

Miscarriage Care and Facilities in Scotland: Scoping Report NHS Highland



CHILDREN, EDUCATION AND SKILLS

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Introduction

The Scottish Government's 2021-22 Programme for Government: A Fairer, Greener Scotland¹ includes a commitment to 'establish a dignified and compassionate miscarriage service'. The aim of this commitment is to support the development of individualised care plans following a woman's first miscarriage, take forward specific recommendations made in the Lancet series on Miscarriage Matters published on 26 April 2021², and ensure women's services in Health Boards have dedicated facilities for women who are experiencing unexpected pregnancy complications.

Miscarriage is the loss of intrauterine pregnancy before viability, at 23 weeks and 6 days or less. First trimester miscarriages occur in the first 11 weeks and 6 days of pregnancy, while second trimester miscarriages occur between 12 weeks and 23 weeks and 6 days of pregnancy.

The Lancet series on Miscarriage Matters found that the risk of miscarriage in the UK was 15.3% of all recognised pregnancies and that the risk of miscarriage was lowest in women with no history of miscarriage (11%)³.

It is thought that miscarriage affects around one in five pregnancies before 12 weeks. It is estimated that 1–2% of second-trimester pregnancies miscarry before 23 weeks and 6 days of gestation. After 24 weeks gestation the death of a baby in utero is regarded as a stillbirth.

Treatment of miscarriage is dependent on gestation. Patients in early first trimester may choose to go home and miscarry with support; those in late first trimester or second trimester will usually be advised to be admitted to hospital.

There are three recognised management pathways for miscarriage available for women:

Expectant (also called natural or conservative) management – this allows a miscarriage to happen without medical intervention and is often recommended in the early first trimester. National Institute for Health and Care Excellence (NICE) guidelines state that expectant management should be the first method of consideration.

Medical management – treatment with medication taken orally and/or vaginal tablets (pessaries) to start or assist the process of a missed or incomplete miscarriage.

Surgical management – to remove the pregnancy tissue surgically. This is usually carried out under general anaesthetic although it can be done under local anaesthetic.

As well as the physical treatment of miscarriage there is also the emotional consideration of the loss of a pregnancy and the way in which people process this loss varies.

¹ Scottish Government Programme for Government: A Fairer, Greener Scotland 2021-22

² The Lancet: Miscarriage Matters Series

³ The Lancet: Miscarriage Matters Series

Recurrent miscarriage is defined by the Royal College of Obstetrics and Gynaecology (RCOG) as three or more first trimester miscarriages and is thought to affect one in every hundred women. Previously, the RCOG defined recurrent miscarriage as the loss of three or more consecutive pregnancies, however, this was redefined in June 2023 to include non-consecutive miscarriages⁴. The risk of recurrent miscarriage increases after each successive pregnancy loss, reaching approximately 40% after three consecutive pregnancy losses. Miscarriage, and especially recurrent miscarriage, is associated with future obstetric complications. The chance of preterm birth increases stepwise with each previous miscarriage, showing a biological gradient with the highest chance in women with three or more previous miscarriages. The chance of fetal growth restriction, placental abruption, and stillbirth in future pregnancies is also increased.

The prognosis worsens with increasing maternal age. Previous live birth does not preclude a woman developing recurrent miscarriage.

The chances of finding a treatable cause for recurrent miscarriage are better than in a single miscarriage but a cause will not be identified in many women, despite undergoing investigation.

⁴ [Recurrent Miscarriage Green-top Guideline No. 17 - BJOG: An International Journal of Obstetrics & Gynaecology](#)

This report

This report details the findings of a scoping exercise to enable a better understanding of miscarriage care and facilities in Scotland. It sets out the current arrangements for miscarriage care in **NHS Highland** and will be used, together with the other Health Board reports, to inform the development of a consistent graded model of care across Scotland. Whilst this is a standalone report detailing miscarriage arrangements in **NHS Highland**, it can also be read alongside the national report which details the service provision within each of the 13 other Health Boards in Scotland overall. The individual Health Board reports and the national report seek to aid policy makers and Health Boards in making decisions about what improvements are required to miscarriage care in Scotland.

The key aims of the report are to:

- provide an overarching view of miscarriage care in **NHS Highland**
- highlight consistencies and inconsistencies in miscarriage care provision
- provide information to aid in the development of an improvement plan for miscarriage care in Scotland.

Methods

All Health Boards were contacted to identify a lead professional for miscarriage care within their individual Health Board in May 2022. The lead professionals then worked with the Scottish Government to identify staff within the 44 secondary care sites across Scotland where women experiencing miscarriage may present. When a contact for all 44 sites was identified, a web-based questionnaire was sent out to each site to request information on the provision of care within that site.

The questionnaire opened on the 1st June 2022 and unique links to the questionnaire were sent to all 44 sites (Annex A). The questionnaire consisted of up to 95 questions and sites were routed through the questionnaire based on their answers to the questions. There were a range of closed and open ended questions within the questionnaire, as well as space for additional information to be added if appropriate. The questionnaire closed on the 3rd August 2022 with responses from all 44 sites across all 14 Health Boards.

The results of the questionnaire were collated, analysed, and are presented in a national report as well as in individual reports specific to each Health Board. This report presents the analysis of responses received from sites in **NHS Highland**. Alongside the questionnaire responses, sites were also asked to send leaflets and other policy documents relevant to miscarriage care to the Scottish Government. Where documents were submitted, these were analysed along with the questionnaire results to supplement some sections of the report.

Findings

Miscarriage care services in Scotland

In Scotland women experiencing miscarriage present at many different locations. This includes: GP practices, Accident and Emergency (A&E) departments, Maternity Units, Community Maternity units (CMU)⁵, Early Pregnancy Units (EPU), and midwifery services more generally. Women can call in advance or present in person for the first time at this range of settings.

Within the 14 Health Board areas in Scotland, numerous secondary care sites that could provide miscarriage care in Scotland were identified. These were checked by the lead professional for miscarriage care in each Health Board to ensure they were secondary care sites that may be the first point of contact for women experiencing miscarriage. This resulted in 44 sites being identified. The sites are listed in Annex A. Table 1 shows the number of sites identified for each Health Board.

| Table 1: Number of sites where women experiencing miscarriage in Scotland may be seen | |
|--|------------------------|
| Health Board | Number of sites |
| NHS Ayrshire and Arran | 3 |
| NHS Borders | 1 |
| NHS Dumfries and Galloway | 2 |
| NHS Fife | 1 |
| NHS Forth Valley | 1 |
| NHS Grampian | 6 |
| NHS Greater Glasgow and Clyde | 5 |
| NHS Highland | 12 |
| NHS Lanarkshire | 3 |
| NHS Lothian | 2 |
| NHS Orkney | 1 |
| NHS Shetland | 1 |
| NHS Tayside | 3 |
| NHS Western Isles | 3 |
| Total | 44 |

Table 2 below lists the secondary care services that are available across the 44 sites and details the services available within the 14 Health Board areas.

⁵ The Best Start: A five year plan for Maternity and Neonatal Care refers to CMUs as either being freestanding units or alongside units.

| Table 2: Services for miscarriage care in Scotland | | | | | | | |
|---|-----------------------------|-----------------------|---------------------------------|--|--|---------------------------------------|-----------------------------|
| Services | Early Pregnancy Unit | Maternity Unit | Community Maternity Unit | Obstetrics and Gynaecology Department | Accident & Emergency Department | Recurrent miscarriage services | Infertility services |
| Total All Sites | 17 | 19 | 21 | 21 | 37 | 13 | 14 |
| All Health Boards | 10 | 14 | 7 | 14 | 14 | 11 | 12 |
| NHS Ayrshire and Arran | 1 | 1 | 1 | 1 | 3 | 1 | 1 |
| NHS Borders | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| NHS Dumfries and Galloway | 0 | 1 | 0 | 1 | 2 | 1 | 2 |
| NHS Fife | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| NHS Forth Valley | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| NHS Grampian | 2 | 2 | 3 | 2 | 4 | 1 | 1 |
| NHS Greater Glasgow and Clyde | 5 | 4 | 4 | 4 | 4 | 2 | 2 |
| NHS Highland | 1 | 1 | 8 | 1 | 10 | 1 | 0 |
| NHS Lanarkshire | 2 | 1 | 0 | 2 | 3 | 1 | 1 |
| NHS Lothian | 2 | 2 | 0 | 2 | 2 | 2 | 1 |
| NHS Orkney | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| NHS Shetland | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| NHS Tayside | 1 | 1 | 3 | 2 | 1 | 1 | 1 |
| NHS Western Isles | 0 | 1 | 1 | 1 | 3 | 0 | 0 |

Services within NHS Highland

In **NHS Highland** twelve sites were identified that could come into contact with women experiencing miscarriage, these are:

- Raigmore Hospital
- Dr MacKinnon Memorial Hospital – Broadford Hospital (A&E)
- Victoria Hospital
- Mull & Iona Community Hospital
- Mid Argyll Community Hospital and Integrated Care Centre
- Lorn & Islands Hospital
- Islay Hospital
- Cowal Community Hospital (A&E) (Dunoon Hospital previously)
- Campbeltown Hospital
- Nairn Town and County Hospital
- Caithness General Hospital
- Belford Hospital

Where most women present for the first time when experiencing a miscarriage differs depending on the site, these include; A&E, GP, midwifery team, Community Midwifery Unit or Early Pregnancy Unit (EPU). Women experiencing miscarriage would be seen at the EPU at Raigmore Hospital. Within several other sites women are initially seen in A&E or by the midwifery team. The services provided at the twelve secondary care sites where women may present when experiencing miscarriage are detailed in Table 3 below.

Table 3: Services for Miscarriage care in NHS Highland

| Services | Early Pregnancy Unit | Maternity Unit | Community Maternity Unit | Obstetrics and Gynaecology Department | Accident & Emergency Department | Recurrent miscarriage services | Infertility services | Other |
|-----------------------------------|----------------------|----------------|--------------------------|---------------------------------------|---------------------------------|--------------------------------|----------------------|-------|
| Raigmore Hospital | Yes | Yes | No | Yes | Yes | Yes | No | None |
| Dr. MacKinnon Memorial Hospital – | No | No | Yes | No | Yes | No | No | None |

| | | | | | | | | | |
|--|----|----|-----|----|-----|----|----|---|--|
| Broadford Hospital (A&E) | | | | | | | | | |
| Victoria Hospital | No | No | Yes | No | Yes | No | No | None | |
| Mull & Iona Community Hospital | No | No | No | No | Yes | No | No | None | |
| Mid Argyll Community Hospital and Integrated Care Centre | No | No | Yes | No | Yes | No | No | None | |
| Lorn & Islands Hospital | No | No | Yes | No | Yes | No | No | None | |
| Islay Hospital | No | No | No | No | Yes | No | No | None | |
| Cowal Community Hospital (A&E) | No | No | Yes | No | Yes | No | No | None | |
| Campbeltown Hospital | No | No | Yes | No | Yes | No | No | None | |
| Nairn Town and County Hospital | No | No | No | No | No | No | No | None | |
| Caithness General Hospital | No | No | Yes | No | Yes | No | No | Yes – dedicated midwife for early pregnancy complications in conjunction with ultrasound department and A&E | |
| Belford Hospital | No | No | Yes | No | No | No | No | None | |

Sites in Argyll and Bute

Victoria Hospital, Mull & Iona Community Hospital, Mid Argyll Community Hospital and Integrated Care Centre, Lorn & Islands Hospital, Islay Hospital, Cowal Community Hospital (A&E) and Campbeltown Hospital are all located in Argyll and Bute. Although these sites in Argyll and Bute are part of **NHS Highland**, the services for miscarriage care and pregnancy complications are provided jointly through the local community maternity units and general practice in NHS Highland and via a service level agreement with NHS Greater Glasgow and Clyde. Women are consulted on their choices and preferences for care. Responses for all sites in Argyll and Bute are grouped together in the remainder of this report, as the same pathway of care is followed in Argyll and Bute. The services provided by NHS Greater Glasgow and Clyde are explained in more detail in the report Miscarriage care and facilities in Scotland: scoping report - NHS Greater Glasgow and Clyde.

Gestation at which miscarriage care is provided

All sites in Scotland were asked to provide an approximation of the gestation at which miscarriage care is provided at their site. There was wide variation in responses, particularly among sites that do not currently collect data on gestation. Just over half (57%) of sites said they collected information on gestation, while 43% did not currently collect this. The average approximations of gestation at which miscarriage care is provided are presented in Table 4 below.

| Table 4: Gestation at which miscarriage care is provided in Scotland | | | |
|---|----------------------------|-------------------------|----------------------------|
| Site | Under 9 weeks % | 9-12 weeks % | Over 12 weeks % |
| All sites Average | 65 | 26 | 9 |

The data provided by **NHS Highland** on approximate gestation at which miscarriage care is provided on their sites is provided in Table 5 below. Dr. MacKinnon Memorial Hospital, Nairn Town and County Hospital and Belford Hospital refer all women to Raigmore Hospital.

| Table 5: Gestation at which miscarriage care is provided in NHS Highland | | | |
|---|----------------------------|-------------------------|----------------------------|
| Site | Under 9 weeks % | 9-12 weeks % | Over 12 weeks % |
| Raigmore Hospital | 70 | 25 | 5 |
| Dr. MacKinnon Memorial Hospital | - | - | - |
| Argyll and Bute Sites | 50 | 40 | 10 |
| Nairn Town and County Hospital | - | - | - |
| Caithness General Hospital | 50 | 40 | 10 |
| Belford Hospital | - | - | - |

Opening hours of miscarriage care services

Early Pregnancy Units

The Lancet series on Miscarriage Matters recommended that healthcare funders and providers invest in early pregnancy care, with specific focus on training for clinical nurse specialists and doctors to provide comprehensive miscarriage care within the setting of **dedicated Early Pregnancy Units**.

17 of the 44 sites reported that they have a dedicated Early Pregnancy Unit (EPU). This was across 10 Health Board areas (Table 2).

NHS Highland reported that there is one EPU at Raigmore Hospital. The opening times of the EPU is 08:30-15:30 four days a week and it is closed on Wednesday, Saturdays and Sundays (Table 6).

| Table 6: Opening times of EPU in NHS Highland | | | |
|---|-------------------------|----------|--------|
| Site | Monday – Friday | Saturday | Sunday |
| Raigmore Hospital | 08:30-15:30* | Closed | Closed |
| Dr MacKinnon Memorial Hospital – Broadford Hospital | No Early Pregnancy Unit | | |
| Argyll and Bute Sites | No Early Pregnancy Unit | | |
| Nairn Town and County Hospital | No Early Pregnancy Unit | | |
| Caithness General Hospital | No Early Pregnancy Unit | | |
| Belford Hospital | No Early Pregnancy Unit | | |

*Closed on Wednesday

Maternity Units

19 sites of the 44 sites reported that they have a Maternity Unit that is currently open. This was across all 14 Health Board areas.

NHS Highland reported that there is one maternity unit in NHS Highland at Raigmore Hospital and that the unit is open 24 hours a day seven days a week (Table 7).

| Table 7: Opening times of Maternity Units in NHS Highland | | | |
|---|-------------------|----------|----------|
| Site | Monday – Friday | Saturday | Sunday |
| Raigmore Hospital | 24 hours | 24 hours | 24 hours |
| Dr. MacKinnon Memorial Hospital – Broadford Hospital | No Maternity Unit | | |
| Argyll and Bute Sites | No Maternity Unit | | |
| Nairn Town and County Hospital | No Maternity Unit | | |
| Caithness General Hospital | No Maternity Unit | | |
| Belford Hospital | No Maternity Unit | | |

Community Maternity Units

21 of the 44 sites said that they have a Community Maternity Unit (CMU). This was across 7 Health Board areas. The Best Start: A five year plan for Maternity and Neonatal Care refers to CMUs as either being freestanding units or alongside units.

NHS Highland reported that there are eight CMU. At both Dr MacKinnon Memorial Hospital and Caithness General Hospital the CMU are open 09:00-17:00 seven days a week. At Belford Hospital, the CMU is open 08:00-17:00 seven days a week. In Argyll and Bute Campbeltown Hospital, Cowal Community Hospital, Lorn & Islands Hospital, Mid Argyll Community Hospital, and Victoria Hospital run a CMU which are all open seven days a week 08:00-18:00, with on-call cover outwith these hours (Table 8).

| Table 8: Opening times of CMU in NHS Highland | | | |
|--|--|--|--|
| Site | Monday – Friday | Saturday | Sunday |
| Raigmore Hospital | No Community Maternity Unit | | |
| Dr. MacKinnon Memorial Hospital | 09.00-17.00 | 09.00-17.00 | 09.00-17.00 |
| Argyll and Bute Sites | 0800-1800 with on call cover overnight | 0800-1800 with on call cover overnight | 0800-1800 with on call cover overnight |
| Nairn Town and County Hospital | No Community Maternity Unit | | |
| Caithness General Hospital | 09.00-17.00 with on call cover overnight | 09.00-17.00 with on call cover overnight | 09.00-17.00 with on call cover overnight |
| Belford Hospital | 08.00-17.00 | 09.00-17.00 | 09.00-17.00 |

Obstetrics and Gynaecology

21 of the 44 sites said they had an Obstetrics and Gynaecology department. This was across all 14 Health Boards areas.

NHS Highland reported that there is one Obstetrics and Gynaecology department at Raigmore Hospital which is open 24 hours a day seven days a week (Table 9). For sites in Argyll and Bute, women are referred to NHS Greater Glasgow and Clyde.

| Table 9: Opening times of Obstetrics and Gynaecology departments in NHS Highland | | | |
|---|--|-----------------|---------------|
| Site | Monday – Friday | Saturday | Sunday |
| Raigmore Hospital | 24 Hours | 24 Hours | 24 Hours |
| Dr. MacKinnon Memorial Hospital | No Obstetrics and Gynaecology department | | |
| Argyll and Bute Sites | No Obstetrics and Gynaecology department | | |
| Nairn Town and County Hospital | No Obstetrics and Gynaecology department | | |
| Caithness General Hospital | No Obstetrics and Gynaecology department | | |
| Belford Hospital | No Obstetrics and Gynaecology department | | |

Recurrent miscarriage services

13 of the 44 sites said they have recurrent miscarriage services. This was across 11 Health Board areas.

NHS Highland reported that recurrent miscarriage services operate at Raigmore Hospital with daily appointments with a nurse specialist. Raigmore Hospital also provides one consultant led recurrent miscarriage clinic a month (Table 10).

Table 10: Opening times of recurrent miscarriage services in NHS Highland

| Health Board | Monday – Friday | Saturday | Sunday |
|---------------------------------|-----------------------------------|----------|--------|
| Raigmore Hospital | 08:15-15:30 | Closed | Closed |
| Dr. MacKinnon Memorial Hospital | No recurrent miscarriage services | | |
| Argyll and Bute Sites | No recurrent miscarriage services | | |
| Nairn Town and County Hospital | No recurrent miscarriage services | | |
| Caithness General Hospital | No recurrent miscarriage services | | |
| Belford Hospital | No recurrent miscarriage services | | |

Infertility services

14 of the 44 sites said they have infertility services. This was across 12 Health Board areas.

There are no infertility services available at any of the sites in **NHS Highland**. Women are referred to Aberdeen Maternity Hospital in NHS Grampian or NHS Greater Glasgow and Clyde for those in Argyll and Bute.

Accident and Emergency

37 of the 44 sites said they have a Accident and Emergency (A&E) department. This was across all 14 Health Board areas. All A&E sites said they were open 24 hours every day including weekends in all Health Board areas.

All sites in **NHS Highland** that have an A&E department, reported that their A&E department is open 24 hours a day seven days a week. Nairn town and County Hospital and Belford Hospital do not have A&E departments.

Out of Hours Care

If a woman presents at A&E with suspected miscarriage through the night (out of hours) in Scotland, the reported processes varied both within and between Health Boards.

All sites in **NHS Highland** were asked what would happen if a woman presents at A&E with suspected miscarriage through the night (out of hours). Raigmore Hospital reported that women who present at their site would first be assessed by the A&E doctor, with bloods taken for quantitative human chorionic gonadotropin (QHCG – pregnancy hormone) if in early pregnancy. Details would then be discussed with the on call obstetrics and gynaecology registrar regarding the need for immediate assessment or admission. If necessary, women would be assessed and examined

on a ward by the on-call team (there are no out of hours scanning facilities within this department). A referral would be made to the EPU where they would be telephoned and assessed the following working day and a scan appointment made if required.

Dr. MacKinnon Memorial Hospital reported that if a woman presents at their site out of hours, the care will depend on the woman's condition. If suffering from heavy bleeding, they would be treated on site and possibly transferred to Raigmore Hospital when stable. Similarly, Belford Hospital reported that if a woman presents at A&E at their site, they would be medically assessed by the on call doctor for haemodynamic stability and transferred to Raigmore Hospital or, if suitable, discharged home with their GP informed. Caithness General Hospital reported that women would either be transferred to Raigmore Hospital or asked to attend for ultrasound scan locally during opening hours. Nairn Town and County Hospital does not have an A&E department at which women would present. At sites in Argyll and Bute, the Obstetrics and Gynaecology team would be contacted in NHS Greater Glasgow and Clyde for advice.

Dedicated facilities

Unexpected pregnancy complications

The Scottish Government has committed to the provision of dedicated facilities for women experiencing unexpected pregnancy complications through the Programme for Government 2021-22⁶. All sites were asked if they currently provide dedicated facilities for women experiencing unexpected pregnancy complications at **any gestation** and sites with an EPU were also asked to indicate if they currently provide dedicated facilities for women experiencing unexpected pregnancy complications at **any gestation within the EPU**.

Within **NHS Highland**, Raigmore Hospital indicated that they currently provide dedicated facilities for women experiencing unexpected pregnancy complications at any gestation. These dedicated facilities are located within the EPU in Raigmore Hospital with lack of space cited as the reason that dedicated facilities are not provided outwith the EPU. Dr Mackinnon Memorial Hospital cited staff recruitment, staff retention, and staff training as reasons for not providing dedicated facilities for women experiencing unexpected pregnancy complications at any gestation while Caithness General Hospital and Belford Hospital indicated that these services are centralised in Raigmore Hospital. For all sites in Argyll and Bute, women are referred to NHS Greater Glasgow and Clyde (Table 11).

As Nairn Town and County Hospital does not have an EPU, maternity unit, CMU or an Obstetrics and Gynaecology Department they were not asked this question.

Table 11: Facilities provided for Miscarriage Care in NHS Highland (within EPU or outwith EPU)

| | Dedicated facilities for women experiencing <u>unexpected pregnancy complications at any gestation</u> | | Separate room/area/ward away from labour ward <u>for women that are miscarrying</u> | | Separate room/area/ward with dedicated services to <u>admit women who are miscarrying (away from labour ward)</u> | | Number of rooms |
|--|--|--|---|--|---|--|------------------|
| | Within EPU | Outwith EPU | Within EPU | Outwith EPU | Within EPU | Outwith EPU | |
| Raigmore Hospital | Yes | Not currently provided – no plans to implement | Yes | Not currently provided – no plans to implement | Yes | Yes | 2 en-suite rooms |
| Dr. MacKinnon Memorial Hospital – Broadford Hospital | No EPU | Not currently provided – no plans to implement | No EPU | Not currently provided – no plans to implement | No EPU | Not currently provided – no plans to implement | |

⁶ Scottish Government Programme for Government: A Fairer, Greener Scotland 2021-22

| Argyll and Bute Sites | No EPU | Can refer/access – (outwith HB area) | No EPU | Can refer/access - (outwith HB area) | No EPU | Can refer/access – (outwith HB area) | |
|--------------------------------|---|--------------------------------------|--------|--------------------------------------|--------|--------------------------------------|--|
| Nairn Town and County Hospital | Not asked – No maternity services on site | | | | | | |
| Caithness General Hospital | No EPU | Refer to Raigmore Hospital | No EPU | Refer to Raigmore Hospital | No EPU | Refer to Raigmore Hospital | |
| Belford Hospital | No EPU | Refer to Raigmore Hospital | No EPU | Refer to Raigmore Hospital | No EPU | Refer to Raigmore Hospital | |

Separate room/area/ward

All sites were asked if they provide a separate room, area or ward away from the labour ward for women that are miscarrying. They were also asked if they provide a separate room, area, ward or unit with dedicated services to admit women who are miscarrying. The number of separate rooms reported to be available for women who are experiencing miscarriage ranged between 1 and 12 rooms in Scotland.

In **NHS Highland**, Raigmore Hospital reported they provide a separate room, area, or ward away from the labour ward for women that are miscarrying within the EPU, they do not provide a separate room, area, or ward away from the labour ward for women that are miscarrying outwith the EPU, with a lack of space provided as the reason for not providing this. However, if women need admitted a separate room is available within the gynaecology ward. Raigmore Hospital also reported that they provide a separate room, area, ward or unit with dedicated services to admit women within the EPU.

Dr Mackinnon Memorial Hospital cited staff recruitment, staff retention, and staff training as reasons for not providing dedicated facilities for women experiencing unexpected pregnancy complications at any gestation while Caithness General Hospital and Belford Hospital indicated that these services are centralised in Raigmore Hospital. These spaces are also available for use for women experiencing still births, termination of pregnancy due to fetal anomaly (TOPFA), ectopic and molar pregnancies. The facilities that are provided are set out in Table 11 above.

Scanning facilities

Scans are often performed to confirm a miscarriage has occurred. For this scoping exercise all sites were asked if a separate area was available to carry out complication or investigative scans separated from women with a continuing pregnancy.

Overall, 7 out of the 14 Health Boards reported having a separate area to carry out complication/investigative scans separated from women with a continuing pregnancy, either within or outwith the EPU.

When asked about areas where complication or investigative scans are carried out in **NHS Highland**, scans are conducted in the EPU at Raigmore Hospital between 9:00 and 12:00 Monday, Tuesday, Thursday and Friday. These scans are conducted in

the same area as other expectant mothers. Raigmore Hospital cited lack of space as the reason that they do not have a separate area away from women with a continuing pregnancy to carry out these scans. Scans are also carried out in the Maternity Unit at Raigmore Hospital between 9:00 and 16:00 Monday to Friday, Obstetrics and Gynaecology department 9:00 to 16:00 Monday to Friday and the Recurrent Miscarriage Clinic 9:00 to 12:00 Monday, Tuesday, Thursday and Friday.

If a woman presents with a suspected miscarriage out of hours at Raigmore Hospital A&E there are no out of hours scan facilities available. Patients from A&E would be transferred to gynaecology ward where they would be assessed, the majority of patients are then discharged for referral/follow up with EPU. The majority of patients that present for miscarriage are assessed and scanned at the EPU in Raigmore Hospital. Occasionally emergency admissions to the gynaecology ward are scanned by the obstetric scan team on an emergency basis.

At Caithness General Hospital scans cannot be performed locally during the night although scans can be performed 9:00-17:00 Monday and Thursday. If there is an emergency, a scan can be conducted outwith these times if available. All other sites would refer women for scans to the EPU at Raigmore Hospital. For sites in Argyll and Bute women are referred to NHS Greater Glasgow and Clyde (Table 12).

As Nairn Town and County Hospital does not have an EPU, maternity unit, CMU or an Obstetrics and Gynaecology Department they were not asked this question.

| Table 12: Scanning facilities in NHS Highland | | |
|--|--|---|
| Site | Separate area to carry out complication / investigative scans separated from area for women with a continuing pregnancy | |
| | Within EPU | Outwith EPU |
| Raigmore Hospital | Not currently provided - no plans to implement | Not currently provided - no plans to implement |
| Dr. MacKinnon Memorial Hospital | No EPU | Not currently provided - no plans to implement |
| Argyll and Bute Sites | No EPU | Can refer/access - (outwith HB area in NHS GGC) |
| Nairn Town and County Hospital | No EPU | - |
| Caithness General Hospital | No EPU | Not currently provided - no plans to implement |
| Belford Hospital | No EPU | Not currently provided - no plans to implement |

Miscarriage management and information

The Lancet series on Miscarriage Matters stated that women should be presented with the available evidence about miscarriage management and be free to choose the management approach that suits their needs and preferences.

Choice of management option

All Health Boards in Scotland reported that they ensure that women can choose their preferred method of management of miscarriage. However, the geography in Scotland has implications for women in terms of how they can access their chosen approach.

Sites in **NHS Highland** reported different processes of offering management options within the Health Board. Sites in Argyll and Bute reported that their services are provided via service level agreement with NHS Greater Glasgow and Clyde where women are referred for all management options. Belford Hospital reported that women are referred to Raigmore Hospital for all treatment which is 67 miles away. Both Caithness General Hospital and Dr MacKinnon Memorial Hospital said that they provide expectant management on site and refer women for all other management options to Raigmore Hospital. Caithness General Hospital is approximately 105 miles from Raigmore Hospital and Dr Mackinnon Memorial Hospital is approximately 89 miles away.

Written information

All Health Boards in Scotland said that they provide written information about the treatment options for the management of miscarriage and what to expect in terms of miscarriage care. However, not all sites where women may present for miscarriage care said that they provide written information on treatment options or what to expect.

In **NHS Highland** Raigmore Hospital stated that the same pathway of care for miscarriage treatment is used across all available departments within the site. Across NHS Highland there is some variation in what is provided by each site in terms of information provision.

| Table 13: Written information provided in NHS Highland about: | | | | | | |
|---|-------------------|--------------------------------|-----------------------|--------------------------------|----------------------------|------------------|
| | Raigmore Hospital | Dr MacKinnon Memorial Hospital | Argyll and Bute Sites | Nairn Town and County Hospital | Caithness General Hospital | Belford Hospital |
| Treatment options for the management of miscarriage | Yes | Yes | Yes | No | Yes | No |
| What to expect next in terms of miscarriage care | Yes | Yes | No | No | Yes | No |
| Services including third party services for | Yes | Yes | Yes | Yes | No | No |

| | | | | | | |
|--|-----|-----|-----|-----|-----|----|
| mental health support following a loss | | | | | | |
| Services including third party services for bereavement following a loss | Yes | Yes | Yes | Yes | Yes | No |

Raigmore Hospital, Dr MacKinnon Memorial Hospital and Caithness General Hospital all responded that written information about treatment options and what to expect is provided at their sites. Belford Hospital and Nairn Town and County Hospital reported that written information about management of miscarriage or what to expect next is not provided on site, however, Belford Hospital noted that this information would be provided by staff at Raigmore Hospital once a patient had been transferred. Sites within Argyll and Bute reported that they provide information on treatment options for the management of miscarriage, but do not provide information about what to expect next in terms of miscarriage care as all women are referred to sites within NHS Greater Glasgow and Clyde for treatment, where this information would be provided.

Information about management options

As well as written information, Raigmore Hospital, Dr MacKinnon Memorial Hospital and Caithness General Hospital all either agreed or strongly agreed that what will happen during and after the chosen method of management of miscarriage, and what happens in terms of follow-up after the management of miscarriage, is fully explained to women. Belford Hospital stated that this information would be provided at Raigmore Hospital. Sites within Argyll and Bute neither agreed nor disagreed with these statements as information is provided once the pathway of care for the Health Board had been followed and the patient is at the site that would offer treatment for miscarriage, which in this case is delivered by NHS Greater Glasgow and Clyde.

Table 14: Information about management options in NHS Highland

| Site | What will happen DURING the chosen method of management of miscarriage is explained fully to women | What will happen AFTER the chosen method of management of miscarriage is explained fully to women | What will happen in terms of FOLLOW-UP after the management of miscarriage is fully explained to women |
|---------------------------------|--|---|--|
| Raigmore Hospital | Agree | Agree | Agree |
| Dr. MacKinnon Memorial Hospital | Agree | Agree | Agree |
| Argyll and Bute Sites | Neither agree nor disagree | Neither agree nor disagree | Neither agree nor disagree |
| Nairn Town and County Hospital | Neither agree nor disagree | Neither agree nor disagree | Neither agree nor disagree |
| Caithness General Hospital | Strongly agree | Strongly agree | Strongly agree |
| Belford Hospital | Other – Provided at Raigmore | Other – Provided at Raigmore | Other – Provided at Raigmore |

Management options

In **NHS Highland** Raigmore Hospital and Dr Mackinnon Memorial Hospital both agreed that women are free to choose their preferred management approach based on their needs and preferences, while Caithness General Hospital disagreed with this statement. Nairn Town And County Hospital, Campbeltown Hospital, Cowal Community Hospital, Islay Hospital, Lorn & Islands Hospital, Mid Argyll Community Hospital, Mull & Iona Community Hospital and Victoria Hospital all neither agreed nor disagreed that women were free to choose their preferred management option.

All sites in **NHS Highland** were asked if the management options listed in Table 15 below are either provided on site, accessible locally, or not provided. Raigmore Hospital reported that they provide all management options on site. Dr Mackinnon Memorial Hospital and Caithness General Hospital reported that they provide expectant management on site and refer all women to Raigmore Hospital for all other management options. Belford Hospital refers women to Raigmore Hospital for all management options. Sites within Argyll and Bute reported that all management options are provided outwith the Health Board area via a service level agreement with NHS Greater Glasgow and Clyde. Nairn Town and County Hospital reported that none of the management options listed below are provided on site but did not indicate where women are referred to.

| Table 15: Management options in NHS Highland | | | | | | |
|--|--|---|------------------------------------|---------------------------------------|--|-------------------------|
| | Raigmore Hospital | Dr. MacKinnon Memorial Hospital | Argyll and Bute Sites | Nairn Town and County Hospital | Caithness General Hospital | Belford Hospital |
| Expectant management | Provided on this site (first trimester only) | Provided on this site (first and second trimester) | Can refer/access (outwith HB area) | Not currently provided | Provided on this site (first trimester only) | Referred to Raigmore |
| Medical management with misoprostol | Provided on this site (first and second trimester) | Referred to Raigmore - plan to implement in next 2 years | Can refer/access (outwith HB area) | Not currently provided | Referred to Raigmore | Referred to Raigmore |
| Medical management with mifepristone and misoprostol | Provided on this site (first and second trimester) | Referred to Raigmore - plan to implement in next 2 years | Can refer/access (outwith HB area) | Not currently provided | Referred to Raigmore | Referred to Raigmore |
| Medical management - Inpatient | Provided on this site (first and second trimester) | Referred to Raigmore - plan to implement within 3 years or longer | Can refer/access (outwith HB area) | Not currently provided | Referred to Raigmore | Referred to Raigmore |

| | | | | | | |
|--|--|--|------------------------------------|------------------------|----------------------|----------------------|
| Medical management - Outpatient | Provided on this site (first trimester only) | Referred to Raigmore - plan to implement in next 2 years | Can refer/access (outwith HB area) | Not currently provided | Referred to Raigmore | Referred to Raigmore |
| Surgical management with manual vacuum aspiration (MVA) with local anaesthetic | Provided on this site (first trimester only) | Referred to Raigmore | Can refer/access (outwith HB area) | Not currently provided | Referred to Raigmore | Referred to Raigmore |
| Surgical management under general anaesthetic | Provided on this site (first trimester only) | Referred to Raigmore | Can refer/access (outwith HB area) | Not currently provided | Referred to Raigmore | Referred to Raigmore |

All sites were asked to fully describe the treatment pathway for expectant management, medical management and surgical management. The descriptions provided have been presented under the relevant subheadings below; these narratives contain only information provided by the sites during this exercise.

Expectant management in NHS Highland

In **NHS Highland** women are directed to the Miscarriage Association website and are given leaflets from the Miscarriage Association to read detailing all the management options available. Women then have a scan to confirm miscarriage and a discussion would take place regarding management options. Once expectant management is decided upon as the preferred option, women are advised about expectant management including timescales, risks and benefits. Women are provided with written information and are given a pregnancy test to take home. Women are then advised that they will experience varying levels of pain from mild cramps to severe pain causing nausea and fainting. Women are advised to attend the A&E department if their bleeding is heavy, or they begin to feel unwell. Women are contacted by telephone 7 days later to check progress, if the miscarriage is not complete, they are contacted again over the next 7 days. Women are also informed of signs of infection. Three weeks after the start of management women are contacted to check on their wellbeing and to gather results of the home pregnancy test. Women are also advised to contact their GP if they have any concerns or experience low mood and are again directed to the Miscarriage Association website for leaflets on what happens next.

Sites within Argyll and Bute reported that all management options are provided outwith the Health Board area via a service level agreement with NHS Greater Glasgow and Clyde. Women who present at any of the sites within Argyll and Bute are offered expectant management after they have been seen by a specialist in NHS Greater Glasgow and Clyde. If expectant management is chosen, women would be cared for by an EPU in NHS Greater Glasgow and Clyde in conjunction with the local maternity unit.

Medical management at NHS Highland

In **NHS Highland** medical management is provided at Raigmore Hospital only, and women from Belford Hospital, Nairn Town and County Hospital, Caithness General Hospital and Dr MacKinnon Hospital are referred here. Women who present at any of the Argyll and Bute Hospitals are referred to NHS Greater Glasgow and Clyde sites for medical management. Women who are referred from Caithness General Hospital are made aware that they will be required to travel over 200 miles (round trip) for the treatment and that the process may need to be repeated.

At Raigmore Hospital, medical management can be carried out as an inpatient for both first and second trimester losses, or as an outpatient at home for first trimester losses only. Women are advised on what to expect, the time frame is explained along with the likely level of pain, bleeding and risk. Statistics about infection, failure of the treatment option and bleeding are also discussed. Women are also advised that severe pain may require morphine and that they may experience heavy bleeding with large clots which may require surgical management/MVA if bleeding cannot be controlled.

Once diagnosis of miscarriage is confirmed by two sonographers and the patient has made the decision for medical management, treatment is booked for inpatient or outpatient care. Women are given 800 micrograms of misoprostol followed by a further 400 micrograms 3 hours later. If no bleeding is observed after 24 hours, there is a review and discussion about ongoing care. Further treatment would be to either repeat the medical treatment or continue to surgical management depending on the patients choice. Recurrent miscarriage investigation is offered 6 weeks later, if this was the patients second miscarriage. The patient would also be offered or advised about taking progesterone in the future.

If medical management occurs as an inpatient and staff have confirmed that they have visualised products of conception and they appear complete, then there is no further follow up.

If a patient undergoes out-patient medical management and they give a history which is suggestive of complete miscarriage during telephone follow-up, they will be contacted for urine pregnancy test follow-up 3 weeks later. If urine pregnancy test remains positive three weeks post medical management, then the patient would be tested for human chorionic gonadotropin (hCG) again and another ultrasound would be provided, with further management if necessary.

Surgical management at NHS Highland

In **NHS Highland** surgical management is provided at Raigmore Hospital only, and women from Belford Hospital, Nairn Town and County Hospital, Caithness General Hospital and Dr MacKinnon Hospital are referred here. Women who present at any of the Argyll and Bute Hospitals are referred to NHS Greater Glasgow and Clyde for surgical management. Women who are referred from Caithness General Hospital are made aware that they need to travel over 200 miles (round trip) for the treatment.

At Raigmore Hospital surgical management with manual vacuum aspiration (MVA) with local anaesthetic is offered in the first trimester and surgical management under general anaesthetic is offered in the first trimester also. Raigmore Hospital reported

that currently the availability of surgical management with manual vacuum aspiration has been sporadic due to equipment issues.

When surgical management is decided upon, women are advised of the risks of infection, perforation, failure of procedure and heavy bleeding, and are also advised that they will be required to fast before the procedure.

The treatment pathway for surgical management described at Raigmore Hospital involves patients being admitted to the inpatient ward early in the morning of the procedure. Women are given misoprostol two hours before the surgery to allow the cervix to soften. Women are then taken to theatre. Products are sent to pathology and cytogenetics if required. After surgery, Anti D rhesus prophylaxis is given if required, and a referral made to recurrent miscarriage clinic if the patient is within the criteria. Women are taken to the ward to recover and are discharged 3-4 hours later provided pain and bleeding are within an acceptable level. If surgery was straightforward, there is no follow up from surgical management.

Referrals and assessment following a loss

All sites were asked if they provide or can access referrals and assessments for support services following a loss.

In **NHS Highland**, all sites except Nairn Town and County Hospital were asked if they are able to provide the assessments and referrals listed below in Table 16. As Nairn Town and County Hospital does not have a maternity unit, CMU or an Obstetrics and Gynaecology Department they were not asked this question. Most referrals and assessments asked about are carried out at Raigmore Hospital, Dr MacKinnon Memorial Hospital and Caithness General Hospital, including all NHS referrals. For sites in Argyll and Bute, GPs and midwives in the area liaise with consultants in NHS Greater Glasgow and Clyde which allows them to access/refer to the services listed in Table 16 locally within NHS Highland. The provision of referrals and assessments is detailed in Table 16 below.

| Table 16: Referrals and assessment following a loss in NHS Highland | | | | | | |
|--|--------------------------|--|---|---------------------------------------|---|---|
| | Raigmore Hospital | Dr. MacKinnon Memorial Hospital | Argyll and Bute Sites | Nairn Town and County Hospital | Caithness General Hospital | Belford Hospital |
| Assessment of women for risk of psychological distress following miscarriage | Yes | Yes | Can refer/access locally - not on this site (within this HB area) | - | Can refer/access locally - not on this site (within this HB area) | Other - Seen by Consultant for debrief and follow up care |
| Referring women to NHS services for mental health support following a loss | Yes | Yes | Can refer/access locally – not on this site (within HB area) | - | Yes | Other - GP and Consultant |
| Referring women to third party services for mental health support following a loss | Yes | Yes | Yes | - | Yes | Other - Perinatal Mental Health Team |
| Referring women to NHS services for bereavement support | Yes | Yes | Can refer/access locally – not on this site (within HB area) | - | Yes | Other - Perinatal Mental Health Team |

| | | | | | | |
|--|-----|-----|--|---|-----|---|
| following a loss | | | | | | |
| Referring women to third party services for bereavement support following a loss | Yes | Yes | Can refer/access locally – not on this site (within HB area) | - | Yes | Other - Perinatal Mental Health Team |
| Referring women to NHS services for counselling following a loss | Yes | Yes | Can refer/access - not locally (but within HB area) | - | Yes | Other - Through Perinatal Mental Health Team/GP |
| Referring women to third party services for counselling following a loss | Yes | Yes | Can refer/access locally – not on this site (within HB area) | - | Yes | Other - Through Perinatal Mental Health Team |

Graded approach to recurrent miscarriage care

The Lancet series on Miscarriage Matters provided information on the provision of treatment and care after first, second and third or subsequent miscarriage. The Lancet series proposed a graded approach to the treatment of recurrent miscarriage, where after one miscarriage women would have their health needs evaluated and would be provided with information and guidance to support future pregnancies. If a second miscarriage were to occur, they would be offered an appointment at a miscarriage clinic for initial investigations, extra support and early reassurance scans for subsequent pregnancies. After three miscarriages they would be offered a full series of evidence-based investigations and care. RCOG guidelines state that the graded approach should be encouraged as it appears to bridge the gap between sporadic and recurrent miscarriage care, encouraging a systematic graded approach rather than a fragmented one. It also addresses the balance between the need for evidence-based and supportive care, while targeting healthcare resources effectively.

The following sections of this report are based on the Lancet series and will help to ascertain the extent to which the graded approach is currently being delivered in NHS Boards across Scotland.

It should be noted that at the time of completion of this questionnaire, RCOG defined recurrent miscarriage as the loss of three or more consecutive pregnancies. RCOG guidelines on the treatment of recurrent miscarriage were updated in June 2023 and this definition now includes non-consecutive miscarriages⁷.

In Scotland, 12 of the 14 Health Board areas said a graded approach to the treatment of recurrent miscarriage is adopted.

In **NHS Highland** a graded approach to treatment of recurrent miscarriage is provided at Raigmore Hospital, where the majority of women are referred. Regarding sites in Argyll and Bute, NHS Greater Glasgow and Clyde provide a graded approach to miscarriage which patients from Argyll and Bute follow.

After first miscarriage

The Lancet series on miscarriage care recommended the services listed in Table 17 below should be available after a first miscarriage. Vaginal micronised progesterone in women with early pregnancy bleeding and a history of miscarriage is not offered in all 14 Health after a first miscarriage with some sites referring to the NICE Guidelines⁸ that state this should be offered for women with early pregnancy bleeding and a history of miscarriage rather than a first miscarriage.

In **NHS Highland**, Dr MacKinnon Memorial Hospital reported that all of the information provision or services asked about are provided on site. Raigmore Hospital reported that all provision, except screening for mental health issues are

⁷ [Recurrent Miscarriage Green-top Guideline No. 17 - BJOG: An International Journal of Obstetrics & Gynaecology](#)

⁸ [Ectopic pregnancy and miscarriage: diagnosis and initial management | Guidance | NICE](#)

provided on site, there are currently no plans to implement this at Raigmore Hospital. Of the remaining sites, all provisions and services are either available on site or are accessible in the Health Board area. However, Belford Hospital currently do not provide vaginal micronised progesterone to women with early pregnancy bleeding and a history of miscarriage and there are no plans to implement this. As Nairn Town and County Hospital does not have an EPU, maternity unit, CMU or an Obstetrics and Gynaecology Department they were not asked this question. In Argyll and Bute, GPs and midwives liaise with consultants in NHS Greater Glasgow and Clyde to provide or access the provisions and services in Table 17. The provisions and services are listed in Table 17 below.

| Table 17: Service provision after first miscarriage in NHS Highland | | | | | | |
|---|--|--|-------------------------------------|---------------------------------------|---|--|
| | Raigmore Hospital | Dr. MacKinnon Memorial Hospital | Argyll and Bute Sites | Nairn Town and County Hospital | Caithness General Hospital | Belford Hospital |
| Information provided about miscarriage | Provided | Provided | Provided | - | Provided | Provided |
| Vaginal micronised progesterone in women with early pregnancy bleeding and a history of miscarriage | Provided | Provided | Can refer/access – (within HB area) | - | Provided | Not currently provided – no plans to implement |
| Information provided about physical health needs following pregnancy loss | Provided | Provided | Provided | - | Provided | Provided |
| Information provided about mental health needs following pregnancy loss | Provided | Provided | Provided | - | Provided | Can refer/access locally – (within HB area) |
| Screening for mental health issues | Not currently provided – no plans to implement | Provided | Provided | - | Can refer/access locally – (within HB area) | Can refer/access locally – (within HB area) |

| | | | | | | |
|--|----------|----------|---|---|---|---|
| Information provided to optimise health for future pregnancies e.g. smoking cessation, weight loss, folic acid intake etc. | Provided | Provided | Provided | - | Provided | Provided |
| Referral to necessary services for management and optimisation of chronic maternal medical conditions | Provided | Provided | Can refer/access – not locally (within HB area) | - | Can refer/access locally – (within HB area) | Provided |
| Women are asked verbally if they have had a previous miscarriage | Provided | Provided | Provided | - | Provided | Provided |
| Development of an individualised care plan | Provided | Provided | Provided | - | Provided | Can refer/access locally – (within HB area) |

In **NHS Highland** the services listed above are offered to all women regardless of the gestation when the loss occurred.

In **NHS Highland** patients are signposted to the following services (Table 18). All sites in **NHS Highland** reported that they will always signpost women to patient support groups and provide information on appropriate pre-conceptual folate and vitamin D supplementation after a first miscarriage, for the other services sites within the Health Board approach this differently.

As Nairn Town and County Hospital does not have an EPU, maternity unit, CMU or an Obstetrics and Gynaecology Department they were not asked this question.

Table 18: Service provision after first miscarriage in NHS Highland

| | Raigmore Hospital | Dr. MacKinnon Memorial Hospital | Argyll and Bute Sites | Nairn Town and County Hospital | Caithness General Hospital | Belford Hospital |
|---|--------------------------|--|------------------------------|---------------------------------------|-----------------------------------|----------------------------|
| Patient Support Groups | Always | Always | Always | - | Always | Always |
| Online self-help strategies for mental health | Never | Always | Always | - | Only if deemed appropriate | Only if deemed appropriate |
| Weight management | Some of the time | Only if deemed appropriate | Only if deemed appropriate | - | Only if deemed appropriate | Only if deemed appropriate |
| Smoking and recreational drugs cessation services | Always | Only if deemed appropriate | Only if deemed appropriate | - | Only if deemed appropriate | Always |

After second miscarriage

The Lancet series on Miscarriage Matters recommended the following services listed in Table 19 below should be available after a second miscarriage.

After a second miscarriage the information provision or services provided in **NHS Highland** are listed in Table 19 below. Raigmore Hospital reported that after a second miscarriage an appointment at a midwifery-led clinic is not offered and that there are no plans to implement this as this service is provided by nurses. Raigmore Hospital further explained that their EPU department is nurse-led with continuity of carer provided with nursing staff, within EPU and nurse-led clinics. In Argyll and Bute, GPs and midwives liaise with consultants in NHS Greater Glasgow and Clyde to provide or access the provisions and services in Table 19.

As Nairn Town and County Hospital does not have an EPU, maternity unit, CMU or an Obstetrics and Gynaecology Department they were not asked this question.

Table 19: Service provision after second miscarriage in NHS Highland

| | Raigmore Hospital | Dr. MacKinnon Memorial Hospital | Argyll and Bute Sites | Nairn Town and County Hospital | Caithness General Hospital | Belford Hospital |
|---|--------------------------------------|--|--|---------------------------------------|---|--|
| Appointment at a nurse-led miscarriage clinic | Provided | Can refer/access locally (within HB area) | Can refer/access – not locally (outwith HB area) | - | Can refer/access locally (within HB area) | Can refer/access locally (within HB area) |
| Appointment at a midwifery-led miscarriage clinic | Not currently provided – no plans to | Not currently provided – no plans to implement | Can refer/access – not locally (outwith HB area) | - | Can refer/access – not locally (within HB area) | Not currently provided – no plans to implement |

| | | | | | | | |
|--|---|----------|--|---|---|---|--|
| | implement (provided by nurses) | | | | | | |
| Continuity of carer | Provided (nursing staff) | Provided | Provided | - | Provided | Can refer/access locally – (within HB area) | |
| Test for full blood count offered | Provided | Provided | Provided | - | Can refer/access locally – (within HB area) | Provided | |
| Tests for thyroid function offered | Provided | Provided | Provided | - | Can refer/access locally – (within HB area) | Provided | |
| Vaginal micronized progesterone offered to women with early pregnancy bleeding and a history of miscarriage | Provided | Provided | Can refer/access – not locally (within HB area) | - | Provided | Can refer/access locally – (within HB area) | |
| Discussion about lifestyle issues in relation to future pregnancies | Provided | Provided | Provided | - | Provided | Provided | |
| Referral to specialist care if required | Provided | Provided | Can refer/access - not locally (outwith HB area) | - | Provided | Provided | |
| Access to support and early pregnancy reassurance scan in subsequent pregnancies | Provided | Provided | Can refer/access - not locally (outwith HB area) | - | Provided | Can refer/access locally – (within HB area) | |
| Women are asked verbally if they have had a previous miscarriage | Provided | Provided | Provided | - | Provided | Provided | |

After third and subsequent miscarriage

The Lancet series on Miscarriage Matters recommended the following services listed in Table 20 below should be available after a third or subsequent miscarriage.

After a third or subsequent miscarriage, responses from sites in **NHS Highland** show that all of the information provision or services asked about are either provided or accessible within the Health Board area, Table 20. Raigmore Hospital reported that they do not currently provide investigative pelvic ultrasound scans, however Caithness General Hospital said that they provide this on site with Belford Hospital and Dr MacKinnon Memorial Hospital stating that they are able to access this within the Health Board area. Regarding appropriate screening for mental health issues and appropriate care for mental health issues, Raigmore Hospital reported that they do not provide this on site but can access within the Health Board area. However, Dr MacKinnon Memorial Hospital and sites within Argyll and Bute stated that they provide both of these services on site with Caithness General Hospital and Belford Hospital able to access this within the Health Board area. In Argyll and Bute, GPs and midwives liase with consultants in NHS Greater Glasgow and Clyde to provide or access the provisions and services in Table 20.

Table 20: Service provision after third and subsequent miscarriage in NHS Highland

| | Raigmore Hospital | Dr. MacKinnon Memorial Hospital | Argyll and Bute Sites | Nairn Town and County Hospital | Caithness Hospital | Belford Hospital |
|--|--------------------------|---|------------------------------------|---------------------------------------|---|---|
| Appointment at a medical consultant led clinic | Provided | Provided | Can refer/access (outwith HB area) | - | Can refer/access locally - (within HB area) | Can refer/access locally - (within HB area) |
| Continuity of carer | Provided | Provided | Provided | - | Provided | Can refer/access locally - (within HB area) |
| Pregnancy tissue from the third and any subsequent miscarriages will be sent for genetic testing | Provided | Not presently done at site but could be something to consider | Can refer/access (outwith HB area) | - | Can refer/access locally - (within HB area) | Can refer/access locally - (within HB area) |
| Blood tests for antiphospholipid antibodies | Provided | Provided | Provided | - | Can refer/access locally - (within HB area) | Can refer/access locally - (within HB area) |
| Investigative pelvic ultrasound scan arranged | Not currently provided – | Can refer/access locally – | Can refer/access (outwith HB area) | - | Provided | Can refer/access locally |

| | | | | | | |
|---|-----------------------------------|------------------|------------------------------------|---|---|---|
| (ideally three dimensional – not a pregnancy scan) | no plans to implement | (within HB area) | | | | (within HB area) |
| Parental karyotyping offered depending on the clinical history and results of the genetic analysis of pregnancy tissue from previous losses | Provided | Provided | Can refer/access (outwith HB area) | - | Can refer/access not locally – (within HB area) | Can refer/access locally – (within HB area) |
| Vaginal micronized progesterone in women with early pregnancy bleeding and a history of miscarriage | Provided | Provided | Can refer/access (within HB area) | - | Provided | Can refer/access locally – (within HB area) |
| Appropriate screening for mental health issues | Can refer/access (within HB area) | Provided | Provided | - | Can refer/access locally – (within HB area) | Can refer/access locally – (within HB area) |
| Appropriate care for mental health issues | Can refer/access (within HB area) | Provided | Provided | - | Can refer/access locally – (within HB area) | Can refer/access locally – (within HB area) |
| Women are recognised as being at an increased risk of obstetric complications including pre-term birth | Provided | Provided | Provided | - | Can refer/access locally – (within HB area) | Can refer/access locally – (within HB area) |
| Appropriate screening and care for future obstetric risks | Provided | Provided | Provided | - | Provided | Can refer/access locally – (within HB area) |
| Care for mental health issues and future obstetric risk are incorporated into the care | Provided | Provided | Provided | - | Provided | Can refer/access locally – (within HB area) |

| | | | | | | |
|---|----------|----------|----------|---|----------|---|
| pathway for couple with a history of recurrent miscarriage | | | | | | |
| Women are treated as at high risk during antenatal and intrapartum care | Provided | Provided | Provided | - | Provided | Can refer/access locally – (within HB area) |
| Women are asked verbally if they have had a previous miscarriage | Provided | Provided | Provided | - | Provided | Provided |

Staff guidance, skills and training

Written clinical guidance

In **NHS Highland**, Raigmore Hospital, Belford Hospital, Caithness Hospital, Nairn town and County Hospitals and Dr MacKinnon Hospital said that they have written clinical guidance for clinical staff on the appropriate treatment and care for miscarriage at all gestations. Sites in Argyll and Bute said that they have access to consultant unit guidelines. There is strong agreement across most sites that all necessary staff that require access to this clinical guidance have access to it, however, Caithness Hospital neither agree nor disagree with this. When asked whether they agree or disagree that the clinical guidance on miscarriage care is followed by all staff that care for women experiencing miscarriage, Raigmore Hospital, Dr MacKinnon Memorial Hospital, and Belford Hospital agreed while the remaining sites neither agreed nor disagreed.

Raigmore Hospital, Dr MacKinnon Memorial Hospital, Nairn Town and County Hospital, Caithness General Hospital and Belford Hospital reported that they currently do not have staff with additional specialist training to deal with all baby losses including miscarriage and stillbirth. However, Raigmore Hospital reported that they do plan to implement this in the next two years while Dr Mackinnon Memorial Hospital do not plan to implement this. Additional services are listed in Table 21 below.

| | Raigmore Hospital | Dr. MacKinnon Hospital | Argyll and Bute Sites | Nairn Town and County Hospital | Caithness General Hospital | Belford Hospital |
|---|--|--|------------------------------------|--|--|--|
| There are staff with additional specialist training to deal with all baby losses from early pregnancy to stillbirth | Not currently provided – plan to implement in next 2 years | Not currently provided – no plans to implement | Can refer/access (outwith HB area) | Not currently provided – plan to implement in next 2 years | Not currently provided – plan to implement in next 2 years | Not currently provided – plan to implement in next 2 years |
| There are midwives/nurses with additional specialist training to provide comprehensive miscarriage care | Provided | Not currently provided – no plans to implement | Can refer/access (outwith HB area) | Can refer/access locally (within HB area) | Provided | Can refer/access not locally (within HB area) |
| There are midwives/nurses with additional specialist training for | Provided | Not currently provided – no plans to implement | Can refer/access (outwith HB area) | Can refer/access locally (within HB area) | Can refer/access locally (within HB area) | Can refer/access not locally (within HB area) |

| recurrent miscarriage care | | | | | | |
|---|----------|--|------------------------------------|-----------|---|---|
| Specialised medical staff are trained specifically for recurrent miscarriage care | Provided | Not currently provided – no plans to implement | Can refer/access (outwith HB area) | Not known | Can refer/access not locally (within HB area) | Can refer/access not locally (within HB area) |
| Doctors are trained to provide comprehensive miscarriage care | Provided | Not currently provided – no plans to implement | Can refer/access (outwith HB area) | Not known | Can refer/access not locally (within HB area) | Can refer/access not locally (within HB area) |

Data on miscarriages

Accurate assessment of the number of all miscarriages that occur in Scotland is not possible at present as only miscarriages that require hospital inpatient or day case treatment are recorded.

The Lancet series on Miscarriage Care recommended that:

- miscarriage data are gathered and reported to facilitate comparison of rates among countries, to accelerate research, and to improve patient care and policy development; and
- every country reports annual aggregate miscarriage data, similarly to the reporting of stillbirth.

The Scottish Government is currently working with Public Health Scotland to find ways to improve miscarriage data recording and to gather a more accurate picture of the number of miscarriages in Scotland. This will be used to facilitate comparison of rates among countries, to accelerate research, and to improve patient care and policy development.

This scoping exercise found that miscarriage data is not collected in all sites or in all Health Boards in Scotland. While some data is collected in 11 of the 14 Health Boards, there is variation in what is being recorded as a miscarriage and this varies both across and within Health Boards.

Information technology used to collect miscarriage data

Across Scotland different IT systems are used by Health Boards to collect data about those accessing miscarriage care. BadgerNet Maternity is used by 11 out of 14 Health Boards to collect miscarriage data and Trakcare is used by 8 Health Boards to capture miscarriage data.

In **NHS Highland** miscarriage data is collected at all sites via BadgerNet. Raigmore Hospital and Belford Hospital reported that they also use Trakcare. Depending on the site, data is collected on the number of miscarriages, miscarriages as a proportion of pregnancies, gestation, maternal age, parity, SIMD and ethnicity. This can be seen in Table 22 below. Raigmore Hospital reported that the EPU collects data from every patient that has an ultrasound scan, while Caithness General Hospital said that data is also collected from the A&E department and by the midwife who deals with early pregnancy scans. The information collected includes date, CHI (Community Health Index), gestation by last menstrual period (LMP), gestation by ultrasound scan, diagnosis, management plan, and requirement for follow-up.

Table 22: Data collected on miscarriage in NHS Highland

| Site | BadgerNet Maternity | Trakcare | Other | Number of miscarriages | Miscarriages as proportion of pregnancies | Gestation | Maternal Age | Parity | SIMD | Ethnicity |
|--------------------------------------|------------------------|----------|-------|---------------------------|---|-----------|-----------------|--------|------|-----------|
| Raigmore Hospital | Yes | Yes | No | No | No | No | No | No | No | No |
| Dr MacKinnon Memorial Hospital | Yes | No | No | Yes | No | Yes | No | No | No | No |
| Argyll and Bute Sites | Yes | No | No | No | No | No | No | No | No | No |
| Nairn Town and County Hospital | Yes | No | No | No | No | No | No | No | No | No |
| Caithness General Hospital | Yes | No | No | Yes | No | No | No | No | No | No |
| Belford Hospital | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

In **NHS Highland**, Belford Hospital is the only site that reported collecting data on miscarriages as a proportion of pregnancies. Like most sites across Scotland there is some disparity in what is counted as a miscarriage in **NHS Highland**. Responses varied across all sites; Raigmore Hospital said that miscarriages are recorded following a positive home pregnancy test, Dr MacKinnon Memorial Hospital reported that any miscarriages that they are made aware of either before or after the booking appointment are recorded as a miscarriage, and Caithness Hospital said that a miscarriage must be confirmed by ultrasound scan. Other sites record miscarriage once pre-booking contact has been made.

Summary

The overall summary is presented below and is shown in Table 23 against the recommendations within the Lancet series on Miscarriage Matters and the Scottish Government Programme for Government commitments.

In **NHS Highland**, Raigmore Hospital is the core site that provides the majority of care for those that experience miscarriage. Raigmore Hospital and Dr Mackinnon Memorial Hospital both agreed that women are free to choose their preferred management approach based on their needs and preferences. Caithness General Hospital disagreed that women are free to choose their preferred management approach based on their needs and preferences and all other sites in **NHS Highland** neither agreed nor disagreed. The geography in **NHS Highland** has implications for women in terms of how they can access their chosen approach, with some women having to travel over 200 miles (round trip) to access management options. Although sites in Argyll and Bute are part of **NHS Highland**, the services for miscarriage care and pregnancy complications are provided via a service level agreement by NHS Greater Glasgow and Clyde, this also presents a need for women to travel to access management options.

In **NHS Highland**, Raigmore Hospital, Dr MacKinnon Memorial Hospital and Caithness General Hospital all responded that written information about treatment options and what to expect is provided at their sites. Sites within Argyll and Bute reported that they provide information on treatment options for the management of miscarriage but do not provide information in what to expect next in terms of miscarriage care as all women are referred to sites within NHS Greater Glasgow and Clyde for treatment where this information would be provided.

Within **NHS Highland** Raigmore Hospital, Dr MacKinnon Memorial Hospital, Caithness General Hospital and Nairn Town and County Hospital all either agreed or strongly agreed that what will happen during and after the chosen method of management of miscarriage and what happens in terms of follow-up after the management of miscarriage is fully explained to women. Sites within Argyll and Bute neither agreed or disagreed with these statements as this is provided once the pathway of care for the Health Board had been followed and the patient is at the site that offers treatment for miscarriage, which in this case is delivered by NHS Greater Glasgow and Clyde.

In **NHS Highland** a graded approach to treatment of recurrent miscarriage is provided at Raigmore Hospital, where most women experiencing miscarriage are referred. For sites in Argyll and Bute, NHS Greater Glasgow and Clyde provide a graded approach to recurrent miscarriage which patients from Argyll Bute would follow.

All elements of care outlined in the Lancet series on Miscarriage Matters are provided within **NHS Highland**, however, not all elements are provided in all sites.

Dedicated facilities for women experiencing unexpected pregnancy complications at any gestation are provided within the EPU at Raigmore Hospital. Raigmore Hospital is also able to provide a separate room area/ward/unit with dedicated services to

admit women who are miscarrying both within and outwith the EPU away from the labour ward.

In **NHS Highland**, there currently are no separate areas to carry out complication / investigative scans separated from areas for women with a continuing pregnancy, however, sites in the Argyll and Bute area reported that they can access this outwith the Health Board area in NHS Greater Glasgow and Clyde.

In **NHS Highland** data on miscarriage is collected via BadgerNet in all sites. Raigmore Hospital and Belford Hospital also reported using Trakcare. Data is collected on the number of miscarriages, miscarriages as a proportion of pregnancies, gestation, maternal age, SIMD, parity, and ethnicity. However, the data collected differs depending on the site.

Table 23: Scottish Government Programme for Government (PfG) Commitments and the Lancet Miscarriage Matters Recommendations

| Source | Commitment/ Recommendation | Progress in NHS Highland |
|---------------------------------|---|--|
| PfG | Ensure women’s services in Health Boards have dedicated facilities for women who are experiencing unexpected pregnancy complications. | Dedicated facilities for women experiencing unexpected pregnancy complications are located within the EPU in Raigmore Hospital. Raigmore Hospital provide a separate room, area, ward, or unit with dedicated services to admit women who are miscarrying both within and outwith the EPU on site. There are two ensuite rooms available for women in the EPU. It is noted that some rooms/areas are not solely used for miscarriage care and may be used for other pregnancy complications or loss. For sites in Argyll and Bute women would be transferred to NHS Greater Glasgow and Clyde for management of miscarriage where there are dedicated facilities for women experiencing unexpected pregnancy complications at the five sites included in this study. |
| The Lancet: Miscarriage Matters | A graded approach to the treatment of recurrent miscarriage. | A graded approach to treatment of recurrent miscarriage is provided at Raigmore Hospital where the majority of women are referred. For sites in Argyll and Bute women would be transferred to NHS Greater Glasgow and Clyde for management of miscarriage where a graded |

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| | approach is provided in 4 of the 5 sites. |
| After first miscarriage | |
| After the first miscarriage, women will be guided to information about miscarriage | Provided at Raigmore Hospital, Dr. MacKinnon Memorial Hospital, Caithness General Hospital, Belford Hospital and all sites within Argyll and Bute. |
| After the first miscarriage, women will be guided to resources to address their physical needs | Provided at Raigmore Hospital, Dr. MacKinnon Memorial Hospital, Caithness General Hospital, Belford Hospital and all sites within Argyll and Bute. |
| After the first miscarriage, women will be guided to resources to address mental health needs following pregnancy loss | Provided at Raigmore Hospital, Dr. MacKinnon Memorial Hospital, Caithness General Hospital and all sites within Argyll and Bute (Belford Hospital can refer/access locally). |
| After the first miscarriage, women will be guided to ways to optimise their health for future pregnancy | Provided at Raigmore Hospital, Dr. MacKinnon Memorial Hospital, Belford Hospital, Caithness General Hospital can refer/access within Health Board area and Argyll and Bute sites can refer/access outwith NHS Highland. |
| After first miscarriage - this approach could involve: | |
| Patient support groups | Provided at all sites in NHS Highland except Nairn Town and County Hospital. Provided at sites in the Argyll and Bute area. |
| Online self-help strategies for mental health | Provided at Dr. MacKinnon Memorial Hospital, Caithness General Hospital, Belford Hospital and sites in the Argyll and Bute area. |
| Weight management | Provided at all sites in NHS Highland except Nairn Town and County Hospital. Provided at sites in the Argyll and Bute area. |
| Smoking and recreational drugs cessation services | Provided at all sites in NHS Highland except Nairn Town and County Hospital. Provided at sites in the Argyll and Bute area. |
| Information on appropriate preconceptual folate and vitamin D supplementation | Provided at all sites in NHS Highland except Nairn Town and County Hospital. |

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| | Provided at sites in the Argyll and Bute area. |
| Referral to necessary services for management and optimisation of chronic maternal medical conditions (e.g., diabetes, hypertension, heart disease, and epilepsy) | Provided at Raigmore Hospital, Dr. MacKinnon Hospital and Belford Hospital. Sites in Argyll and Bute and also Caithness Hospital can access locally. |
| Screening for mental health issues. | Provided at Dr. MacKinnon Memorial Hospital. Sites in the Argyll and Bute area can refer/access in NHS Greater Glasgow and Clyde. |
| After second miscarriage | |
| Women will be offered an appointment at a miscarriage clinic nurse or midwifery-led | Appointment at a nurse-led miscarriage clinic provided at Raigmore Hospital. Sites in the Argyll and Bute area can refer/access in NHS Greater Glasgow and Clyde. |
| Continuity of care | Provided at all sites in NHS Highland (Belford Hospital can access within the Health Board area). Provided at sites in the Argyll and Bute area. |
| Tests for full blood count are offered | Provided at Raigmore Hospital, Dr. MacKinnon Memorial Hospital, Belford Hospital and all sites in the Argyll and Bute area (Caithness General Hospital can refer/access locally within the Health Board area). |
| Tests for thyroid function are offered | Provided at Raigmore Hospital, Dr. MacKinnon Memorial Hospital, Belford Hospital and all sites in the Argyll and Bute area (Caithness General Hospital can refer/access locally within the Health Board area). |
| Discussion about lifestyle issues | Provided at all sites in NHS Highland except Nairn Town and County Hospital. Provided at sites in the Argyll and Bute area. |
| Referral for specialist care will be arranged if tests are abnormal or if there is a chronic medical or mental health problem. | Provided at Raigmore Hospital, Dr. MacKinnon Memorial Hospital, Belford Hospital and Caithness General Hospital. Sites in the Argyll and Bute area can refer/access in NHS Greater Glasgow and Clyde. |

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| Women will have access to support and early pregnancy reassurance scans in subsequent pregnancies. | Provided at all sites in NHS Highland except Nairn Town and County Hospital. Sites in the Argyll and Bute area can refer/access in NHS Greater Glasgow and Clyde. |
| After third and subsequent miscarriage | |
| Women will be offered an appointment at a medical consultant-led clinic, in which additional tests and a full range of treatments can be offered. | Provided at Raigmore Hospital and Dr. MacKinnon Memorial Hospital. Sites in the Argyll and Bute area can refer/access in NHS Greater Glasgow and Clyde. |
| Pregnancy tissue from the third and any subsequent miscarriages will be sent for genetic testing. | Provided at Raigmore Hospital. Sites in the Argyll and Bute area can refer/access in NHS Greater Glasgow and Clyde. |
| Blood tests for antiphospholipid antibodies will be arranged. | Provided at Raigmore Hospital and Dr MacKinnon Memorial Hospital. Provided at sites in the Argyll and Bute area. |
| A pelvic ultrasound scan (ideally three dimensional transvaginal) will be arranged | Provided at Caithness General Hospital. Sites in the Argyll and Bute area can refer/access in NHS Greater Glasgow and Clyde. |
| If necessary, parental karyotyping will be offered depending on the clinical history and the results of the genetic analysis of pregnancy tissue from previous losses | Provided at Raigmore Hospital and Dr. MacKinnon Memorial Hospital. Sites in the Argyll and Bute area can refer/access in NHS Greater Glasgow and Clyde. |
| Appropriate screening for mental health issues | Provided at Dr. MacKinnon Memorial Hospital. Provided at sites in the Argyll and Bute area. |
| Appropriate care for mental health issues | Provided at Dr. MacKinnon Memorial Hospital. Provided at sites in the Argyll and Bute area. |
| Overall recommendations | |
| Appropriate screening and care for future obstetric risks, particularly preterm birth, fetal growth restriction, and stillbirth. | Provided at all sites in NHS Highland except Nairn Town and County Hospital. Provided at sites in the Argyll and Bute area. |
| Appropriate screening and care for future obstetric risks and mental health issues will need to be incorporated into the care | Provided at all sites in NHS Highland except Nairn Town and County Hospital. |

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| pathway for couples with a history of recurrent miscarriage. | Provided at sites in the Argyll and Bute area. |
| Consider giving vaginal micronised progesterone in women with early pregnancy bleeding and a history of miscarriage. | Provided at Raigmore Hospital, Dr. MacKinnon Memorial Hospital and Caithness General Hospital (after first, second and third or subsequent miscarriage) Sites in the Argyll and Bute area can refer/access locally within the Health Board. |
| We urge health-care funders and providers to invest in early pregnancy care, with specific focus on training for clinical nurse specialists and doctors to provide comprehensive miscarriage care within the setting of dedicated early pregnancy units. | Raigmore Hospital and Caithness General Hospital have midwives/nurses with additional specialist training to provide comprehensive miscarriage care. Raigmore Hospital has doctors trained to provide comprehensive miscarriage care. Sites in the Argyll and Bute area can refer/access in NHS Greater Glasgow and Clyde. |
| Early pregnancy services need to focus on providing an effective ultrasound service, as it is central to the diagnosis of miscarriage, and be able to provide expectant management of miscarriage, medical management with mifepristone and misoprostol, and surgical management with manual vacuum aspiration | Raigmore Hospital is able to carry out scans in the EPU. All management options are available at Raigmore Hospital. Sites in the Argyll and Bute area can provide expectant management on site and can refer/access in NHS Greater Glasgow and Clyde for surgical management with manual vacuum aspiration. |
| Recommend that miscarriage data are gathered and reported to facilitate comparison of rates among countries, to accelerate research, and to improve patient care and policy development. We recommend that every country reports annual aggregate miscarriage data, similarly to the reporting of stillbirth. | Data on miscarriage is collected at all sites via BadgerNet. Raigmore Hospital and Belford Hospital reported that they also use Trakcare. Data is collected on the number of miscarriages at Dr Mackinnon Memorial Hospital, Caithness General Hospital and Belford Hospital, miscarriages as a proportion of pregnancies, gestation, maternal age, SIMD parity and ethnicity are collected at Belford Hospital only. While Raigmore Hospital stated data on miscarriages is collected it is unclear what data is collected. |
| Identifying women at risk of psychological distress following miscarriage | Provided at Raigmore Hospital and Dr MacKinnon Memorial Hospital. |

| | | |
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| | | Sites in the Argyll and Bute area can refer/access in NHS Greater Glasgow and Clyde. |
| Identifying women at risk of psychological distress following miscarriage and the development of optimal treatment strategies have been recognised as research priorities. | | Not assessed. |
| Women with a history of miscarriage, particularly those with three or more miscarriages, are at an increased risk of obstetric complications including preterm birth. Therefore, these women should be treated as patients at high risk during antenatal and intrapartum care. | | Provided at all sites in NHS Highland except Belford Hospital and Nairn Town and County Hospital. Provided at sites in the Argyll and Bute area. |
| Miscarriage Management - women should be presented with the available evidence and be free to choose the management approach that suits their needs and preferences. | | Caithness General Hospital disagreed that women are free to choose their preferred management approach based on their needs and preferences, while Raigmore Hospital and Dr Mackinnon Memorial Hospital agreed. All other sites including those in Argyll and Bute neither agreed nor disagreed. |
| Consider pathways of care for miscarriage management, treatment of women with a history of miscarriage and care following a miscarriage. | | Not assessed. |
| The Lancet: Miscarriage Matters | Key epidemiological research priority 1 - | Project underway with Scottish Government, Public Health Scotland and Maternity and Children Quality Improvement Collaborative (MCQIC). |
| Research Recommendations | Establishing how we can monitor miscarriage rates on a population basis. | |
| | Key epidemiological research priority 2 - | Project underway with Scottish Government, Public Health Scotland and Maternity and Children Quality Improvement Collaborative (MCQIC). |
| | Ascertaining if miscarriage risk and prevalence differ across nations and ethnic groups. | |
| | Key epidemiological research priority 3 - | Work to follow from research priorities 1 and 2 above. |

Whether miscarriage rate is increasing, and if so why; what the key outcomes are from women's point of view.

Key epidemiological research priority 4 - Which risk factors for miscarriage are potentially causative and modifiable; and the effect of modification of the risk factor on clinical outcomes.

Work to follow from research priorities 1 and 2 above.

Annex A

| Table A: Secondary care sites where women experiencing miscarriage in may be seen | |
|--|------------------------|
| Health Board | Number of sites |
| NHS Ayrshire and Arran Arran War Memorial Hospital University Hospital Ayr (ED) University Hospital Crosshouse (including Ayrshire Maternity Unit) | 3 |
| NHS Borders Borders General Hospital | 1 |
| NHS Dumfries and Galloway Dumfries and Galloway Royal Infirmary Galloway Community Hospital (A & E) | 2 |
| NHS Fife Victoria Hospital | 1 |
| NHS Forth Valley Forth Valley Royal Hospital | 1 |
| NHS Grampian Aberdeen Royal Infirmary and Maternity Hospital (Foresterhill Site) Dr Gray's Hospital Fraserburgh Hospital Inverurie Health & Care Hub Jubilee Hospital Peterhead Community Hospital | 6 |
| NHS Greater Glasgow and Clyde Glasgow Royal Campus – included: Princess Royal Maternity Jubilee Building (A& E) Glasgow Royal Infirmary Inverclyde Campus – included: Inverclyde Royal Hospital Inverclyde Community Maternity Unit Royal Alexandra Campus – included: Royal Alexandra Hospital Royal Alexandra Community maternity Unit Queen Elizabeth University Hospital Campus Vale of Leven Campus – included: Vale of Leven District General Hospital Vale of Leven Community Maternity Unit | 5 |
| NHS Highland Belford Hospital Caithness General Hospital | 12 |

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|---|----|
| Campbeltown Hospital Cowal Community Hospital (A & E) (Dunoon Hospital previously) Dr MacKinnon Memorial Hospital - Broadford Hospital (A & E) Islay Hospital Lorn & Islands Hospital Mid Argyll Community Hospital and Integrated Care Centre Mull & Iona Community Hospital Nairn Town And County Hospital Victoria Hospital Raigmore Hospital | |
| NHS Lanarkshire University Hospital Hairmyres University Hospital Wishaw University Hospital Monklands | 3 |
| NHS Lothian Royal Infirmary of Edinburgh St Johns Hospital | 2 |
| NHS Orkney Balfour Hospital | 1 |
| NHS Shetland Gilbert Bain Hospital | 1 |
| NHS Tayside Arbroath Infirmary Ninewells Hospital Perth Royal Infirmary | 3 |
| NHS Western Isles Barra Community Hospital Uist and Barra Hospital Western Isles Hospital | 3 |
| Total | 44 |



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This document is also available from our website at www.gov.scot.
ISBN: 978-1-83521-626-2

The Scottish Government
St Andrew's House
Edinburgh
EH1 3DG

Produced for
the Scottish Government
by APS Group Scotland
PPDAS1373394 (11/23)
Published by
the Scottish Government,
November 2023



Social Research series
ISSN 2045-6964
ISBN 978-1-83521-626-2

Web Publication
www.gov.scot/socialresearch

PPDAS1373394 (11/23)