CHAPTER 11

Deaths from psychiatric causes

Introduction

For this Report, the concept of psychiatric death has been broadened to include not only deaths from suicide but also includes deaths from substance misuse, physical illness, accidents and other misfortunes which, in the opinion of the assessors, would not have occurred in the absence of a psychiatric disorder. However, as the characteristics of the deaths and lessons to be learned from these different groups of women are dissimilar, the Editorial Board took the decision to split this chapter into two parts:

- **11A**, which relates to lessons to be drawn from maternal deaths from suicide and other psychiatric causes; and the second, new section,
- **11B**, on lessons to be learned from deaths associated with drug and/or alcohol misuse.

This distinction has also been made because the problems and needs of women with substance misuse were distinctively different to those of women with psychiatric illness and because neither group was best served by including them under one generic title, 'Psychiatric disorder'.

For statistical purposes, the actual numbers of deaths from all psychiatric causes will continue to be counted under one overall category for psychiatric causes of death.

Although a psychiatrist has been a member of the Enquiry Board and a central assessor for the last three triennia, CEMACH will be introducing a network of Regional Psychiatric Assessors for 2003–2005, to reflect the importance of the lessons to be learned from these deaths.

CHAPTER 11A

Deaths from suicide and other psychiatric causes

MARGARET OATES on behalf of the Editorial Board

Psychiatric deaths from suicide or attributed to physical causes: key recommendations

Service provision

Guidelines for the management of women who are at risk of a relapse or recurrence of a serious mental illness following delivery should be in place in every Trust providing maternity services.

A specialist perinatal mental health team with the knowledge, skills and experience to provide care for women at risk of or suffering from serious postpartum mental illness should be available to every woman.

Women who require psychiatric admission following childbirth should be admitted to a specialist mother and baby unit, together with their infant. In areas where this service is not available then admission to the nearest unit should take place.

Sufficient regional psychiatric mother-and-baby units should be developed to meet the needs of the population.

Individual practitioners

Systematic enquiries about previous psychiatric history, its severity, care received and clinical presentation should be routinely made at the antenatal booking visit.

General practitioners should ensure that all relevant information concerning a woman's current or previous psychiatric history is included in referral letters to the booking clinic.

The term 'postnatal depression' or 'PND' should not be used as a generic term for all types of psychiatric disorder. Details of previous illness should be sought and recorded in line with the recommendations above.

Women who have a past history of serious psychiatric disorder, postpartum or non-postpartum, should be assessed by a psychiatrist in the antenatal period. A management plan regarding the high risk of recurrence following delivery should be agreed with the woman, her maternity team and GP and placed in her handheld records.

Women who have suffered from serious mental illness either following childbirth or at others times should be counselled about the possible recurrence of that illness following further pregnancies.

Education and training

The Royal Colleges of Psychiatry, Obstetrics and Gynaecology, General Practice and Midwives should ensure that perinatal psychiatry is included in their curricula and requirements for continuing professional development.

Local training must be put into place before routine screening for serious mental illness is implemented.

Obstetricians and midwives should be aware of the laws and issues that relate to child protection and when and to whom to refer if concerned.

Introduction

Perinatal psychiatric disorder

Psychiatric disorder associated with childbirth is common, both new episodes specifically related to childbirth and recurrences of pre-existing conditions. Ten percent of new mothers are likely to develop a depressive illness,[1] of whom between one-third and one-half will be suffering from a severe depressive illness.[2] Two percent of delivered women will see a psychiatrist during the first year after delivery. Four per thousand will be admitted to a psychiatric hospital, of which two per thousand will suffer from a puerperal psychosis.

The majority of women who develop postnatal mental health problems will suffer from mild depressive illnesses, often with accompanying anxiety. Such illnesses are equally prevalent in pregnancy. However, there is little evidence that mild depression is any more common during pregnancy or the postpartum period than at other times.[1]

In contrast, the risk of developing a severe mental illness, either a severe depressive illness or a puerperal psychosis, is substantially elevated, particularly in the first 3 months postpartum. The relative risk of suffering from a severe depressive illness following childbirth is 5, of seeing a psychiatrist 7 and of being admitted with a psychosis in the first three months following childbirth 324. The relative risk of suffering from a new onset serious psychiatric disorder in pregnancy is lower than at other times.[4] However, it should not be forgotten that the prevalence of all psychiatric disorders including substance misuse, schizophrenia and obsessional compulsive disorders is the same at conception as in the nonpregnant female population.

While psychosocial factors are undoubtedly in the ascendancy as etiological factors in the mild to moderate postnatal depressive illnesses,[4] it has been thought that biological factors (genetic and neuroendocrine) are the most important etiological factors in the severe postpartum onset conditions. It is known that a family history of bipolar disorder increases the risk of a woman developing such an illness after childbirth.[5] Women who have had a previous episode of non-postpartum serious mental illness are at an increased risk of developing a postpartum-onset illness, a risk estimated at between 1 in 2 and 1 in 36 and women who have had a previous manic episode either postpartum or non-postpartum are at particularly elevated risk of recurrence following childbirth, a risk estimated at 1 in 2.[6] The last Report[7] revealed that one-half of the women who died

from suicide had a previous history of serious mental illness, one-quarter related to their last childbirth.

Specialist perinatal psychiatric services

The serious mental illnesses following childbirth tend to have an early and rapid onset, with the illness often developing very quickly over a period of 24–48 hours. Fifty percent of these illnesses have presented by day 7 and 90% by 3 months postpartum.[4] This, together with the distinctive symptoms[8] and the special needs of women and their infants at this time has led to national and international acceptance of the need for special services for perinatal psychiatric disorder.[9] It is also generally recommended in the United Kingdom that, if such women require admission to hospital, they should be admitted together with their infant to a specialised mother-and-baby unit. The finding of the last Report that none of the women who died as a consequence of severe postnatal mental illness had been admitted to a mother-and-baby unit underpins the importance of this Health Service strategy.

Maternal suicide

Despite the frequency of maternal psychiatric disorder in general and the increased risk of serious postnatal psychiatric disorder in particular, suicide is a rare event during pregnancy and the postpartum period. Until recently it had been thought that pregnancy and the postpartum period exerted 'a protective effect' on suicide and that the maternal suicide rate was lower than would be expected.[10,11] The last Report found that overall maternal suicide was more common than previously thought and was in fact the leading cause of maternal death. Four times as many suicides occurred following delivery than in pregnancy itself.

As shown in Chapter 20, the rate of suicides in women who have given birth up to 1 year after delivery is less than that for the nonpregnant population of the same age. This 'protective effect of pregnancy' is even more striking among pregnant women, who have the lowest suicide rate of all.

Risk of recurrence

Of great importance to the findings of this Enquiry is the risk of recurrence posed by childbirth to women who have a past history of severe mental illness, postpartum or at other times. The recommendations made in the last two Reports that women should be asked in the antenatal clinic about a previous history of psychiatric illness is strengthened in this Report, which once again emphasises not only the identification of risk but also its psychiatric management.

Fifty years ago...

Over the last 50 years, suicides have been reported to the Confidential Enquiries into Maternal Deaths. However, it is only in the last three Enquiries covering the triennia 1993–96, 1997–99 and this current Enquiry for 2000–02 that they have been separately analysed and described. The concept of psychiatric death has been broadened to include not only suicide but also deaths from substance misuse, physical illness, accidents and other misfortunes which would not have occurred in the absence of a psychiatric

disorder. It is also only in the last three triennia that a psychiatrist has been a member of the Enquiry and a central assessor.

Suicide research over the last 40 years has consistently shown that suicide rates based on coroners' verdicts alone are underestimated. The record-linkage study by the Office for National Statistics (ONS) conducted at the end of the last Report and repeated for this, clearly demonstrated that around half of all maternal suicides had not been reported to this Enquiry. This is because these women died once they had lost contact with maternal health services, whose professionals are well used to reporting all cases of maternal death of which they are aware. To date, psychiatrists, community mental health nurses, general practitioners and others have not been sufficiently aware of the need to report such cases, and some women will have died out of contact with any services at all. Such under-reporting is likely always to have been true, making it difficult to compare the rates of suicide in the current Enquiries (and other psychiatric causes of deaths) with those over the last 50 years. Maternal suicide and postnatal mental illness have not been seen in the past as the direct consequence of the effects of childbirth. While the reporting of early suicide may be improving, those occurring after 42 days, particularly later in the postpartum year, are still under reported. Advice to pathologists, coroners and regional assessors will hopefully improve this situation in future Enquiries.

The previous Report for 1997–99

Chapter 11 in the previous Report described 42 psychiatric deaths; 68% of those deaths were due to suicide, which was the leading cause of *Indirect* death and the second leading cause of maternal death overall. However, when the additional cases discovered by the ONS linkage study were added, suicide emerged as the leading cause of maternal death. Other important findings to emerge from the 1997–99 Report were that the great majority of women who committed suicide died violently, very few dying from an overdose of prescribed medication. This, together with the fact that the majority of suicides were over 30 years of age and from comfortable social circumstances, suggested that the profile of women at risk of suicide at this time might be different to that of other women and men. A further important finding was that half of the suicides had a previous psychiatric history. Had their risk of recurrence been recognised and managed then the outcome might have been different. These findings informed the recommendations of the previous Report and included the recommendations that all women should be asked about a previous history of serious mental illness at booking and that management plans should be put in place for those women at high risk of recurrence following delivery. These and other recommendations have now been widely implemented in maternity Trusts throughout the United Kingdom[12] and have been incorporated into the NICE guidelines for antenatal care,[13] the Scottish National Maternity Framework (National Service Framework),[14] the Women's Mental Health Strategy,[15] and the Children and Maternity National Service Framework for England.[16]

An important cause of maternal death revealed in the last Report was overdosing of illicit drugs, mainly heroin. Those women suffering from substance misuse who committed suicide by other methods were counted as suicides. However, for most of the 'accidental' overdoses it is difficult to know whether the overdose was intentional. It was clear from the last Report that many of these women had difficulties engaging with Substance Misuse Services and that few of those services were well integrated with maternity care. In this Report, the deaths from substance misuse that occurred in

pregnancy and in the first 42 days following delivery are counted in this chapter. All the deaths from substance misuse including the *Late* deaths are described in further detail in Chapter 11B.

Summary of the findings for 2000–02

As in the previous Report, the number of cases of suicide and other deaths associated with psychiatric causes were under-reported to the Enquiry. By using the numbers of cases of suicide actually reported to the Enquiry it appears to be the second leading cause of maternal death after cardiac disease. However, as shown in Figure 11.1, the ONS record linkage study, described more fully in Chapter 1, has identified additional deaths in England and Wales not reported to the Enquiry shows that suicide was in fact the leading cause of *Indirect* or *Late Indirect* maternal death over the whole year following delivery. Figure 11A.1 shows the number of deaths due to drugs and substance misuse, violence, accidents and misadventure that were also unreported. It is likely that a number of these also include cases of suicide.

Suicide is the leading cause of maternal death

As in the last Report, the majority of women who committed suicide after childbirth but within 1 year after delivery were not known to the Enquiry. This is mainly because they were out of contact with the maternity services by the time they died and their deaths were not coded as due to maternal causes on the death certificate. The ONS record linkage study identified around 50 women in England and Wales who were known to have died of suicide or whose deaths were recorded under an open verdict. Only 18 suicides were known to the Enquiry, including cases from Scotland and

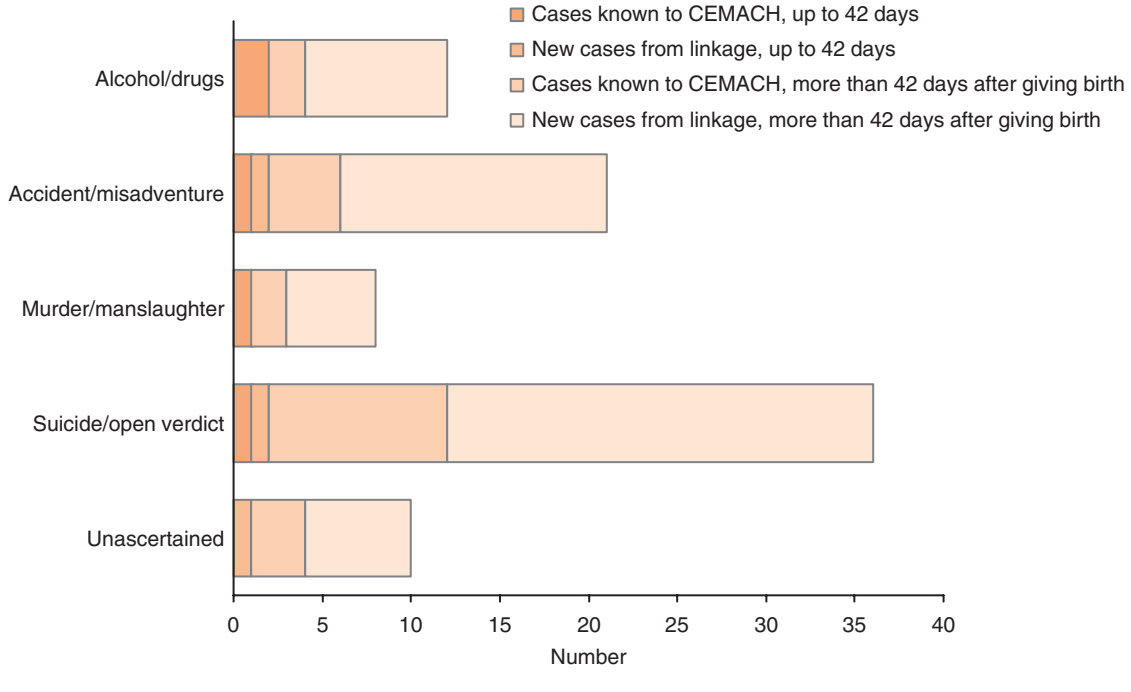

Figure 11A.1 Number of maternal deaths idenitifdied by ONS record linkage from psychiatric, accidental, violent of unascertained causes; England and Wales 2000–02

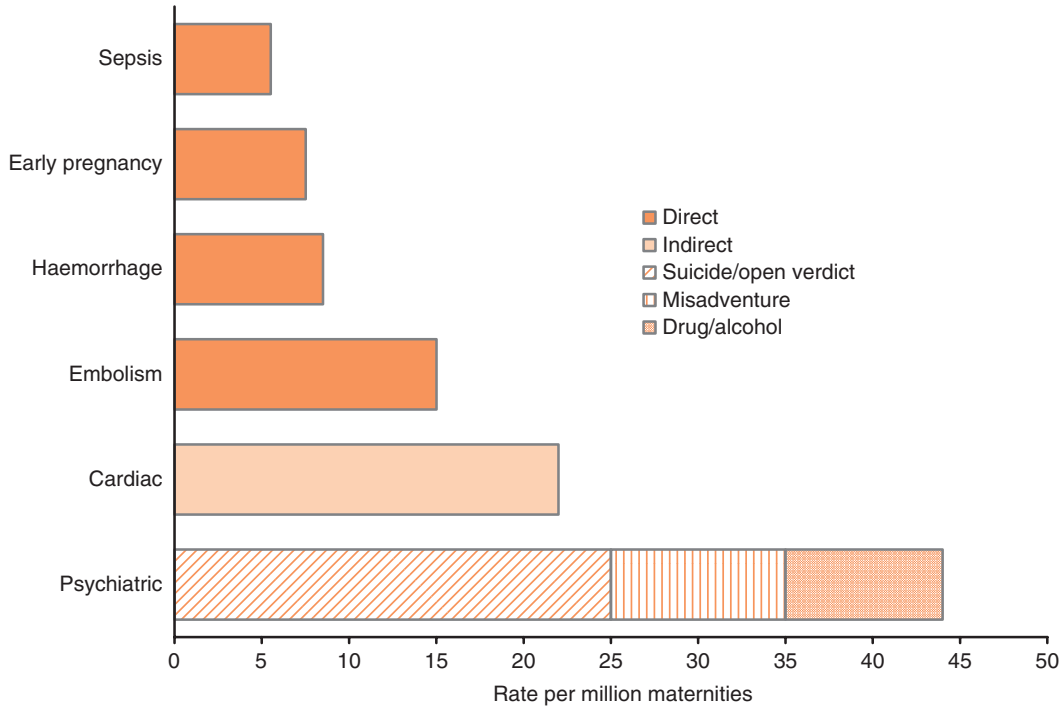

Figure 11A.2 Deaths per million maternities from leading causes of death as identified by ONS Linkage study for England and Wales; 2000–02

Northern Ireland. Further, another 14 women had verdicts of deaths due to accidental causes or misadventure and another ten died from drugs and/or alcohol and in both categories some of these too would have probably been self-inflicted. Figure 11A.1 shows the additional cases identified for England and Wales and Figure 11A.2 shows the overall UK maternal mortality rate if these deaths are included. It is important to note that many women who died as a result of puerperal psychosis did so after the first 6 weeks following delivery had elapsed, the timeframe usually taken to define a maternal death. Although these cases are classed as *Late Indirect* deaths they are still counted in the overall maternal mortality rate from suicide.

In this, as in previous Reports, the majority of the women died by their own hand, mostly suicide but a significant number from self-administered recreational drugs. As in previous Reports, there were a smaller number of women who died from other causes. However, all these deaths were caused, or significantly contributed to, by a psychiatric illness.

There were 60 deaths reported to this Enquiry which had psychiatric aspects and which are described in this Chapter. Details for four cases, two suicides and two to physical causes are incomplete and they are excluded from many of the tables in this chapter. However, only the 16 deaths, from suicide or recreational drugs overdose that occurred during pregnancy or in the first 42 days following delivery are counted in this chapter to accord with the international definitions of maternal deaths described on page 9 of this Report. A further 18 suicides and four illicit drug overdoses took place after 42 days, *Late* deaths, and are counted in Chapter 15. Eighteen women died from physical causes attributable to psychiatric disorder and are counted in the relevant chapters. There were three deaths: a death in a house fire, a murder and a road traffic accident, which have been counted as *Coincidental* deaths in Chapter 14. The details of how these deaths

Table 11A.1 Chapters in which maternal deaths reported to this Enquiry caused by or linked with psychiatric illness are counted; United Kingdom 2000–02

	Chapter 11 *Indirect*	Chapter 15 *Late*	Other chapters	Total
Suicide	10	18		28*
Drug overdose**	6	5		11
Other physical cause of death		3	15	18*
Other**			3	3
Total	16	26	18	60

* Two cases in each section have very few details and are excluded from the majority of the tables in this Chapter
** One death from alcoholism
*** Road traffic accident, murder or house fires in which psychiatric conditions may have played a part

have been classified are shown in Table 11A.1. The timing of the deaths in relation to pregnancy are shown in Table 11A.2.

Causes of death

There were 28 reported suicides. Further details were not available for two cases. Five of these occurred in pregnancy, including a woman who died in a road traffic accident, which did not have a coroner's suicide verdict but was probably intentional. Five women who committed suicide died within 42 days after delivery and there were 18 *Late* reported deaths from suicide. There were 11 deaths from an overdose of illicit drugs, four in pregnancy, two early after delivery and five *Late* deaths. Eighteen women died from physical causes, directly or indirectly related to a psychiatric condition, mainly in the immediate postpartum period. Three other deaths counted in Chapter 14 Coincidental deaths, probably had an underlying psychiatric component.

Deaths from physical illness

The three deaths in pregnancy included a woman who died of meningitis who was an intravenous drug user and a woman who died from HELLP syndrome who was an intravenous heroin user and homeless and whose psychosocial problems interfered with the earlier identification and management of her medical syndrome. A woman from an ethnic minority also died from infection. Her behavioural disturbance, probably due to a toxic confusional state, again interfered with her initial diagnosis and management.

Table 11A.2 Timing of reported maternal deaths associated with psychiatric causes; United Kingdom 2000–02

Cause	During pregnancy	Up to 42 days after delivery	Late (42 days to one year after delivery)	Total
Suicide	5	5	18	28*
Illicit drugs overdose	4	2	5	11
Physical illness	3	12	3	18*
Other	2	1	0	3
Total	14	20	26	60

* no further details available for two of these cases

Table 11A.3 Maternal deaths from physical illness associated with psychiatric disorders; United Kingdom 2000–02

Cause	During pregnancy	Within 42 days of delivery	Late	Total
Thromboembolism:				
Cerebral thrombosis		2		2
Pulmonary embolus		1		1
Central nervous system:				
Cerebral haemorrhage		1	1	2
Wernickes encephalopathy		1		1
Acute hydrocephalus			1	1
Infection:				
Meningitis	1			1
Uterine sepsis		1		1
Not known	1	1		2
Obstetric haemorrhage		2		2
Others	1	3	1	5*
Total	3	12	3	18

* details not available for 2 of these cases

Many of the lessons to be learned from the 12 deaths from physical causes in which psychiatric causes played a part are described in the relevant chapters. Some are briefly mentioned here and the major lessons to be learned from these cases are discussed later in this chapter (Table 11A.3).

In the immediate postpartum period, two women's deaths were due to cerebral thromboembolism and their symptoms, in one case attributed to hysteria, had led to them receiving inappropriate psychiatric care prior to the correct diagnosis. Another woman's symptoms of meningitis were ascribed to depression. This probably delayed their treatment.

Of the *Direct* deaths, one woman who died from sepsis a few days following delivery had a severe tachycardia, which was mistaken for panic attacks. Two women died from postpartum haemorrhage. They had both concealed their pregnancies and had unassisted deliveries. In one case there was clear evidence to suggest a major personality disorder and in the other the circumstances of the concealment and unassisted delivery strongly suggest psychological problems.

There were three other early postpartum deaths. One woman, a chronic alcoholic, died from a ruptured pancreatic cyst shortly after delivery. A second, with a long history of major psychosocial problems, was thought to have psychogenic vomiting and died from the consequences of a ruptured oesophagus. In the third, a woman with a long history of emotional and behavioural disturbance died from a ruptured adenoma after having been transferred to a psychiatric unit with a presumed diagnosis of puerperal psychosis. It is possible that her psychiatric medication contributed to her respiratory arrest.

There were three *Late* deaths from physical causes, two of which are discussed in the section on drug and alcohol misuse. The final woman who died had a sudden unexplained cardiac death, which may have been due to her antidepressant medication.

Table 11A.4 Timing of deaths from or associated with psychiatric causes reported to this Enquiry during pregnancy or in 6-week intervals up to following delivery; United Kingdom 2000–02

	Timing							
	Pregnancy (completed weeks of gestation)			Up to 42 days after delivery (weeks)	*Late* (weeks after delivery)			
Cause of death	< 28	28–33	34–40	0–6	7–12	13–25	> 26	Total (*n*)
Suicide	1	0	4	5	5	7	6*	28
Drugs	3	1	0	2	0	3	2	11
Physical Illness	0	1	2	12*	2	1	0	18
Other	1	1	0	1	0	0	0	3
Total	5	3	6	20	7	11	8	60

* further details not available for two cases

Timing of psychiatric deaths from suicide, overdose or other causes

The known epidemiology of perinatal psychiatric disorders suggests that psychiatric disorder presenting in the last trimester of pregnancy is both unusual and predictive of problems following delivery. It is also known that the majority of serious mental illnesses have presented by 90 days following delivery. For this reason, together with the fact that deaths from psychiatric causes may occur some weeks after the early onset of the illness, the psychiatric deaths were analysed in 6-week periods relating to childbirth. Four out of five suicides in pregnancy occurred between 34 and 40 weeks of gestation. Details are shown in Table 11A.4. Twelve of the 26 reported suicides therefore occurred between the last trimester of pregnancy and the first 3 months following delivery. In two more, the timing was not known to the assessors.

The timings of death of the women who died from an overdose of drugs are also shown in Table 11A.4, as are those for women who died of other causes. There were no deaths from physical causes beyond 18 weeks post-delivery. All the *Coincidental* deaths occurred during or shortly after delivery.

Overall therefore, almost more than 50% (34 out of 60, according to the Reports to this Enquiry) of all maternal deaths from psychiatric causes occurred either in the 3 months before or the 3 months after childbirth.

Method of suicide

As in the last Confidential Enquiry, the method of suicide was predominantly violent. In two women the method of death was not disclosed on the death certificate and further information not available.

Of the suicides where the method of death was known only nine women died from an overdose of prescribed medication. Seventeen women died violently, eight from hanging, four from jumping, one each from a cut throat, self-immolation and drowning; two were from intentional road traffic accidents. Two-thirds of the suicides assessed for this triennium were violent. Table 11A.5 shows the percentage of deaths from suicide by method for 1997–2002.

Table 11A.5 Chosen method of suicide; United Kingdom 1997–2002

Method of suicide	1997–99 (*n*)	2000–02 (*n*)	1997–2002 Total (*n*)	1997–2002 (%)
Hanging	10	8	18	*35*
Jumping from a height	5	4	9	*17*
Cut throat	4	1	5	*10*
Intentional road traffic accident*	1	2	3	*6*
Self-immolation	1	1	2	*4*
Drowning	1	1	2	*4*
Gunshot	1	0	1	*2*
Total violent deaths	23	17	40	*77*
Overdose of prescribed drugs	3	9	12	*23*
Total	26	26**	52	*100*

* Open verdict but the details of the cases led the opinion of the Assessors to classify these as suicides
** Details missing for two further cases

Age at death

In the last Report it was noted that the women who committed suicide tended to be older than for those dying of other causes of maternal death with over half the women being aged 30 years more. For this triennium, 42% of the women who committed suicide were 30 years or older as shown in Table 11.6. The details are missing for two cases.

Social characteristics

Unlike the women who died from drug- or alcohol-related deaths, the social circumstances of the women who committed suicide were favourable, and there was no social class gradient or link to deprivation as seen for many other causes of maternal death. The majority of the women came from comfortable backgrounds, were in stable relationships and had partners who were in employment. Many had completed higher education and several had higher professional qualifications. As in the last Report, a number were healthcare professionals.

Ethnicity

Four of the women who committed suicide were from ethnic minority groups, two being Indian. None of the suicides was African or Caribbean, although three women from these groups died of physical causes. Fifty-three of the total number of 60 women who died from psychiatric deaths were White.

Table 11A.6 Age at death from psychiatric causes; United Kingdom 2000–02

Age (years)	Suicide (*n*)	Illicit drugs (*n*)	Physical illness (*n*)	Other (*n*)	Total (*n*)
18 & under	1	1	0	1	3
19–24	3	3	2	0	8
25–29	11	3	7	0	21
30–34	6	2	4	2	14
35+	5	2	5	0	12
Total	26*	11	18	3	58*

* Excluding two suicides for which very few details were available

Table 11A.7 Psychiatric diagnosis and underlying causes of death; United Kingdom 2000–02

Diagnosis	Suicide (*n*)	Illicit drugs O/D (*n*)	Physical illness (*n*)	Other (*n*)	Total (*n*)
Organic state	0	0	5	0	5
Psychosis	9	0	1	1	11
Severe depressive illness	5	0	0	0	5
Anxiety/depression adjustment	5	0	2	0	7
Alcohol dependent	2 (1*)	0	3 (1*)	1	6
Drug dependent	2 (1*)	9 (3*)	5	0	16
Personality disorder	1	0	1	1	3
Unascertainable	2	0	1	0	3
Total	26**	9	18**	3	56

* Co-morbidity anxiety and depression
** Detail not available in two cases

Diagnosis of psychiatric disorder

In all but three cases, there was sufficient information to make a probable or definite psychiatric diagnosis. In nine of the 18 women whose deaths were due to physical causes the probable psychiatric diagnosis immediately prior to deaths were of an acute confusional state. However, their symptoms were attributed to a functional psychiatric disorder and this may have delayed appropriate diagnosis and treatment. Details of the psychiatric diagnosis and cause of death are given in Table 11A.7.

In all, there were 11 cases of psychosis, nine of the 26 women who committed suicide, one who died from physical causes and a woman who was murdered. Five other women who committed suicide were suffering from a severe depressive illness. Therefore, more than 50%, 14 of 26, women who died from suicide were suffering from a serious mental illness during the index maternity.

There were seven cases of mixed anxiety and depression or adjustment reaction, five who committed suicide and two who died from a physical illness.

Six women were alcohol-dependent, of whom two committed suicide, one of whom had co-morbid anxiety and depression. A further three women with chronic alcoholism died from physical illness, and the other woman died in pregnancy in a house fire.

Details of the women who died from drug- or alcohol-related deaths are given in Chapter 11B but two heroin addicts committed suicide by hanging.

Three women had personality disorders. One woman with an explosive personality disorder and co-morbid alcohol misuse committed suicide, and another profoundly personality disordered woman, with a history of at least 12 concealed pregnancies and unassisted deliveries, died of a postpartum haemorrhage. A young girl with conduct disorder and personality difficulties died when pregnant in a road traffic accident in a car driven by her young disordered boyfriend.

Although over half of the suicides were seriously ill, there was a wide range of psychiatric disorders in the deaths overall.

Substance misuse (see Chapter 11B)

There were 22 deaths in women who misused alcohol or illicit drugs, six in alcohol misusers and 16 in drug misusers. Eleven died of overdoses and five hanged themselves.

Three women died from the physical consequences of chronic alcoholism. Apart from the suicides and deaths due to alcohol the remainder were either accidental overdoses or deaths from physical consequences of drug misuse. Another nine women who died from other causes were known to be substance misusers.

Current level of contact with services

In the previous Report, 68% of all women who died from psychiatric causes and 86% of those who committed suicide were receiving some form of psychiatric treatment during the index maternity, and over half were in contact with psychiatric services. In this triennium, ten women had been admitted to a psychiatric hospital in the index maternity, six of whom subsequently committed suicide and three of whom died from physical illness. Only one woman had received inpatient care in a specialist mother and baby unit.

A further 13 women had been in contact with a community mental health team or a psychiatrist during the index maternity: eight suicides, two who died from physical causes, one woman who was murdered and a girl who died a road traffic accident.

Five women were being treated by their general practitioner for depression, four of whom committed suicide and one who died of a drug overdose and who was being managed by her general practitioner for co-morbid anxiety and depression.

Overall out of the 60 psychiatric deaths from all causes, 37 were receiving treatment for their condition during the index maternity, 23 of these by psychiatric services, ten as inpatients. Twenty of the 26 women who committed suicide were receiving treatment, 15 by psychiatric services. Seven of these women had been admitted for psychiatric care during the index maternity (Table 11A.8).

Previous psychiatric history

In the last Report half of the women who died from suicide had had a psychiatric history prior to the index maternity, of which half had followed a previous childbirth. These findings are consistent with this Report. In this triennium, 17 of the 26 suicides had a prior psychiatric history. Six of these had been treated as an inpatient, three with a previous puerperal psychosis. Seven had been managed as psychiatric outpatients or by the community mental health team, including one woman with a previous history of severe postnatal depression. A further two women were being managed by their

Table 11A.8 Highest level of current psychiatric care, by cause of death, provided during the index pregnancy; United Kingdom 2000–02

	Cause of death				
Level of care	Suicide	Illicit O/D drugs	Physical illness	Other	Total
Inpatient	7	0	3	0	10
Outpatient	8	0	2	3	13
Substance misuse services	1	6	2	0	9
GP only	4	1	0	0	5
None	6	2	11	0	19
Total	26*	9	18*	3	56

O/D = overdose; * details for not available for 2 cases

Table 11A.9 Previous contact with psychiatric services past history of psychiatric disorder all causes; United Kingdom 2000–02

	Cause of death				
Type of care	**Suicide**	**Illicit drugs overdose**	**Physical illness**	**Other**	**Total**
Inpatient	6(3*)	0	0	1	7
Outpatient	7 (1*)	0	3	2	12
Substance misuse services	2	5	4	0	11
GP only	2 (1*)	0	2	0	4
None	9	4	9	0	22
Total	26	9	18	3	56**

* = postnatal illness ** details not available for four cases

general practitioners, including one with a history of postnatal depression. Two substance misusers who committed suicide had been seen previously by the substance misuse services.

Half of the 18 women who died from physical illness had been previously treated for a psychiatric disorder, mainly by community mental health teams or their general practitioners for anxiety and depression (Table 11A.9).

The woman who was murdered had previously been an inpatient for schizophrenia, the road traffic accident victim had been treated by the child and adolescent services for conduct disorder and the woman who died in a house fire by the community mental health services.

Overall, therefore, 34 out of 56 psychiatric deaths had a prior psychiatric history, 19 out of the 56 a previous history of serious psychiatric disorder, treated by psychiatric services and a further 11 women previously treated by substance misuses services. In this triennium only five women had a previous psychiatric history of postpartum illness.

Risk identification and management

Thirty-four of the women who died from psychiatric causes had a previous history of a psychiatric disorder treated by psychiatric services, substance misuse services or their general practitioner. Of these, 17 had their history identified during the index pregnancy and 17 did not. Of the 17 suicides 'at risk', in seven cases the risk was antenatally identified by either or both maternity and psychiatric services but in ten cases it was not identified. For women dying from other causes including accidental overdoses of illicit drugs, ten were identified antenatally but ten were not. Overall, therefore, in half of the cases 'at risk', risk factors were not identified during the index pregnancy.

Further, of the 34 women with a previous history of treated psychiatric disorder, in only ten cases was an adequate psychiatric management plan put into place in the antenatal period. Of the 17 suicides with a previous history only four had an adequate management plan and of the 17 deaths from other causes with a previous history only six had an adequate management plan, as shown in Table 11A.10.

Contact with specialist services

Of the 60 deaths, only one woman, who died from suicide in pregnancy, was cared for by specialist perinatal mental health services and only one woman, a *Late* suicide, was

Table 11A.10 Appropriate management of risk in women with a known previous psychiatric history; United Kingdom 2000–02

	Management of risk				
	Plan in place		No plan		
Cause of care	(*n*)	(%)	(*n*)	(%)	Total (*n*)
Suicide	4	24	13	*76*	17
Other	6	55	11	*65*	17
Total	10	42	24	*71*	34

admitted to a mother and baby unit. However, this latter woman was admitted many miles from her home and discharged herself after only a few hours. None of the women who had been in contact with psychiatric services after a previous childbirth had been treated by specialist services during the current pregnancy.

Communication between professionals and services

Despite the fact that two thirds of the women who died from psychiatric causes were receiving some form of psychiatric treatment during the index maternity, and the fact that almost two thirds of the women had a previous psychiatric history, there was very little evidence of communication between the specialties of general practice, psychiatry and obstetrics. With two notable exceptions, there appears to have been an absence of communication in the following areas:

- GPs did not reveal previous psychiatric history or current psychiatric involvement to obstetricians on referral.
- Psychiatric services seemed to be unaware in many cases that their patient was pregnant and, if they were aware, did not communicate their management plans or concerns to the obstetricians.
- Obstetricians and midwives did not appear to communicate with psychiatric services.

The children

Twenty-five women who died of psychiatric causes had no living children prior to the index maternity. Thirty-one women had one or two older children and only three women had more than two older children including a woman who died from a haemorrhage after a concealed pregnancy and unassisted delivery. She had at least 12 children. Half the women who died from suicide had older children but only five had a previous history of postnatal mental illness.

Infanticide and filicide

There were four cases, all suicides, where the woman died and killed her infant; three suicide/infanticides and one death of the infant was followed by suicide some weeks later. In two cases, an older child was killed at the same time. To these cases can be added four suicides that occurred in pregnancy, near term, therefore killing a viable infant.

Comparison with the findings of the last Report

The overall numbers of maternal deaths due to psychiatric causes and the numbers of suicides in particular were broadly similar to the 1997–99 Enquiry. Also the same were the findings that the majority of women were older, White, had a previous history of psychiatric disorder, and that in the majority of cases the risk of recurrence was neither identified nor managed in the index pregnancy. Sadly, the predominantly violent method of suicide was also found in the current Enquiries.

However, there were some differences. There were relatively fewer women in the current Enquiries with a previous history of puerperal psychosis and postnatal depression. While over half of the suicides were seriously mentally ill, there was a wider range of psychiatric diagnoses in deaths from all causes than previously. The proportion of women who died from the consequences of illicit drug misuse seems to have increased. There were fewer early deaths and there seemed to be an increase in the number of women who died from physical illness as a consequence of their psychiatric disorder. On this occasion, unlike the two previous Enquiries, four women died together with their infants or older children.

Emergent themes

Suicide profile

Although there were fewer earlier deaths after childbirth than in the last Report, 57% of the women who died from suicide and whose deaths were assessed by this Enquiry died within 3 months of childbirth and 78% within 6 months. This highlights the need to be particularly vigilant about the mental health of women in late pregnancy and the first 3 months postpartum. The following points summarise the findings in this Report.

Of the women who committed suicide:

- 87% were White
- 83% were over the age of 25 years
- 46% were over the age of 30 years
- 55% had previous children
- 54% were seriously ill, either suffering from a postpartum psychosis or a very severe depressive illness
- 50% had a previous history of serious illness, of whom half had been admitted to a psychiatric unit
- 50% were in contact with psychiatric services during their index maternity, 75% of whom were receiving some form of treatment
- Only one woman with significant postpartum mental illness had been admitted to a specialist mother and baby unit
- 65% of the suicides died violently, half from hanging or jumping from a height, clearly reflecting the profound disturbance of their mental state and intention to die
- Only 35% died from an overdose of prescribed medication.

These illnesses were therefore neither hidden nor undetected.

However, in this Report, only five women had a previous history of postpartum mental illness, despite the fact that over 50% of the women who killed themselves had had a previous child.

Learning point: profile of women who commit suicide due to perinatal mental illness

The most common profile of women at risk of suicide in late pregnancy and following delivery is of a White older woman in her second or subsequent pregnancy, married and living in comfortable circumstances. She is likely to have a previous history of mental illness and contact with psychiatric services, is probably currently being treated and whose baby is under 3 months old. She is likely to die violently. This highlights the importance of alerting psychiatric services to the fact that risk factors for maternal suicide may be different to those for other women and men.

Risk detection and management

Sixty percent of all maternal psychiatric deaths and 77% of suicides had a previous history of treated psychiatric disorder and were therefore 'at risk' of a recurrence of that disorder following childbirth. For 57% of the women who committed suicide, this previous psychiatric history was of serious mental illness and had been managed by the psychiatric services. Despite this, 50% of the maternal deaths overall and 60% of suicides had not had these risk factors identified during the index pregnancy either by maternity or psychiatric services. A higher percentage, 70% of all those at risk and 76% of the suicides at risk, had no psychiatric management plan for the peripartum period. For some women, therefore, even though their risk had been identified, no further action had been taken.

This finding underlines the importance of the recommendation made in the last Confidential Enquiry that routine inquiry should be made about previous psychiatric history during pregnancy and that management psychiatric plans should be put in place for those at risk of a recurrence of their condition following delivery.

In 50% of all cases and 60% of suicides where the risk was not identified during the index pregnancy, the GP records would have contained the relevant information. In some cases, it is evident that the GP did not inform the obstetrician or midwifes of the previous psychiatric history. In other cases, including once more a previous history of puerperal psychosis recorded as 'PND', the midwife did not seek further information.

The following vignette demonstrates the importance of GPs sharing their knowledge of a woman's previous history and how this information might have altered the significance of the events that followed:

> A professional woman died from violent means, together with baby and another child. At the booking clinic she revealed a family history of mental illness but denied any personal psychiatric history. Her GP records contained the evidence that she had taken several previous overdoses and had been

> treated previously by a psychiatrist but this was not shared with her maternity care providers. There were no concerns about her mental health until the very end of pregnancy when she called her GP saying that she was unable to leave the house. She was diagnosed with agoraphobia and was referred to the community mental health team. She declined psychological intervention on the unusual grounds that the resultant anxiety would harm the baby. This was accepted and no arrangements were made for her to be seen again. Following her death, the family revealed that the woman had wished them to conceal her previous history and that she was developing a paranoid psychosis.

Both her previous psychiatric history and family history were risk factors for the development of her fatal psychiatric illness. If more information had been available, the community mental health team might have perceived her presentation late in pregnancy as an additional risk factor and visited her following delivery.

The central role of the GP and the information contained in their records to assist in the accurate identification of risk cannot be overemphasised.

The following vignette gives an example of a case, even when the history of previous serious mental illness and its treatment had been accurately noted at the Booking Clinic by the midwife, in the risk seems to have been under-estimated by others and no proactive plans put into place:

> A professional woman killed herself and her baby by self-immolation some weeks following delivery. She had a history of bipolar illness with several previous inpatient admissions. Despite this, she had been well for many years and functioning at a very high level. At booking, the midwife accurately recorded her previous psychiatric history but the fact that she had been well for many years seems to have diminished the risk of a recurrence in the view of others. No proactive management plan was put into place. The early signs of a developing depressive psychosis were misattributed before her death.

This woman, as with others with a previous history of bipolar disorder, was at a one in two risk of a postpartum recurrence. A proactive management plan of supportive vigilant monitoring in the early weeks following delivery and perhaps prophylactic medication might have altered the outcome.

A further case illustrates the theme that risk identification in the absence of risk management is of little use:

> An older parous woman killed herself a few days following delivery by jumping from a height. She had a substantial psychiatric history, which included a number of previous puerperal psychoses. Following the birth of a previous child she survived a serious suicide attempt. She had been chronically mentally unwell and physically disabled since that time. Her substantial risk of relapse was correctly identified by all involved. However, no plan was put into place for her peripartum management. She first tried to kill herself by jumping a few days after delivery and, shortly afterwards, succeeded.

In view of her previous psychiatric history and life-threatening suicide attempt, this woman should have received intensive psychiatric care and close observation

throughout the peripartum period. Neither of this woman's earlier puerperal psychoses had been treated in a mother and baby unit.

Misattribution of symptoms to functional psychiatric disorder

A worrying new theme emerging from this Enquiry is that 32% of psychiatric deaths were due to physical illness, 18 of the 56 psychiatric deaths. In 50% of these, nine cases, either physical symptoms or behavioural disturbance were mistakenly attributed to functional psychiatric disorder rather than to serious and ultimately fatal physical illness. In all of these cases, the presumed psychiatric diagnosis led to a delay in making the correct diagnosis. One case serves as a reminder to exercise caution in attributing atypical neurological signs to hysteria, particularly in a woman with no previous psychiatric history. It also underlines the importance of involving obstetricians and midwives in the care of a pregnant woman who is admitted to a non-maternity facility. In three cases, the women were admitted initially to a psychiatric hospital, which may also have delayed the onset of effective treatment.

The following case demonstrates the difficulty of distinguishing clinically the symptoms of anxiety from tachycardia of physical origin:

> A woman died within days of delivering her second child from sepsis and cardiac arrhythmia. At postmortem, she was discovered to have a gangrenous uterus and gross cardiac dilatation. Towards the end of her pregnancy, she complained of palpitations and had a tachycardia recorded at between 140 bpm and 170 bpm. She revealed a previous history of anxiety and depression treated many years ago by her GP and a diagnosis of recurrent panic attacks was made. Following delivery, her complaints continued and again a diagnosis was made of panic attacks and a selective serotonin reuptake inhibitor antidepressant was started. Her complaints continued and she was referred to the community mental health team. On the day of her death she became acutely disturbed and doubly incontinent. She was admitted to a psychiatric hospital. Shortly afterwards, she was transferred to an intensive care unit where she died.

This case is a reminder that a tachycardia of over 110 bpm and double incontinence are unlikely to be due to a functional psychiatric disorder. It is probable that the attribution of this woman's symptoms to an anxiety state delayed appropriate diagnosis and treatment.

Clinicians should be reminded that serious physical illness can coexist with mental illness. Great caution should be exercised before attributing unusual physical symptoms to psychiatric causes. The possibility that new emotional and behavioural changes in later pregnancy and the early postpartum period may be due to an acute confusional state with serious underlying pathology should not be overlooked.

Suicide and Infanticide

The majority of suicides did not involve the death of a living child. There were four exceptions to this. In addition, four suicides occurred in the last few weeks of pregnancy and a viable infant died. This could be seen, psychologically, as indistinguishable from infanticide.

As in the last Enquiry, there was little information about the infants and children of the women who died, despite the evidence that social services had been involved with previous children or with the index pregnancy in a number of cases. However an exception was a very full social services report on a woman who died from a postpartum haemorrhage. She had given birth to at least 12 children previously with at least three infant deaths and one stillbirth. In most other cases it could be surmised that the infant and older children were alive and well.

There were four previous described cases in which women died and killed their infant and, in two cases, older children. The first was a suicide/infanticide in a woman with a prior history of bipolar disorder. The second was an early death of a woman who committed suicide by jumping together with her infant and older child. Both of these have already been described. The third case was of a woman who was depressed with a previous history who killed herself just before delivery by cutting her throat having first killed her existing child. The last, a woman who had had an unassisted delivery, killed herself by taking an overdose of psychotropic medication during court proceedings for having been charged, together with her partner, with wilful neglect causing the death of their infant.

Most cases of infanticide due to serious maternal mental illness will be associated with either a significant suicide attempt or a successful suicide. In late pregnancy and the early weeks postpartum, maternal suicide risk should therefore be also regarded as a risk for infanticide. However, implementing child protection procedures alone is not only unlikely to protect the mother and infant but may increase the risk by increasing guilt and the fear that the child may be removed. The most effective way of protecting both the mother and the infant's life is early risk identification and rapid and effective treatment.

Child protection issues

Some of these women had no prior indications for the involvement of social services and were devoted mothers. Their acute psychiatric disorder posed the only, fatal risk to their children. However, in two further cases, knowledge of and correct use of child protection procedures might have influenced the outcome. One was the woman who killed herself after she and her husband had been charged with causing death by wilful neglect. In this case, there were multiple risk factors for child abuse present prior to the death of the child that could have been identified during pregnancy. In one further case a woman killed herself during court proceedings after her child had been removed into the care of the local authority for non-accidental injury to her child at the hands of her husband. This child had presented previously with a lacerated lip, which was probably the first episode of non-accidental injury. If it had been acted upon at that time, then perhaps the second episode, which resulted in the infant being severely brain damaged, might have been prevented. In the case of the schizophrenic woman who was murdered, her preterm infant was safely in special care baby unit. However, in the light of her lifestyle and severe chronic illness, childcare social services should perhaps have been involved.

Clinical isolation and communication

From the evidence available to the Enquiry, it seems that, although the majority of women who died were receiving psychiatric treatment during the index maternity and that the majority had a previous history of prior treatment, this information was not

elicited at antenatal clinic nor was the information provided by general practitioners or psychiatric services. Communication between these services also appears not to have occurred during the immediate postpartum period. The fact that psychiatric services are often geographically isolated from maternity units and have separate management and patient information systems no doubt increases the problem. This theme can be seen to run through all the other emergent issues and made a significant contribution to the deaths of many of these women.

When different Trusts and professions are involved in the care of a pregnant or postpartum woman and where there has been a history in the past of such involvement, it is essential that obstetric and psychiatric services communicate with each other and that the pivotal role of the general practitioner is recognised.

Conclusion

More than 25% of the women who died from *Direct*, *Indirect* or *Late Indirect* causes had some form of psychiatric disorder associated with their death. Excluding the women who died from physical causes initially wrongly attributed to psychiatric disorders, 42 actually died as a result of their mental health problems, although a majority died in the *Late* postnatal period.

The introduction to this chapter shows that the deaths from suicide reported to this Enquiry are the second leading reported cause of maternal death, but the number of unreported cases identified by subsequent record linkage reveals psychiatric causes to be the leading cause of maternal death overall.

Nevertheless, maternal suicide is rare, particularly in pregnancy. Although the fact that suicide is the leading cause of maternal death overall and has led to the key recommendations made in this Report, the results of the survey discussed in Chapter 20 show pregnancy itself to have a protective effect on suicide until at least 1 year after delivery.

In the absence of full information from psychiatric sources and the absence of a control group, it is not possible to know the frequency of the risk factors found in this study in women with severe psychiatric morbidity but who did not die. The findings of this study of deaths from psychiatric causes are therefore not only important for suicide prevention but also important in improving the care of equivalently ill women.

Psychiatric deaths: key learning points

- Although the number of cases reported to this Enquiry suggests that death from mental illness is the second leading cause of maternal mortality, the ONS linkage study has shown that a large number of deaths were not reported; if these were included then deaths from psychiatric causes would be the leading cause of maternal morality.
- Women who have had a past episode of severe mental illness following delivery have a one in two to one in three chance of recurrence.
- 50% of the women were seriously mentally ill but a wide range of psychiatric disorders was found.

- The risk of recurrence was neither identified nor managed.
- GPs, obstetricians, midwives and psychiatrists are not sharing information or psychiatric management plans.
- Women requiring specialist inpatient care after delivery are still not being admitted to specialist mother and baby units.
- The suicide profile of childbearing women is different in many respects to that of other women and men.
- Psychiatric disorder is a risk to the physical health of women. Serious physical illness can present with psychological symptoms, result from or complicate mental illness. In many causes a psychiatric diagnosis delayed the treatment of a fatal physical illness.

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CHAPTER 11B

Drug and/or alcohol related deaths

MARY HEPBURN on behalf of the Editorial Board

Key recommendations: drug and/or alcohol related deaths

Service delivery

Pregnant women with significant problem drug and/or alcohol use may have other social problems and their care should reflect this. They should not be managed in isolation but by maternity services that are part of a wider multi-agency network, which should include both addiction and social services.

Women with problems with substance misuse, and their babies, also require close multi-disciplinary follow-up in the postnatal period.

The management of pregnant women who are substance misusing should be according to best practice guidelines. National guidelines for Scotland were published in 2003[1] and suggested guidelines for England and Wales in 1997.[2]

Individual practitioners

Staff providing antenatal care for pregnant women should ask sensitively, but routinely, about all substance use, prescribed and non prescribed, legal and illegal, including tobacco and alcohol.

Information on social problems, including substance misuse, that could affect medical or social outcomes of pregnancy should be provided in all referral letters.

Women with problem drug and/or alcohol use have potentially high-risk pregnancies and an obstetrician should supervise their management. However, most of their care can be usually be delivered by midwives.

Education

All maternity and primary care staff require training so that they have the knowledge and skills to identify substance misuse, assess its severity and refer women to specialist services.

Staff in specialist services, including obstetricians, midwives, health visitors, social and addiction workers, require ongoing training and all staff, mainstream and specialist, need support in caring for such women.

Obstetricians and midwives should be aware of the laws and issues that relate to child protection and when, and to whom, to refer if concerned.

Introduction

Such is the growing impact of problem drug and alcohol use on the outcome of pregnancies for mother, child and the wider family, that this separate section has been included in this Report for the first time. The aim of this section is to give a brief summary of the main issues and to summarise the general lessons and recommendations that can be drawn from the management of the women who died, from whatever cause, who were known to use drug and or alcohol inappropriately.

The prevalence and patterns of problem use

The huge increase in problem drug use that has occurred nationally and internationally since the 1980s has been disproportionately large among women of childbearing age. The effects of substance abuse on the mother include poorer overall health, addiction and occasionally death by either an intentional or unintentional overdose. Consequently, there has been a large increase in the numbers of pregnant drug-using women. No such change appears to have occurred in numbers of pregnant women with problem alcohol use. The possible effects on the baby are given in Box 11B.1, which has been taken from the 2003 Scottish guidelines for working with families and children affected by problem drug misuse.[1]

There is a general under-identification of women with problem substance abuse in maternity services. This may reflect inadequate history taking or a reluctance to disclose the information. Problem drug use is usually illegal and is socially unacceptable and therefore women may not wish to admit to an activity that could lead to loss of custody of their child or children. Alcohol is socially acceptable but levels of consumption are often underestimated by pregnant women, not recognised as problematic or may be hidden. Nevertheless, there is increasing awareness of the need to provide specialised services for such women and specialist care is increasingly provided to varying degrees in many maternity units throughout the UK.

Box 11B.1 The effects of substance misuse on the baby during and after pregnancy[1]

Substance misuse during pregnancy increases the risk of:

- having a premature or low weight baby
- the baby suffering symptoms of withdrawal from drugs used by mother during pregnancy
- the death of the baby before or shortly after birth
- sudden infant death syndrome
- physical and neurological damage to the baby before birth, particularly if violence accompanies parental use of drugs or alcohol
- pregnant women drinking to excess risk delivering babies with fetal alcohol syndrome.

Some pregnant women who misuse substances do not seek antenatal services until late in pregnancy or when in labour. They may not realise they are pregnant because of the effects of some substance use on the menstrual cycle. Their substance misuse and associated lifestyle may make other more urgent demands on their time. They may fear that their drug use or drinking will be detected through routine urine or blood tests, or that if they tell staff they will be treated differently, or that child protection agencies will be contacted automatically. They may feel guilty about their drug or alcohol use and want, or feel they ought, to stop but are worried they will not succeed. They may be worried that their baby will be damaged or display withdrawal symptoms after birth. Many of these problems can be overcome by provision of accessible antenatal services that tackle these worries honestly and sympathetically.

Problem drug use is closely associated with socio-economic deprivation.[1] Alcohol consumption occurs throughout all groups of society but problem alcohol use may also be exacerbated by deprivation. Problem drug and alcohol use both cause significant morbidity and mortality aggravated by coexisting social problems and both can lead to additional social problems. Associated problems may include smoking, a poor diet, homelessness and a chaotic lifestyle that can prevent adequate access to services and consequently compromise childcare.

A multi-agency approach

Since the mid 1980s, informal guidelines have existed for the management of drug-using families. The current guidelines were drawn up in collaboration with all relevant professional bodies, both healthcare and non-healthcare and, like earlier versions, address the issue of problem drug and/or alcohol use during pregnancy. The most recent suggested guidelines for England and Wales were published in 1997,[2] while those applicable to Scotland were published in 2003.[1] All the guidelines recognise the impact of drug and alcohol use and their associated social problems on the health and social outcomes of pregnancy and emphasise the importance of integrated multi-agency management.

Women with significant problem drug and/or alcohol use may have other social problems and their care should reflect this. Pregnant women with substance misuse problems should not be managed in isolation but by maternity services that are part of a wider multi-agency network, which should include both addiction and social services. The multidisciplinary service should be led by a healthcare professional with a special interest in the area.

If, during pregnancy or at booking, it emerges that a woman may have a problem with drugs or alcohol, she should be encouraged to attend addiction services, or specialist maternity services where available, and her healthcare professional should offer to make the referral. Antenatal services should arrange a multidisciplinary assessment of the extent of the woman's substance use – including type of drugs, level, frequency, pattern, method of administration – and consider any potential risks to her unborn child from current or previous drug use. If the woman does not already have a social worker, her obstetrician, midwife or general practitioner should ask for her consent to liaise with the local service to enable an appropriate assessment of her social circumstances.

The related medical and social problems associated with substance abuse also increase the likelihood that these women will have a high-risk pregnancy. They should have an

assessment by an obstetrician and a joint care plan agreed and the obstetrician should continue to supervise those pregnancies considered to be at medium or high risk. For the majority of women, care can be mainly midwifery-led if they so choose, and they should have access to the same range and quality of services as all other women throughout their pregnancy and childbirth.

Whatever the local arrangements for delivery of maternity care, a multidisciplinary approach is essential, with local protocols drawn up to ensure effective collaboration between agencies and services. Such protocols should prescribe the arrangements for assessment and care.

Summary of findings for 2000–02

During this triennium, 31 women whose deaths were reported to the Enquiry were known to have problem drug and/or alcohol use, although, for some, this may not have directly led to their deaths. This is three times as many as the 11 women identified in the last Report. Part of the rise for this triennium may be due to increased case ascertainment. Additionally, ten cases were discovered through the ONS record linkage study for England and Wales, described in Chapter 1, although many of these deaths took place some months after delivery. The cases are counted in the chapter that best reflects the underlying causes of death. Many of these are counted in Chapter 11 Deaths from psychiatric disorders, or in Chapter 15 *Late* deaths, but others who died from other *Direct* or other *Indirect* causes are counted elsewhere in this Report.

Of the 31 women in this triennium who were know to have problem substance misuse, insufficient information was available to enable a full assessment to be made in nine cases. The discussion in this chapter is therefore restricted to the 22 cases, for which full details were available. Twelve of these deaths were associated with drug use, six with alcohol use and four with combined drug and alcohol use.

The women who died

All but four of the 22 women who died were aged 25 years or older and half were in stable relationships. All but two had existing children, although in two cases no information on parity was provided. Only one pregnancy appeared to have been actively planned and two women had opted for a termination of pregnancy. All but four of the women had features of marked social exclusion.

The timing of death

Of the 22 cases, six women died during pregnancy, six died early in the postpartum period and ten were *Late* deaths, occurring more than 42 days after delivery. While many of the deaths that occurred after pregnancy, especially the *Late* deaths, were considered *Coincidental*, it appeared very likely that the birth of the baby added to the pressures experienced by the women and may have contributed indirectly to their deaths. However, in many of these cases, no or minimal information was provided, suggesting that the services did not recognise the possibility of any link. In almost all cases, including those women who received a lot of specialist support during pregnancy, it was apparent that little support was provided in the postnatal period. In some cases

this demonstrated a lack of awareness of the difficulties experienced by the women but in others it may have reflected the lack of resources and consequently the lack of sufficient community support available for such disadvantaged women.

The causes of death

Eleven women died from drug overdose and five hanged themselves. Six women died from medical conditions and, in four of these cases, there were additional complications due to their drug or alcohol use. While death by hanging was clearly intentional it is less clear whether overdoses were suicide. However, in some cases where death by overdose was deemed to be accidental, circumstances suggest that the death may have been intentional or at least there was a lack of concern about living:

> A woman with multiple deprivation factors had already had at least one previous child adopted. A child protection case conference was held during her next pregnancy and the decision was taken to remove the child to statutory care at delivery. Shortly after this, she died from an overdose.
>
> Another woman with a combined drug and alcohol problem had a stillbirth at term. She was provided with some short-term postnatal support in the community but this ended abruptly. Shortly afterwards, on a particularly significant day for her, she looked after the children of a close relative. She was found dead a few days after the children had left her care. Death was due to drug overdose.

Identification of substance misuse

Fifteen of the 22 women were known by maternity services to have a drug and/or alcohol problem. The problem was sometimes identified because the woman had specifically reported it and asked for advice and help and sometimes because the information was provided to the maternity services.

In the seven cases where it was not known that the women had a problem, it was recorded in the notes that the women had 'no special needs' but it is not clear whether they were proactively asked about substance misuse. The absence or paucity of information provided in a number of the reports suggests that there may be a lack of recognition of the need for, and importance of, such a routine enquiry. However, it is also possible that the women chose not to disclose this information.

In two cases, despite a long history of substance misuse known to the general practitioner, the information was not provided to maternity services until long after the booking visit. For a further woman, information was only provided when the midwife contacted the general practitioner because of an abnormal blood result. Another woman changed to a different general practitioner, who noticed her intoxication and notified the midwife and for one, not registered with a general practitioner, her pregnancy and substance misuse were only picked up when she attended the accident and emergency department with a drug-related problem. In four cases it is not clear whether maternity services were aware of the problem (but in two of these the general practitioner definitely was aware) while in a further two cases both the general practitioners and maternity services were unaware of the problem. Four women changed general practitioners during pregnancy.

Coexisting mental health problems

Mental illness can be a cause or effect of substance misuse and a number of these women had mental health problems. Many had depression before, during and/or after pregnancy and at the time of their deaths seven women were receiving antidepressant therapy. Two of these women were also drinking heavily, two were also using illicit drugs and three women were also receiving prescribed substitute medication for their drug problem. Two were prescribed methadone and one was prescribed dihydrocodeine.

All of the seven women on antidepressant therapy died from a drug overdose, a recognised risk in such cases, and dual therapy with medication for drug use and mental illness is recognised as a particular risk factor associated with drug deaths in general. Where women were on prescribed substitute medication, it was not clear whether this was dispensed daily under supervision according to recognised good practice.

Experience of violence or abuse is a risk factor for mental illness and for substance misuse and for seven of the women there was reference to experience of violence at some time in their lives. Among these women there was minimal overlap with those receiving antidepressant therapy.

A number of women who were clearly mentally unwell or had psychological problems were not referred for psychiatric assessment or support. For such women, there may be a lack of appropriate services to meet their needs and this was evident in the group of women who died during this triennium. Some were referred for psychiatric assessment and then deemed not to need psychiatric care but there were others whose psychiatric problems appear to have been disregarded by the maternity services. Most of these women received very little support from services particularly after delivery and most did not have effective support systems within family and friends networks. Consequently, many of these women who died were very isolated.

Other stressful factors

Bereavement or loss was a common factor and was documented in ten cases. One woman had had at least six miscarriages, her current pregnancy also ending in miscarriage, while two women had experienced the death of one of their children. In one case the pregnancy had ended in a stillbirth while another woman whose earlier child had died was informed just prior to her death that the child she was carrying would be taken into care at delivery. A further five women had had all or some of their previous children removed from their care and in two cases these children had been adopted. One woman's partner had been killed and the close relative of another woman was terminally ill during her pregnancy and died shortly before she did.

The services they received

The majority of women appeared to have been managed within mainstream services. In many reports to this Enquiry the women's addiction problems seemed to be viewed only in terms of the impact on their obstetric care, with little acknowledgement of the other medical, psychological or social effects of the addiction on the women, their babies and their social or other circumstances. A few of the women attending mainstream services appeared to have been referred to addiction services and, in such cases, it was

sometimes recorded that they attended or defaulted but in others there was no further comment.

There also seemed to be little recognition that pregnancies complicated by problem drug and /or alcohol use are potentially at high risk and consequently that management provided in the main by midwives (as it should be) ought to be supervised by an obstetrician. The management, in many cases, was not according to established guidelines and this may indicate that the care providers were not familiar with the guidelines.

For three women it was recorded that a specialist midwife contributed to their care, with inputs that ranged from providing regular support to a one-off consultation. These women also attended addiction and social services but did so in parallel, with no inter-agency liaison. As with a further three women who received good multidisciplinary care services during pregnancy, there was little ongoing postnatal support.

While the women who were managed within integrated services all received good antenatal care, some women attending mainstream services were also clearly looked after by committed and caring staff. However, the absence of integrated services may have compromised care, with women falling through the gaps between services. Moreover, the lack of multi-agency collaboration clearly left many staff feeling isolated, with obvious distress when these women died.

Child protection issues

While in some cases the clinical and social information provided for the cases of the women who died was often inadequate, there was even less information about referral to social services because of concerns about the baby, even when there had been previous child protection issues. According to all published guidelines, a multidisciplinary planning meeting should be held at 32 weeks of gestation. If there are child protection concerns these should be separately addressed and a child protection case conference held if appropriate.

On the whole, the women who died had significant addiction problems and many had associated chaotic lifestyles, so child protection issues could have been anticipated in many cases. For seven women, death occurred before 32 weeks of gestation, although, in one of these cases, because of her history, a child protection case conference was held the day prior to her death. In only one other case was it recorded that a case conference was held and in the remainder there was no reference at all to formal or informal social services procedures. While the lack of information about referral and procedural management does not necessarily mean that such issues were not addressed, it may imply that those providing information did not recognise their relevance or importance.

The management of substance misuse during the pregnancies

Only four women were documented to be in contact with addiction services at the time of antenatal booking. Most drug-using women were polydrug users. Only half of the ten women using opioids were recorded to be receiving prescribed methadone during pregnancy and dispensing arrangements were not noted. One woman who was on a reducing dose of prescribed dihydrocodeine also continued to use several other drugs. Another was on a reducing dose of prescribed methadone with continued reduction postnatally. She had regular urine screens carried out, which all showed the presence

of benzodiazepines and other opioids but, despite this, reduction of her methadone dose continued. Urine screening has a limited role in the management of drug use in pregnancy and the postpartum period. However, in the presence of evidence that the woman was not coping with withdrawal, her continued reduction in dosage was inappropriate. While many women can manage to achieve major reductions in their dose of methadone during pregnancy, in the interests of the baby, they often find it difficult to maintain stability at these lower levels after delivery, especially with the dual stresses of caring for a baby and fear of loss of custody of the child. It is therefore common for women to require an increase in methadone dosage postnatally.[3]

The management of substance misuse in pregnancy should be undertaken by a specialist in addiction medicine and according to best practice guidelines.[1,2] Methadone has, for many years, been prescribed as an opioid substitute, including during pregnancy, and its medical and social benefits, when prescribed as a constituent of addiction treatment, have been demonstrated.[4] Consequently, methadone has been and remains the opioid substitute of choice during pregnancy. Buprenorphine has recently been introduced as a prescribed opioid substitute and there are therefore insufficient data to compare use of buprenorphine and methadone in pregnancy.

Reproductive choices and the planning of pregnancies

Only one of the pregnancies discussed in this chapter appears to have been definitely planned and there was no indication that any of the women had received prepregnancy counselling about the effects of drugs and alcohol on their reproductive health or about reproductive choices. Even where women were already in contact with specialist addiction services there was no evidence that contraception had been discussed. After delivery, most women were discharged without adequate contraception.

Experience has shown that drug and alcohol using women are keen to receive appropriate nondirective reproductive health care information to enable them to regain some control of their lives, to plan and space their pregnancies and to improve their health prior to conception. However directional counselling for drug and/or alcohol using women is unsuccessful and will also alienate or discourage women, including those who are planning to become pregnant, from attending services.

These women often have chaotic lifestyles that compromise access to services so frequently their first contact with reproductive health care is with the maternity services. Contraception should be discussed during pregnancy and after birth and, if requested, should be commenced prior to postnatal discharge. Long-acting reversible methods, particularly progestogen intrauterine devices and implants, are proving popular and appropriate for such women using the integrated Reproductive Health Services in Glasgow.

Ideally, contraception for drug and/or alcohol using women (and indeed all women with severe social problems that lead to an inability to access a number of services) should either be provided by the same service that provides maternity care or by services operating in such close collaboration that they are perceived by the women as a single service. This allows not only the provision of contraception but also the earlier identification of the next pregnancies and, since the women are already under the care of the relevant maternity service or perceive themselves to be so, there is less opportunity for the women to be lost between services.

Drug and/or alcohol use in pregnancy: learning points

- Pregnant women with drug and/or alcohol problems, and their babies, are at higher risk of maternal and perinatal morbidity and mortality.
- There are guidelines for England and Wales[2] and Scotland[1] on the multi-agency management of drug using families. Both sets of guidelines address the management of pregnant women affected by substance misuse.
- Pregnant women with significant problem drug and/or alcohol use may have other social problems and their care should reflect this. They should not be managed in isolation but by maternity services that are part of a wider multi-agency network, which should include both addiction and social services.
- In order to provide the best possible care, a full social history should be taken from all women at booking that includes the use of prescribed or illicit drugs, alcohol and tobacco.
- Women using opioids should be prescribed appropriate substitution therapy during pregnancy.
- Polydrug using women should not undergo detoxification from opioid substitution while they are unstable and continue to use other drugs.
- Substance misuse is often associated with past and/or current experience of violence and/or abuse and with psychiatric problems or psychological problems which, while not constituting mental illness, cause major morbidity and contribute to death.
- Management of women with substance misuse and mental illness co-morbidity requires especially close supervision during pregnancy.

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Extracts from *Getting our Priorities Right,* produced by the Scottish Executive, are published with their kind permission.

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