needs and Service Provision

Paper Details	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
Price S (2005) Maternity Services for Women in Prison  Country UK	15 midwives	<b>Method</b> Mixed method survey  <b>Aim</b> To describe maternity services for women in England and Wales	<ul style="list-style-type: none"> <li>• Prison restricts choices for both women and midwives</li> <li>• Access to care variable</li> <li>• Care in Mother &amp; Baby Units no better than in prisons without these facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Gender inequalities in wider prison system are major barrier in providing appropriate care for women.</li> <li>• Both women and midwives disempowered by system.</li> </ul>
Bell et al (2004) Perinatal Health Service use by Women Released from Jail  Country US	453 women in jail between 1993 – 1998	<b>Method</b> Retrospective cohort study  <b>Aim</b> To compare perinatal service use by: a) women in jail during pregnancy and b) ex-prisoners but not in jail during pregnancy  <b>Instruments:</b> Medicaid claims; First Steps Database (FSDB); Adequacy of Prenatal Care Utilization (APNCU) index	<ul style="list-style-type: none"> <li>• Women in prison more likely to receive prenatal care – especially women using drugs in pregnancy</li> <li>• Jail contact in pregnancy increased access to antenatal community care</li> <li>• More than half women had less-than-adequate care (APCNU)</li> <li>• No association between imprisonment and postnatal use of maternity services, case management, or family planning</li> </ul>	<ul style="list-style-type: none"> <li>• Jail offers 'unique opportunity' to improve care of 'high-risk' women who 'greatly underuse' health and social services</li> <li>• Prisons potentially good venues for coordinating care in health and criminal justice systems</li> </ul>
Schroeder & Bell (2005b) Douala Birth Support for Incarcerated Pregnant Women  Country US	18 women (12 ethnic minorities) & 40 prison staff	<b>Method</b> Qualitative interviews with 14 women  Survey (prison staff)  <b>Aim</b> To report on the provision of Douala birth support for a cohort of pregnant prisoners	<ul style="list-style-type: none"> <li>• 60% women had received no prenatal care prior to arrest</li> <li>• 'Intersections of race and poverty' – majority of women in study ethnic minority, poor, under-educated</li> <li>• High levels of satisfaction with service – both women and staff</li> </ul>	<ul style="list-style-type: none"> <li>• Arrest in early pregnancy presents opportunity for public health intervention to improve outcome for mothers and babies</li> <li>• Douala support can help women have positive birth experiences despite prison constraints</li> </ul>

Paper/Author/Date	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
<p>Schroeder &amp; Bell (2005a) Labor support for incarcerated pregnant women: The Douala Project</p> <p>Country US</p>	<p>US 18 women (12 ethnic minorities) &amp; 40 prison staff</p> <p>Method Qualitative interviews with 14 women</p>	<p><b>Method</b> Survey (prison staff)</p> <p><b>Aim</b> To examine the trajectories of women's lives that led to incarceration</p> <p><b>Women's experience of pregnancy in prison</b></p> <ul style="list-style-type: none"> <li>Stressful</li> </ul>	<ul style="list-style-type: none"> <li>Women felt unsafe</li> <li>Physically uncomfortable (not enough pillows, sitting on cement)</li> <li>Insufficient to eat – constantly hungry</li> <li>No 'special consideration' from jail staff</li> <li>Need to 'fight to get medical attention'</li> <li>Other women as sources of help and support</li> <li>Judicial system does not view women or their babies as needing or deserving specialist services</li> <li>Women jailed to prevent drug use but drugs widely available in prison – some women felt pressurized to take drugs</li> <li>Women discharged early – not enough time to set up services</li> <li>Things women wanted were 'simple things most mothers want' but apparently beyond them</li> </ul>	<p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>Extend Douala support to all incarcerated pregnant women</li> <li>Improve nutrition of pregnant prisoners</li> <li>Early intervention harm reduction programs</li> <li>Separate perinatal program</li> <li>Mental health services to recognise and treat trajectory of abuse and violence in women's lives</li> <li>Financial support to enable women to complete/undertake educational programs</li> <li>Formalize peer support</li> <li>Develop reintegration programs</li> </ul>
<p>Siefert &amp; Pimlott (2001) Improving pregnancy outcome during imprisonment: a model residential care programme</p> <p>Country US</p>	<p>i. 50 'key individuals' from relevant agencies and organisations invited to join coalition to prevent separation of mothers and infants</p> <p>ii. Women prisoners</p>	<p><b>Methods</b></p> <ol style="list-style-type: none"> <li>Telephone interviews</li> <li>review 120 prisoners' medical records</li> <li>Focus groups with women prisoners</li> </ol> <p><b>Aim</b> To undertake needs assessment</p>	<p><b>Prisoner Characteristics</b></p> <ul style="list-style-type: none"> <li>76% women imprisoned for non-violent offences</li> <li>71% African American</li> <li>60% used drugs in pregnancy</li> </ul> <p><b>Service Issues</b></p> <ul style="list-style-type: none"> <li>Women lacked information and had little control over pregnancy or delivery</li> <li>Women in labour secured with belly chains during transfer to hospital</li> <li>Corrections Officer – irrespective of gender – remained throughout birth and hospital stay</li> <li>relatives or maternal friends</li> </ul>	<ul style="list-style-type: none"> <li>'Basic medical care provided' but not interventions known to improve pregnancy outcome</li> <li>'Review strongly supported need for special program for pregnant prisoners'</li> </ul>

Paper/Author/Date	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
<p>Birmingham et al (2004) Psychiatric morbidity and mental health treatment needs among women in prison MBUs</p> <p>Country UK</p>	<p>55 women in prison MBUs (total 122 children between them; 25% born before mothers imprisoned)</p>	<p><b>Method</b></p> <ul style="list-style-type: none"> <li>Survey of women and prison staff to determine nature and prevalence of psychiatric treatment needs</li> <li>Review Inmate Medical Record (IMR)</li> <li>Mental health/illness assessment via standard psychiatric interview.</li> </ul> <p><b>Instruments</b></p> <ul style="list-style-type: none"> <li>Schedule for the Clinical Assessment of Neuropsychiatry (SCAN)</li> <li>Clinical Interview Schedule (CIS-R)</li> <li>Structured Clinical Interview for DSM-III Personality Disorder (SCID-II)</li> <li>Alcohol Use Identification Test (AUDIT)</li> <li>Diagnostic Interview Schedule (to identify drug abuse/dependence using DSM-IV criteria)</li> <li>Quick Test (intellectual functioning)</li> <li>Mother &amp; Baby Scale (MABS)</li> </ul>	<p><b>Demographics</b></p> <ul style="list-style-type: none"> <li>Half women were BME</li> <li>36% homeless at some time (58% those with personality disorder)</li> <li>22% IQ score <math>\leq 70</math></li> <li>Majority (82%) pregnancies unplanned</li> <li>73% imprisoned for drug-related offence</li> <li>75% women smoked in pregnancy but 31% had reduced use</li> <li>65% had used drugs at some point (36% dependant in year prior to admission)</li> <li>57% children living outside MBU – 30% with fathers, 48% with another family member</li> </ul> <p><b>Mental Health Needs</b></p> <ul style="list-style-type: none"> <li>60% had one or more psychiatric disorder</li> <li>31% had current mental health treatment need but only 3 women receiving treatment</li> <li>25% received psychiatric treatment at some point</li> <li>70% history deliberate self-harm</li> <li>24% attempted suicide at some point</li> </ul>	<ul style="list-style-type: none"> <li>Women on MBU atypical of wider prison population e.g.</li> <li>- 'Much lower' prevalence of mental disorder</li> <li>- Lower levels of neuroticism but higher levels of depression</li> <li>May be related to characteristics of women who choose to apply- relationship between admission criteria, ethnicity, and offending</li> <li>Admission to MBU favours babies born in prison (easier to plan)</li> <li>Drug trafficking women (75% Black Caribbean) 'likely to be good candidates for prison MBU)</li> <li>Women may remain in prison for sometime after separation from babies – little research into impact on women or children</li> </ul>



### Theme 3: Outcome of Pregnancy in Prison

Paper Details	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
<p>Knight &amp; Plugge (2005)</p> <p>Country International (US, UK, Germany)</p>	<p>10 papers (1960 pregnant women, 10,858 population and 'similarly disadvantaged' controls)</p>	<p>Method Systematic Review.</p> <p>Outcome measures</p> <ul style="list-style-type: none"> <li>• Miscarriages</li> <li>• perinatal/infant mortality</li> <li>• fetal anomaly</li> <li>• babies' birth weight</li> <li>• breast milk use</li> </ul>	<ul style="list-style-type: none"> <li>• 56% prisoners 'non-White'</li> <li>• 54% misused drugs in pregnancy</li> <li>• 56% smoked in pregnancy</li> <li>• Imprisoned women more likely to deliver prematurely than population controls</li> <li>• Imprisoned women more likely to have low birth weight babies than population controls but less so than other disadvantaged women</li> <li>• Significantly lower rates of stillbirth among imprisoned women compared with disadvantaged controls</li> </ul>	<ul style="list-style-type: none"> <li>• Limited research into psychological problems among pregnant prisoners</li> <li>• Little consistency in reporting outcomes</li> <li>• Ethnic minorities over-represented in pregnant prison population</li> <li>• On a range of outcomes (e.g. stillbirth, birth weight) imprisoned women fared better than similarly disadvantaged women in the community</li> <li>• Research needed to tackle health inequalities among this disadvantaged population</li> </ul>
<p>Mertens (2001) Pregnancy outcomes of inmates in a large county jail setting</p> <p>Country US</p>	<p>71 pregnant inmates (controls matched for age, race, gavidity, residence)</p>	<p>Method Review of medical and support services</p> <p>Outcome Measure Comparison of rates of low birth weight (LBW) and fetal death.</p>	<ul style="list-style-type: none"> <li>• Women mostly young, BME, not having first baby</li> <li>• 63% sentenced for theft, drugs or sex offences</li> <li>• Prisoners less likely to access prenatal care</li> <li>• 25% delivered prematurely</li> <li>• LBW statistically higher than county/state</li> <li>• No difference in rates of stillbirth</li> </ul>	<ul style="list-style-type: none"> <li>• Women in prison for short time experienced higher rates LBW than national average</li> <li>• No routine testing for hepatitis B and HIV</li> <li>• Failure to screen has implications for health of women and babies</li> <li>• Support services such as counselling, education and nutrition non-existent</li> <li>• Poor multi-agency working/liaison and women giving false information linked to poor follow-up (agencies e.g. Health Kids unaware of women and children's needs)</li> </ul>
<p>Barkhaus et al (2002) Health outcomes of incarcerated pregnant women and their infants in a community-base program</p> <p>Country US</p>	<p>52 drug-dependant women on residential programme during 30 months study and comparison group (n=40) pregnant women in prison but not on programme</p>	<p>Method Cross-sectional case control study. Data collected from inpatient records of mothers and babies</p>	<ul style="list-style-type: none"> <li>• 65% had drug-related convictions</li> <li>• Over 80% women in both groups smoked in pregnancy</li> <li>• No significant difference in neonatal birth outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Mothers responded positively to both residential program and care provided in prison</li> <li>• Results might have been statistically non-significant due to sample size</li> <li>• Study demonstrates feasibility of providing community-based nurse-midwife services for pregnant women in prison</li> </ul>

Paper Details	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
<p>Siefert &amp; Pimlott (2001) Improving pregnancy outcome during imprisonment: a model residential care programme</p> <p>Country US</p>	<p>44 pregnant women with history of drug or alcohol dependence enrolled on Women &amp; Infants at Risk Program (WIAR)</p>	<p><b>Method</b> 1. Review of WIAR records (1991 – 1995) 2. Follow-up telephone calls (33 women)</p> <p><b>Aim</b> To review pregnancy outcomes among program participants – including rates of relapse and recidivism</p>	<p><b>Infant Outcomes</b></p> <ul style="list-style-type: none"> <li>• 71% normal newborns (120 pregnancies)</li> <li>• 38% infants experienced 'major' complications and medical problems</li> <li>• 14% required neonatal intensive care</li> <li>• 13% surviving 118 babies placed in foster care – remainder discharged to maternal or paternal relatives or maternal friends</li> </ul>	<ul style="list-style-type: none"> <li>• Pregnancy outcomes better than those surveyed in Needs Assessment (see Service Provision theme)</li> <li>• The birth of a healthy, drug-free child represents an important achievement for drug-dependent imprisoned woman</li> <li>• Logistical and funding constraints precluded use of control or comparison group'</li> <li>• 'Basic medical care provided' but not interventions known to improve pregnancy outcome</li> <li>• 'Review strongly supported need for special program for pregnant prisoners'</li> </ul>
<p>Martin et al (1997) Is incarceration during pregnancy associated with infant birth</p> <p>Country US</p>	<p>168 women jailed in pregnancy 630 women jailed at other times 3,910 never incarcerated</p>	<p><b>Method</b> Multivariate Analyses of North Carolina Prison &amp; vital/health records (1988 – 1991)</p> <p><b>Outcome measure</b> Low birth weight (LBW)</p>	<ul style="list-style-type: none"> <li>• 57% pregnant women in prison for property crimes, 25% for public order offences</li> <li>• 52% women spent 8 weeks or less in prison</li> <li>• Poor, single, ethnic women predominate</li> <li>• Non-white, single women who did not access antenatal care and who smoked/used alcohol were more likely to have LBW babies</li> <li>• Infant birth weight for pregnant women in prison not significantly different from never-incarcerated women</li> <li>• Birth weight significantly worse for women jailed at other times than for 'pregnant in prison' or never-incarcerated</li> <li>• Increased length of stay related with increase BW</li> </ul>	<ul style="list-style-type: none"> <li>• Health behaviours of pregnant inmates increases risk of poor pregnancy outcome</li> <li>• Involvement with CJS associated with decreased access to antenatal care</li> <li>• Need for greater health education and programmes to reduce substance misuse and smoking</li> <li>• Exposure-response relationship between number of weeks in prison and birth weight</li> <li>• Research needed into prison as health-promoting environment</li> <li>• More comparisons between prison and community outcomes required</li> </ul>
<p>Kyei-Aboagye et al (2000) Birth outcome in incarcerated, high-risk pregnant women</p> <p>Country US</p>	<p>149 women (Incarcerated in prison n=31; Patients on methadone program n=47; Randomly selected controls n=71)</p>	<p><b>Method</b> Retrospective analysis of pregnancy outcome</p> <p><b>Outcome Measures include:</b> Parity Number of clinic visits Infant birth weight Apgar scores</p>	<ul style="list-style-type: none"> <li>• Birth outcomes in jailed pregnant group similar to those for women in community but better than those on methadone programme e.g. LBW = 10% pregnant prisoners, 4% controls but 21% for methadone group</li> </ul>	<ul style="list-style-type: none"> <li>• Certain aspects of prison environment may be health promoting for high-risk pregnant women</li> <li>• Drug-free lifestyle and adequate prenatal care leads to improved birth outcomes</li> <li>• 'Findings must not be interpreted to mean that imprisonment of drug-using pregnant women is a good idea.'</li> </ul>

Paper Details	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
<p>Bell et al (2004) Jail incarceration and birth outcomes</p> <p>Country US</p>	<p>496 singleton births to women in jail compared with 4,960 births to non-incarcerated Medicaid recipients in the community</p>	<p>Method Secondary data analysis</p> <p>Outcome Measures Birth weight Preterm birth Size for gestational age</p>	<ul style="list-style-type: none"> <li>• 34% babies 'had black mothers'</li> <li>• Incarcerated women more likely to have preterm and low birth-weight babies</li> <li>• Birth weight differed significantly according to age: women in their 30's most likely to have LBW babies</li> <li>• Every day a pregnant woman spent in jail, infant birth weight increased by 2g and odds for LBW decreased by 2%</li> <li>• Odds of preterm delivery and LBW increased with number of incarcerations during pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>• 'well-established maternal risk factors for adverse outcomes; being black, poor education, substance abuse, previous preterm deliver or small baby all associated with risk of LBW and preterm birth</li> <li>• Receipt of prenatal care before third trimester, support services and case management improved outcomes</li> <li>• Better outcome for young women might be due to greater resilience to stress, better general health and less severe chemical dependency</li> <li>• Better outcomes for older women might be due to selection bias or beneficial effects of access to services available in jail</li> </ul>
<p>Martin et al (1997) The effect of incarceration during pregnancy on birth outcomes</p> <p>Country US</p>	<p>94 women jailed during one pregnancy (prison pregnancy/baby) but not another (home pregnancy/baby)</p>	<p>Method Data generated from prison records matched with health service records</p> <p>Instruments</p> <ul style="list-style-type: none"> <li>• Kessner/Institute of Medicine Adequacy of Prenatal Care Index</li> <li>• Special Supplemental Nutrition Program for Women , Infants &amp; Children (WIC)</li> <li>• Medicaid records</li> </ul> <p>Outcome Measures</p> <ul style="list-style-type: none"> <li>• Women's use of health services</li> <li>• Infant outcomes – birth weight</li> </ul>	<ul style="list-style-type: none"> <li>• Significant association between WIC, Medicaid and case management</li> <li>• WIC more likely used in home than prison pregnancy</li> <li>• Home babies significantly more likely to be born before prison babies</li> <li>• Home babies weighed significantly less than prison babies at birth</li> <li>• Each day in prison increased babies' birth weight by 1.49g</li> <li>• Predictors of low birth weight: gender (female); inadequate prenatal care; non-use of case management; smoking</li> </ul>	<ul style="list-style-type: none"> <li>• Aspects of prison environment e.g. shelter and nutrition might enhance pregnancy outcomes for very high-risk women</li> <li>• Raises question about why infants born to women who spent part/most of their pregnancies in prison should have better outcome</li> </ul>

## Theme 4: Imprisoned Mothers & Their Children

Paper Details	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
<p>Caddle &amp; Crisp (1997) Imprisoned women and mothers</p> <p>Country UK</p>	<p>1,596 of 1,766 civil, remand, sentenced prisoners</p>	<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>Data extraction from prison records</li> <li>Screening interviews with women</li> <li>In-depth interviews with 1,082 mothers</li> </ul> <p><b>Aim</b> To provide demographic information about all women prisoners and detailed information about imprisoned mothers</p>	<p><b>Childcare</b></p> <ul style="list-style-type: none"> <li>Of 2,168 children of 1,082 mothers interviewed, 30% were &lt;5 years old; 68% aged 5 – 16</li> <li>71% children had been living with their mothers prior to her imprisonment</li> <li>85% children had not previously been separated from their mothers</li> <li>Of those separated, 24% lived with grandparents, 17% with female friends, 10% were in the care of the local authority or adopted and 9% with their fathers</li> <li>61% imprisoned mothers made their own childcare arrangements</li> <li>Foreign nationals had 290 children born before their imprisonment</li> </ul> <p><b>Women's Feelings/Experience</b></p> <ul style="list-style-type: none"> <li>63% women reported being depressed</li> <li>56% lonely (80% among foreign nationals)</li> <li>47% had health problems</li> <li>Up to 39% reported problems with their families of partners</li> </ul> <p><b>Children's problems</b></p> <ul style="list-style-type: none"> <li>44% behavioural</li> <li>37% difficulty settling into school; 26% problems with school work; and problems with attendance</li> <li>30% withdrawn (65% of those in care)</li> <li>27% sleeping problems</li> <li>26% ill health</li> <li>22% eating problems</li> <li>17% were said by their mothers to be 'mixing with the wrong crowd'</li> </ul>	<ul style="list-style-type: none"> <li>Imprisonment of mothers associated with behavioural, emotional and cognitive problems among their children</li> <li>Mothers had difficulties in maintaining contact with their children</li> <li>Requests for home leave most frequently requested because of concerns about children</li> </ul>

Paper Details	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
<p>Wismont (2000) The lived pregnancy experience of women in prison</p> <p>Country US</p>	<p>12 women (9 BME).</p>	<p><b>Method</b> Qualitative analysis (phenomenological reduction) of journal entries and interviews</p> <p><b>Aim</b> To find out whether fetal attachment is affected by prison</p>	<ul style="list-style-type: none"> <li>• 5% prisoners pregnant</li> <li>• 4 key themes <ul style="list-style-type: none"> <li>a) Apprehension about fetal well-being, ability to care for child in prison, damaged relationship/estrangement from child</li> <li>b) Grief and loss – separation from child</li> <li>c) Subjugation: physical &amp; emotional, lack of autonomy, isolation, powerlessness</li> <li>d) Relatedness - 'connectedness' to fetus and child</li> </ul> </li> <li>• Prison generally negative experience</li> <li>• Positive personal or situational outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Women modify thoughts for benefit of their babies</li> <li>• Relatedness to self and fetus may provide opportunity to effect positive health and educational changes</li> <li>• Self-imposed (emotional) seclusion might be more powerful than structural barriers to engaging with services</li> <li>• Few programs allow women to keep newborns – further limited by strict entry requirements</li> </ul>
<p>Schroeder &amp; Bell (2005a) Labor support for incarcerated pregnant women: The Doula Project</p> <p>Country US</p>	<p>18 women (12 ethnic minorities) &amp; 40 prison staff</p>	<p><b>Method</b> Qualitative interviews with 14 women</p> <p>Survey (prison staff)</p> <p><b>Aim</b> To examine the trajectories of women's lives that led to incarceration</p>	<p>Women's experience of pregnancy in prison</p> <ul style="list-style-type: none"> <li>• Stressful</li> <li>• Women felt unsafe</li> <li>• Physically uncomfortable (not enough pillows, sitting on cement)</li> <li>• Insufficient to eat – constantly hungry</li> <li>• No 'special consideration' from jail staff</li> <li>• Need to 'fight to get medical attention'</li> <li>• Other women as sources of help and support</li> </ul>	<ul style="list-style-type: none"> <li>• 'Intersections of race and poverty' – majority of women in study ethnic minority, poor, under-educated</li> <li>• Judicial system does not view women or their babies as needing or deserving specialist services</li> <li>• Women jailed to prevent drug use but drugs widely available in prison – some women felt pressurized to take drugs</li> <li>• Women discharged early – not enough time to set up services</li> <li>• Things women wanted were 'simple things most mothers want' but apparently beyond them</li> <li>• Arrest in early pregnancy presents opportunity for public health intervention to improve outcome for mothers and babies</li> <li>• Doula support can help women have positive birth experiences despite prison constraints</li> </ul>

Paper Details	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
<p>Poehlmann (2005a) Incarcerated mothers' contact with children, perceived family relationships, and depressive symptoms</p> <p>Country US</p>	<p>94 mothers with children aged 2 – 7</p>	<p>Mixed method</p> <p>a) Quantitative measures</p> <ul style="list-style-type: none"> <li>• Frequency of contact with children</li> <li>• Perceived relationships with caregivers (Inventory of Family Feelings (IFF))</li> <li>• Relationship disconnection trauma index (RDTI)</li> <li>• Maternal Depression (CES-D)</li> </ul> <p>b) Qualitative interviews</p>	<ul style="list-style-type: none"> <li>• 37% had no visits with children and 30% did not receive telephone calls</li> <li>• 79% recorded depression scores within clinical range</li> <li>• Most women had difficult childhood (68% witnessed domestic violence, 30% had been sexually abused, 32% experienced physical abuse, 28% had been in foster care and 39% had at last one parent in prison during childhood)</li> <li>• Women who experienced relationship disconnection in childhood more likely to be depressed</li> <li>• Fewer face-to-face visits associated with depression frequency of telephone calls predicted quality of mother-child relationship</li> <li>• Conflict in mother-caregiver relationship associated with less contact between mothers and children</li> </ul>	<ul style="list-style-type: none"> <li>• Most incarcerated mothers experienced depression and reported multiple experiences of early childhood loss, trauma and relationship disconnection</li> <li>• Most women described initial separation from their children as intensely distressing leading to suicidal ideation and/or action</li> </ul>
<p>Poehlmann (2005b) Representations of attachment relationships in children of incarcerated mothers</p> <p>Country US</p>	<p>54 children aged 2.5 – 7.5, their incarcerated mothers, and non-maternal caregivers</p>	<p>Multiple methods: interviews, questionnaires, coded videotapes, standardized assessments</p> <p>Measures</p> <ul style="list-style-type: none"> <li>• Children's Attachment Representations (Attachment Story Completion Task (ASCT) and MacArthur Story Stem Battery (MSSB))</li> <li>• Children's visits</li> <li>• Caregiver depression (CES-D)</li> </ul>	<ul style="list-style-type: none"> <li>• Although half the children were given honest explanations about their mothers' whereabouts, 20% of caregivers gave distorted explanations; 15% did not discuss the issue and 8% gave frightening details such as involvement with guns, knives, gangs, drugs etc</li> <li>• 73% of children had visited their mothers in the previous 2 months</li> <li>• 60% children had lived with a one caregiver since their mothers' incarceration. Of the remaining 40%, 30% had changed homes for or more times</li> <li>• 42% of caregivers were clinically depressed</li> <li>• 83% of children reacted to separation from their mothers with tearfulness or sadness; 52% appeared confused; 40% exhibited acting out or angry behaviour; 33% were described as being indifferent; 32% had problems sleeping; 22% demonstrated developmental regression such as soiling or wetting and 18% became fearful.</li> </ul>	<ul style="list-style-type: none"> <li>• Two-thirds of children held insecure attachments with their mothers</li> <li>• Children's attachment to their mothers were more likely to be secure if they were older, did not react with anger to initial separation and had not visited their mothers in the previous 2 months</li> <li>• Stability of caregiving situation was the strongest predictor of children's representations of relationships with caregivers</li> <li>• Longitudinal research is needed to determine whether, when and how caregiver mental health affects children of incarcerated mothers</li> <li>• Longitudinal studies important in differentiating the effects of maternal incarceration and other factors such as poverty and substance abuse in the aetiology of children's relationships</li> <li>• Longitudinal research focusing on relationship development of children of incarcerated mothers important for understanding the processes that lead to resilience in this high risk population</li> </ul>

## Theme 5: Pregnant Adolescents/Young Offenders

Paper Details	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
<p>Breuner &amp; Farrow (1995) Pregnant teens in prison: prevalence, management and consequences</p> <p>Country US</p>	<p>261 of 430 juvenile detention and long-term correctional facilities</p>	<p><b>Method</b> Survey questionnaires</p> <p><b>Aim</b> To estimate number of pregnant and parenting incarcerated teens and the health and social care services available to them</p>	<p><b>Provision for pregnant women</b></p> <ul style="list-style-type: none"> <li>• Proportionately more African-Americans</li> <li>• 68% institutions estimate holding 1 – 5 pregnant adolescents</li> <li>• 55% institutions release young women with confirmed pregnancy because of previous legal action for poor obstetric care or institutions acknowledging inability to meet medical and social needs</li> <li>• 27% have no social work services</li> <li>• 31% no nursing or antenatal care</li> <li>• 38% no antenatal obstetric care</li> <li>• 62% have no nutritionist</li> <li>• 70% have no parenting classes</li> <li>• 87% no childbirth education</li> <li>• 78% return teens to jail following delivery</li> <li>• 60% reported at least 1 obstetric complication</li> </ul> <p><b>Young Mothers and Their Babies</b></p> <ul style="list-style-type: none"> <li>• 46% no mother-infant visitation policy</li> <li>• 29% did not know where their children had been placed</li> <li>• 64% of those who did, said children placed with family member; 43% fostered; 11% adopted (some by family members)</li> </ul>	<ul style="list-style-type: none"> <li>• First attempt to count numbers of pregnant and parenting teens</li> <li>• A substantial number of pregnant and parenting adolescents are in prison</li> <li>• They do not receive equivalent community standard services</li> <li>• Recommends further research as basis for service development and to compare short and long-term facilities</li> </ul>
<p>Anderson &amp; Farrow (1998) Incarcerated Adolescents in Washington State: Health Service Utilization</p> <p>Country US</p>	<p>12 (out of 24) juvenile detention facilities</p>	<p><b>Method</b> Monthly data collection survey</p>	<ul style="list-style-type: none"> <li>• At least 14 pregnant adolescents in prison at any on time in Washington state &lt;1% 1819 inmates</li> <li>• Focus of services differed by type and size of institution</li> <li>– <i>County</i>: acute problems e.g. sexually transmitted diseases, pregnancy, urological problems and trauma. More visits to emergency room.</li> <li>– <i>State</i>: more chronic issues e.g. dental, nutrition, respiratory</li> </ul>	<ul style="list-style-type: none"> <li>• Adolescents in prison at high risk of adverse outcome – including death</li> <li>• Improved health care e.g. adequate screening and primary care provision might benefit not only individuals/group but society as a whole</li> </ul>

Paper Details	Participants	Method/Aim/Intervention	Findings	Authors' Conclusions
<p>Mason et al (1998) Sexual and physical abuse among incarcerated youth: implications for sexual behaviour, contraceptive use, and teenage pregnancy</p> <p>Country US</p>	<p>62 female and 334 male incarcerated youth</p>	<p>Method Self-report survey</p>	<ul style="list-style-type: none"> <li>• 73% females reported history of physical abuse</li> <li>• 68% females reported history of sexual abuse</li> <li>• Female victims of sexual abuse reported earlier mean age of first coitus</li> <li>• Victims of physical and/or sexual abuse significantly less likely to use contraception</li> </ul>	<ul style="list-style-type: none"> <li>• Abused adolescents at increased risk of sexual dysfunction, depression, and victimization</li> <li>• Female abuse victims may experience sense of powerlessness and inability to exercise contraceptive choice</li> </ul>