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## **Title: A rapid evidence map of womens health.**

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**Abstract:** The rapid evidence map focuses on identifying the nature and extent of published literature on the following topic areas: healthcare professionals communication with women about womens health issues and broader health problems during clinical encounters; access to specialist healthcare; endometriosis; menopause; womens health and mental health issues, and mental health issues associated with specific conditions related to menopause or menstrual health (adenomyosis; endometriosis; fibroids; heavy menstrual bleeding, polycystic ovary syndrome and premenstrual dysphoric disorder).

The purpose of this rapid evidence map was to identify research gaps and priorities that will be beneficial to womens health in Wales. The rapid evidence map uses abbreviated systematic mapping or scoping review methods to provide a description of the nature, characteristics and volume of the available evidence.

There is a lack of primary and secondary research that explores communication between women and healthcare professionals within primary and secondary care settings. Secondary research evidence exists but there are gaps in the evidence base regarding access to services providing minor gynaecological procedures and pain management, or care for menstrual health and wellbeing, endometriosis, polycystic ovarian syndrome, menopause, heart conditions, autoimmune diseases, hypermobility spectrum disorders, myalgic encephalomyelitis, long COVID, fibromyalgia, skin conditions, or palliative and end of life care, which are priority areas identified by the Womens Health Wales Coalition (2022). There are no active funding calls exploring these topics.

Regarding endometriosis, there is a lack of review evidence regarding education and resources for health care professionals and doctors to reduce diagnostic times and improve care. There is an evidence gap for primary research regarding information, support interventions and tools for women with endometriosis to help them manage their symptoms and improve their quality of life.

A substantial amount of secondary evidence exists on menopause along with a plethora of research priorities around treatment and symptom management. It was beyond the scope of this work to determine if any research had been conducted in these priority areas since the production of the guidelines and recommendations. There is a lack of research recommendations and review evidence that address mental health issues and specific issues that affect a womens menstrual health such as adenomyosis, fibroids, heavy menstrual bleeding and premenstrual dysphoric disorder.

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## Wales COVID-19 Evidence Centre (WCEC)

### Rapid Evidence Map: Women's health Report number – REM 00045 (October 2022)

#### Rapid Evidence Map Details

**Review conducted by:**

Wales Centre For Evidence Based Care

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- Judit Csontos
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**WCEC Team:**

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# Rapid Evidence Map: Women's health

## Report number – REM00045 (October 2022)

### TOPLINE SUMMARY

#### What are Rapid Evidence Maps?

Our Rapid Evidence Maps (REMs) use abbreviated **systematic mapping or scoping review methods** to provide a description of the nature, characteristics and volume of the available evidence for a particular policy domain or research question. They are mainly based on the assessment of abstracts and incorporate an a priori protocol, systematic search, screening, and minimal data extraction. They may sometimes include critical appraisal, but no evidence synthesis is conducted. Priority is given, where feasible, to studies representing robust evidence synthesis. They are designed and used primarily **to identify a substantial focus for a rapid review, and key research gaps in the evidence-base**. (*N.B. Evidence maps are not suitable to support evidence-informed policy development, as they do not include a synthesis of the results.*)

#### Who is this summary for?

Health and Care Research Wales

#### Background / Aim of Rapid Evidence Map (REM)

The Welsh Government Research and Development Division intends to run a commissioned funding call on understanding and tackling gender inequalities in health and social care in Wales. The purpose of this REM was to identify research gaps and priorities that will be beneficial to women's health in Wales to inform the proposed funding call. It was decided, based on a preliminary review of the literature, feedback from an NHS public consultation exercise in Wales, and further discussion with the stakeholder group, that the REM would focus on identifying the nature and extent of the literature on the following prioritised topic areas: **healthcare professionals' communication with women** about women's health issues and broader health problems during clinical encounters; **access to specialist healthcare**; **endometriosis**; **menopause**; **women's health and mental health issues, and mental health issues associated with specific conditions related to menopause or menstrual health** (adenomyosis; endometriosis; fibroids; heavy menstrual bleeding, polycystic ovary syndrome and premenstrual dysphoric disorder). Research gaps in other areas and health conditions, in which women might also experience inequality, were not explored in this REM.

#### Key Findings

##### *Extent of the evidence base*

- **Communication within health care encounters:** The evidence base included one systematic review (of endometriosis) and nine primary studies. The primary studies focused on breast cancer (n=2), maternal medicine (n=3), perinatal mental health (n=1), gynaecological conditions (n=1), and non-specific conditions (n=2). Three studies focused on specific populations: urban Africans, Iraqi Muslim refugees, and undocumented migrants. Planned and ongoing NIHR funded projects include clinicians' perspectives of listening to women's health, menstrual and gynaecological conditions, menopause, and women's cancers.
- **Access to specialist healthcare:** The evidence base consisted of 19 reviews and 9 protocols. Conditions covered were maternal medicine (n=8), sexual and reproductive health (n=5), cancer and cancer screening (n=4), perinatal mental health (n=4), mental health (n=2), HIV (n=2), and non-specific conditions (n=3). Specific populations investigated were refugees or displaced people (n=6), those in differing social, economic, and environmental circumstances (n=4), physical disabilities (n=3), homeless (n=2), migrants (n=2), experiencing intimate partner violence (n=1), and minority ethnicity black (n=1). The reviews focused on barriers and facilitators (n=10), barriers (n=5), experiences (n=3),

mapping the evidence (n=3), factors (n=2), management (n=1), facilitators (n=1), predictors (n=1), associations (n=1), and prevalence (n=1).

- **Endometriosis:** The evidence base included 121 systematic reviews covering different topics including medical management (n=22), surgical management (n=15), biology/molecular (n=12), risk factors (n=11), and comorbid conditions (n=9). Research priorities were identified by the James Lind Alliance (JLA), NICE guideline, a Wales-specific primary study (Boivin et al 2018), and researchers within the field (n=2). Recent UK funding calls were identified covering laboratory research, aetiology of endometriosis and uterine disorders, and medical and surgical management.
- **Menopause:** The evidence base included 108 systematic reviews covering different topics including hormonal therapies (n=17), homeopathic therapies (n=13), non-hormonal therapies (n=10), genitourinary symptoms of menopause (n=7), alternative therapies (n=6), and lifestyle interventions (n=6). Research priorities were identified as part of a NICE guideline, by the British Menopause Society, and researchers within the field (n=3). Recent UK funding calls were identified covering reproductive and menopausal health, testosterone for the treatment of symptoms, women's reproductive health in the workplace, and women's health hub landscape.
- **Women's health and mental health issues:** The evidence base included 37 reviews covering: perinatal mental health (n=23), general mental health (n=9), polycystic ovary syndrome (n=3), and intimate partner violence (n=2). Some reviews focused on specific populations including women in prison, women in inpatient mental health services, mental health of migrants and refugee women, and mental health of women from different minority groups. Recent UK funding calls were identified covering: young women's mental health, women and partners who have experienced pregnancy not ending in live births, and perimenopause and the risk of psychiatric disorders.
- **Mental health issues associated with specific conditions related to menopause or menstrual health:** The evidence base included 10 systematic reviews covering: polycystic ovary syndrome (n=4), endometriosis (n=4), menopause (n=1), and menstruation (n=1). The reviews focused on prevalence (n=4), associations (n=4), and management (n=2).

#### *Recency of the evidence base*

- The review included evidence available (from 2012, 2018, and 2021) up until September 2022. (Separate searches were conducted for different topics, with variable time limits due to the varying volume of research published in certain areas.)

#### **Summary of the evidence gaps**

- There is a **lack of primary and secondary research** that explores **communication between women and healthcare professionals (HCPs)** within primary and secondary care settings.
- Secondary research evidence exists but there are **gaps in the evidence** base regarding **access to services** providing minor gynaecological procedures and pain management, or **care for menstrual health and wellbeing, endometriosis, polycystic ovarian syndrome, menopause**, heart conditions, autoimmune diseases, hypermobility spectrum disorders, myalgic encephalomyelitis, long COVID, fibromyalgia, skin conditions, or palliative and end of life care, which are priority areas identified by the Women's Health Wales Coalition (2022). There are no active funding calls exploring these topics.
- Regarding endometriosis, there is a **lack of review evidence** regarding **education and resources for HCPs and doctors to reduce diagnostic times and improve care**. There is an **evidence gap** for primary research regarding **information, support interventions and tools** for women with endometriosis to help them **manage their symptoms** and improve their **quality of life**.

- A substantial amount of secondary evidence exists on **menopause** along with a **plethora of research priorities** around **treatment and symptom management**. It was **beyond the scope** of this REM to **determine if any research** had been conducted in **these priority areas** since the production of the guidelines and recommendations. Researchers in the field would like to see primary research conducted in the area of **quality of life**.
- There is a **lack of research** recommendations and review evidence that address mental health issues and specific issues that affect a women's menstrual health such as **adenomyosis, fibroids, heavy menstrual bleeding and premenstrual dysphoric disorder**.

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**Abbreviations:**

<b>Acronym</b>	<b>Full Description</b>
BMA	British Medical Association
DHEA	Dehydroepiandrosterone
DHSC	Department of health and Social Care
FTWW	Fair Treatment for The Women of Wales
GSM	Genitourinary syndrome of menopause
HCP	Health care professionals
HCRW	Heath and Care Research Wales
HIC	High income countries
HRT	Hormone replacement therapy
HMB	Heavy menstrual bleeding
IPV	Intimate partner violence
NICE	National Institute of Clinical Excellence
NIHR	National Institute for Health and Care Research
OECD	Organisation for Economic Co-operation and Development
PCOS	Polycystic ovary syndrome
PMDD	Premenstrual dysphoric disorder
PMS	Premenstrual syndrome
REM	Rapid Evidence Map
VMS	Vasomotor symptoms
VTE	Venous thromboembolism
LNG-IUS	Levonorgestrel-releasing intra-uterine system

## 1. BACKGROUND

This Rapid Evidence Map (REM) was conducted as part of the Wales COVID-19 Evidence Centre Work Programme. The initial request to explore women's health came from Health and Care Research Wales (HCRW) to inform the development of a proposed commissioned funding call by the Welsh Government Research and Development Division. The research team conducted a preliminary search of the evidence and presented the findings to the stakeholder group in order to identify research priorities that will be beneficial to women's health in Wales. As a result of the stakeholder meeting and further discussion afterwards the focus for the REM was to explore the nature and extent of the literature on **healthcare professionals' communication** with women about women's health issues and broader health problems during clinical encounters, and their **access to specialist healthcare**. Additionally, the nature and extent of the evidence in relation to **endometriosis**, **menopause** and **mental health** will also be investigated as the preliminary search identified that these areas have been shown to be a priority area (Scottish Government 2021, Department of Health and Social Care 2021). The focus of the REM was also informed by the priority areas identified during an NHS public prioritisation exercise conducted in Wales and led by a member of the stakeholder group.

### 1.1 Communication within healthcare encounters

While women's life expectancy is on average longer than men's in the UK, evidence suggests that women experience more ill health and disability throughout the life course (Office of National Statistics 2022). The reasons for this include women's underrepresentation in clinical trials and research (Duma et al. 2018) and that healthcare professionals' education and the healthcare system is designed for men (Department of Health and Social Care 2022, Women's Health Wales Coalition 2022). Moreover, communication with women in the healthcare system could also pose barriers to seeking help for certain conditions (Scottish Government 2021, Department of Health and Social Care 2021). Women often feel that healthcare professionals do not take their symptoms seriously, or they do not receive support after events, such as a miscarriage (Scottish Government 2021, Department of Health and Social Care 2021). In addition, deaf women, women with disabilities, and refugees often face further barriers to communication, as healthcare professionals often do not know sign language or translation to other languages is not directly available (Allen & Sesti 2018, British Medical Association 2021). The English, Scottish and Welsh Governments have all recently published or started working on Women's Health Strategies to support women's health and wellbeing (Scottish Government 2021, Department of Health and Social Care 2022, Welsh Government 2022). Improved communication is part of this commitment, with professional bodies recommending training on women's health and practice-based skills, such as communication, to be part of the medical curricula (Allen & Sesti 2018, British Medical Association 2021). While Women's Health Strategies are based on national consultations and surveys, little is known about women's experiences of communication during clinical encounters throughout the life course.

### 1.2 Women's access to specialist healthcare

In addition to communication issues the Women's Health Wales Coalition (2022) have identified four key themes which are common reported as being of concern around women's health. These are access to specialist services, improved data collection, support for sustainable co-production and training for health and care professionals. Access to appropriate specialist healthcare can pose an issue to many women (Women's Health Wales Coalition 2022). Due to the development and management of health services in England and Wales, boundaries exist between different health boards and NHS Trusts which often leads to

women living in one area being unable to access specialist care in another (Women's Health Wales Coalition 2022).

### **1.3 Endometriosis**

Endometriosis affects 10% of women and those assigned female at birth (Royal College of Obstetricians & Gynaecologists 2019). It occurs where cells similar to those lining the womb are found elsewhere in the body and such cells can cause inflammation, pain and the formation of scar tissue. Symptoms that are commonly reported include chronic pelvic pain, painful periods, pain during or after sex, painful urination and bowel movements, fatigue or tiredness, and difficulties getting pregnant and can vary considerably in severity from mild or no symptoms to being chronic and debilitating (Women's Health Wales Coalition 2022). In Wales it takes an average of nine years before women receive a diagnosis (a year longer than in England) and can involve the distress of repeated medical appointments that fail to identify a cause for symptoms (Women's Health Wales Coalition 2022). Research has shown that on average in Wales, a women will visit the doctor 26 visits to the doctor before receiving a diagnosis (Boivin et al. 2018), resulting in delays in accessing treatment. The chronic and complex nature of endometriosis requires specialist, multi-disciplinary, long-term management and the Women's Health Wales Coalition (2022) reported that this is severely lacking across Wales with problems identified at all levels of care. NICE guidance (NICE 2017) outlines that access to specialist gynaecologists with expertise in diagnosing and managing endometriosis should be available (Boivin et al. 2018), including those sufficiently skilled and trained to undertake diagnostic laparoscopy. However, long waiting times for gynaecology appointments and surgery and a lack of access to gynaecologists with expertise in endometriosis within Wales have been reported (Women's Health Wales Coalition 2022). With regard to mental health, anxiety and depression are commonly reported mental health outcomes (Wang et al. 2021, Delanerolle et al. 2021) along with a decreased mental and physical quality of life (Wang et al. 2021).

### **1.4 Menopause**

Women and those assigned female at birth account for 52% of the population of Wales and at some point in their lives, the majority of them will experience menopause (Women's Health Wales Coalition 2022). There is often little recognition, appreciation or support for symptoms which for some can be severely debilitating (FTWW 2019) and women are expected to carry on working regardless and may having to leave employment often requiring interventions from healthcare professionals (Women's Health Wales Coalition 2022).

Interventions for menopausal symptoms must be considered based on the person's circumstances, preferences, and the short- and long-term benefits and risks of treatments (NICE 2022a). Treatments, such as hormone replacement therapy (HRT), are highly effective in reducing menopausal symptoms and health risks associated with untreated menopause, including heart disease and osteoporosis (FTWW 2019). However, both primary and secondary care professionals can have limited knowledge on HRT, and they often rely on dated evidence which only focuses on the negative effects of using such treatment (FTWW 2019). This can lead to a lack of consideration for or access to timely treatment (FTWW 2019). One of the reasons for insufficient access to treatment or specialist services are the lack of education provided for both healthcare professionals (HCPs) and women about perimenopause, menopause, and HRT throughout the life-course. Awareness about menopause and treatments could be raised in different settings, such as GP surgeries, sexual and reproductive health clinics, hospitals or screening appointments, although this has not been the case (FTWW 2019). Furthermore, people experience a lack of availability of specialist

services for menopause, which could be traced back to women's health not being a priority for funding bodies and policy (FTWW 2019).

As women's health groups are becoming more vocal about their needs, the British Menopause Society (BMS) recommends that access to information should be provided to women about menopause, transition, and post-menopausal life to prepare them for health changes (Hamoda et al. 2020). Moreover, holistic assessment of the individual person going through menopause should be conducted, and tailored lifestyle and treatment advice, including information on HRT risks and benefits, and complimentary therapies, should be provided (Hamoda et al. 2020).

## **1.5 Mental health**

Recent survey evidence has reported associations between time to diagnosis for a gynaecological health problem and mental health (BMI Healthcare 2021c, BMI Healthcare 2021b, BMI Healthcare 2021a). Delayed diagnosis is often caused by dismissal by healthcare professionals, which can originate from the lack of awareness and education on women's health and gynaecological conditions (BMI Healthcare 2021a). Particular conditions, such as adenomyosis, polycystic ovary syndrome (PCOS) and uterine fibroids, can be disproportionately affected by long waiting times and mental health problems.

### **1.5.1 Adenomyosis**

Adenomyosis is a benign gynaecological condition caused by endometrial tissue growing in the myometrium which is the muscle layer of the womb (NICE 2013) that can affect one in 10 women in the UK (BMI Healthcare 2021a). While some people might not experience symptoms, others report heavy, painful, prolonged, and irregular menstrual bleeding, and pelvic pain (NICE 2013, BMI Healthcare 2021a). Receiving an adenomyosis diagnosis can take several years and results of a recent survey found that 42% women waited over five years for a diagnosis and 26% experienced a wait longer than 10 years (BMI Healthcare 2021a). As a result of prolonged diagnosis and living with symptoms, such as chronic pain, adenomyosis can have a severe impact on a women's health related quality of life, mental health (anxiety and depression) and work productivity (Alcalde et al. 2021, BMI Healthcare 2021a).

### **1.5.2 Fibroids**

Fibroids (leiomyomas, polyps) are benign tumours in the myometrium, which can be varying in size and number, round and hard in appearance, consisting of smooth muscle cells and fibroblasts. Fibroids are usually symptom free, and a high number of women will develop them through the life course (NICE 2022). However, people who experience symptoms, describe back and stomach pain, painful sexual intercourse, heavy periods, constipation, and more frequent urination (BMI Healthcare 2021b). Fibroids are fairly quick to be diagnosed, with majority of people diagnosed within a year, although some people report diagnosis took over a year from the start of symptoms (BMI Healthcare 2021b). Although the incidence of depression and anxiety are lower than for other gynaecological conditions (Li et al. 2022) the impact of uterine fibroids on a women's psychological health is still significant (BMI Healthcare 2021c, Ghant et al. 2015).

### **1.5.3 Polycystic Ovary Syndrome**

Polycystic ovary syndrome (PCOS) is an endocrine disorder, which can present as ovulation disorders, hyperandrogenism, and polycystic ovarian morphology, meaning that follicles filled with fluid are contained in the ovaries (NICE 2022b, BMI Healthcare 2021b). Getting a diagnosis has been reported to take between one to five years or even longer (BMI Healthcare 2021b). Regarding mental health, women affected by PCOS suffer from depression, anxiety

(BMI Healthcare 2021b) and experience a lower quality of life compared to healthy women (Yin et al. 2021).

#### **1.5.4 Heavy menstrual bleeding**

Menstrual bleeding that is heavier than normal or lasts longer than seven days is often referred to as heavy menstrual bleeding or menorrhagia (NICE 2018b). Heavy menstrual bleeding can be a symptom of fibroids and adenomyosis, among other health conditions, and can severely impact on women's quality of life (NICE 2018a). Symptom fluctuations over the menstrual cycle in anxiety disorders, post-traumatic stress disorders and obsessive compulsive disorders have been reported by women with regular periods (Green & Graham 2022). However, there is a lack of research on how women who do not have regular periods experience mental health symptom fluctuation (Green & Graham 2022).

#### **1.5.5 Premenstrual Dysphoric Disorder**

Premenstrual dysphoric disorder is distinct from the above, as its primary symptoms are psychological. Premenstrual syndrome (PMS) is the presence of psychological, physical, and behavioural symptoms between ovulation and the start of menstruation (luteal phase of menstrual cycle) (NICE 2019). Premenstrual dysphoric disorder (PMDD) is characterised as a more severe form of PMS, which results in women experiencing at least five from 11 identified psychological symptoms of PMS (NICE 2019).

## **2. FINDINGS**

### **2.1 Summary of the evidence for communication within healthcare encounters**

The evidence base consisted of nine primary studies (conducted in USA (n=2), UK (n=2), Italy (n=1), Sweden (n=1), Denmark (n=2), Europe (n=1) and one systematic review for women's communication within healthcare encounters (Table 1).

- The conditions covered within the primary studies were breast cancer (n=2); maternal medicine (n=3); perinatal mental health (n=1), gynaecological conditions (n=1) and any condition (n=2).
- The condition covered in the systematic review was endometriosis (n=1)
- The specific populations of women that were investigated and included urban Africans (n=1), Iraqi Muslim refugees (n=1) and undocumented migrants (n=1)
- Studies focused on experiences (n=7), management (n=1) or factors associated with gender of HCPs and patient communication (n=1).

### **Planned and ongoing NIHR funded projects**

Clinician's perspectives of listening to women's health, menstrual and gynaecological conditions (such as polycystic ovary syndrome (PCOS)), menopause, and women's cancers.

#### **2.1.1 Bottom line summary**

There is a lack of primary and secondary research that explores or addresses communication between women and healthcare professionals within primary and secondary care settings with the exception of women with endometriosis and their experiences of healthcare encounters. However, funded NIHR research focusing on HCPs' perspectives on communication with women, who have women's health, menstrual and gynaecological conditions (such as polycystic ovary syndrome (PCOS)), menopause, or cancer, are planned or ongoing.

## 2.2 Summary of the evidence for access to specialist healthcare

The evidence base consisted of systematic reviews (n=17); systematic review protocols (n=4); scoping reviews (n=2); scoping review protocols (n=5) that focused on women's access to specialist healthcare (Table 2).

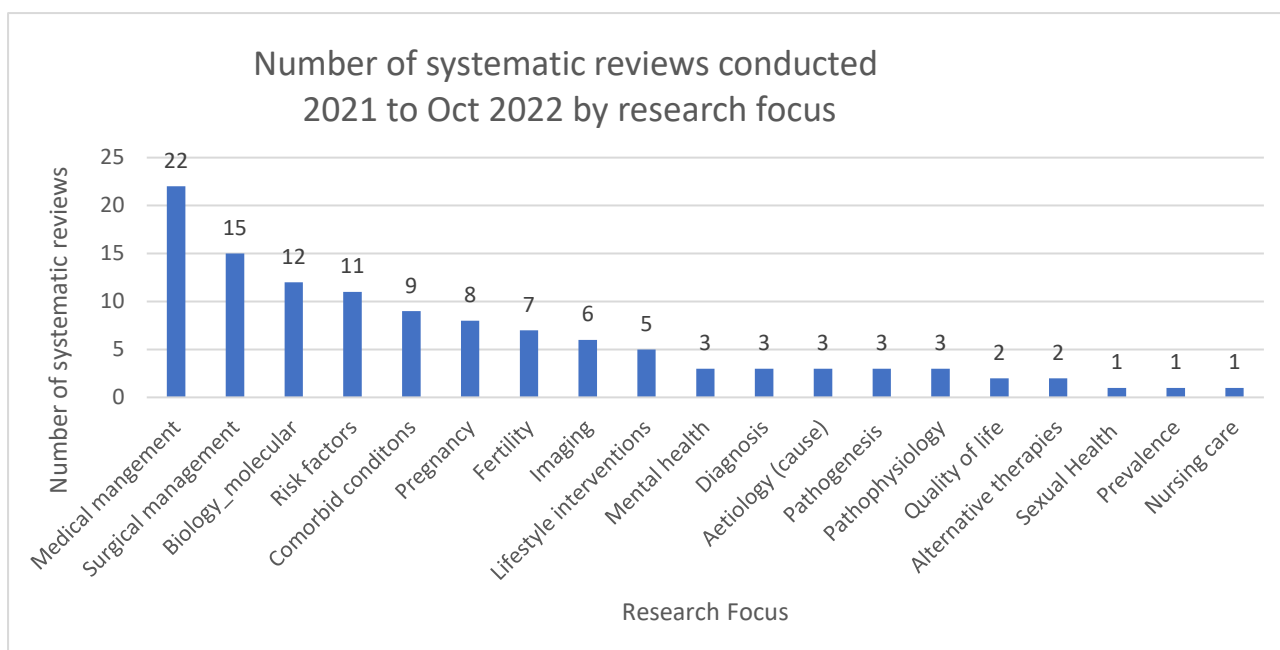
- The conditions covered within the systematic reviews were maternal medicine (n=8); sexual and reproductive health (n=5); cancer and cancer screening (n=4); perinatal mental health (n=4), mental health (n=2) and HIV (n=2). Three systematic reviews did not focus on a specific condition but were on women's health in general.
- The specific populations of women that were investigated included refugees or displaced people (n=6); those in differing social, economic, and environmental circumstances (n=4); physical disabilities (n=3); homeless (n=2); immigrants (n=2), experiencing IPV (n=1) and minority ethnicity black (n=1).
- Additionally, three reviews also included HCPs and/or women's partners.
- The reviews focused on barriers and facilitators (n=10); barriers (n=5); experiences (n=3); mapping the evidence (n=3); factors (n=2); management (n=1); facilitators (n=1); predictors (n=1); associations (n=1) and prevalence (n=1).
- Fourteen reviews focused on healthcare access within a specific country or region and included HICs (n=5); Canada (n=3); UK (n=2); USA (n=2); OECD (n=1); WHO European region (n=1) and Australia (n=1).

### 2.2.1 Bottom line summary

Substantial secondary research evidence exists on the topic of women's access to specialist healthcare services, such as maternal medicine, sexual and reproductive health, cancer, perinatal and general mental health, and HIV. Research populations include women from a wide range of backgrounds and with different socioeconomic, health and ethnic characteristics. No secondary evidence was found regarding access to services providing minor gynecological procedures and pain management, or **care for menstrual health and wellbeing, endometriosis, polycystic ovarian syndrome, menopause**, heart conditions, autoimmune diseases, hypermobility spectrum disorders, myalgic encephalomyelitis, long COVID, fibromyalgia, skin conditions, or palliative and end of life care, which are priority areas identified by the Women's Health Wales Coalition (2022). We did not find any funding calls that covered this topic.

## 2.3 Summary of the evidence for endometriosis

Searches retrieved **121** English language systematic reviews published between 2021 to October 2022. Figure 1 shows where the focus of the research lies with most studies being medical and surgical treatments (some reviews explored more than one area of research). Brady et al. (2020) reported that healthcare providers/scientists tend to prioritise research questions about cause/pathology or risk factors for endometriosis, diagnosis and screening, treatment, and fertility. Whereas patients and family members tend to prioritise questions about education/ awareness, emotional impact, and comorbid conditions (Brady et al. 2020)



### **Research priorities for endometriosis**

- In 2017 the James Lind Alliance (JLA) published their top 10 priorities for endometriosis combining information from an online survey, systematic reviews and clinical guidelines and covered the following areas (see Appendix 1).
- The NICE guideline (NICE 2017) for endometriosis was published in 2017 and is currently being reviewed to consider whether it should be updated (DHSC 2022). The recommendations for research as set out in the current guidance can be found in Appendix 2.
- Other areas considered to be important by researchers within (As-Sanie et al. 2019, Brosens et al. 2017) and based on research already conducted in Wales (Boivin et al. 2018) are shown in Table 3.

### **Funding calls**

- A funding call has just closed (June 2022) for jointly funded projects between the [Wellbeing of Women and the Scottish Government](#) in laboratory, health and translational research that aims to improve access for women to appropriate support, diagnosis and the best treatment for endometriosis.
- The National Institute of Health Research ([NIHR](#)) has five active awards that focus on medical or surgical management (n=4) and management of teenagers with dysmenorrhea in primary care (n=1)
- The [Society of Endometriosis and Uterine Disorders](#) will fund aetiology, pathophysiology or treatment of endometriosis, adenomyosis, fibroids or other uterine disorders and its complications.
- The [Royal College of Obstetricians and Gynaecologists – Endometriosis Millennium Fund](#) will fund up to £5,000 in order to stimulate and encourage research (clinical or laboratory based) in the field of endometriosis.

### **Mapping of research priorities, funding calls and systematic reviews**

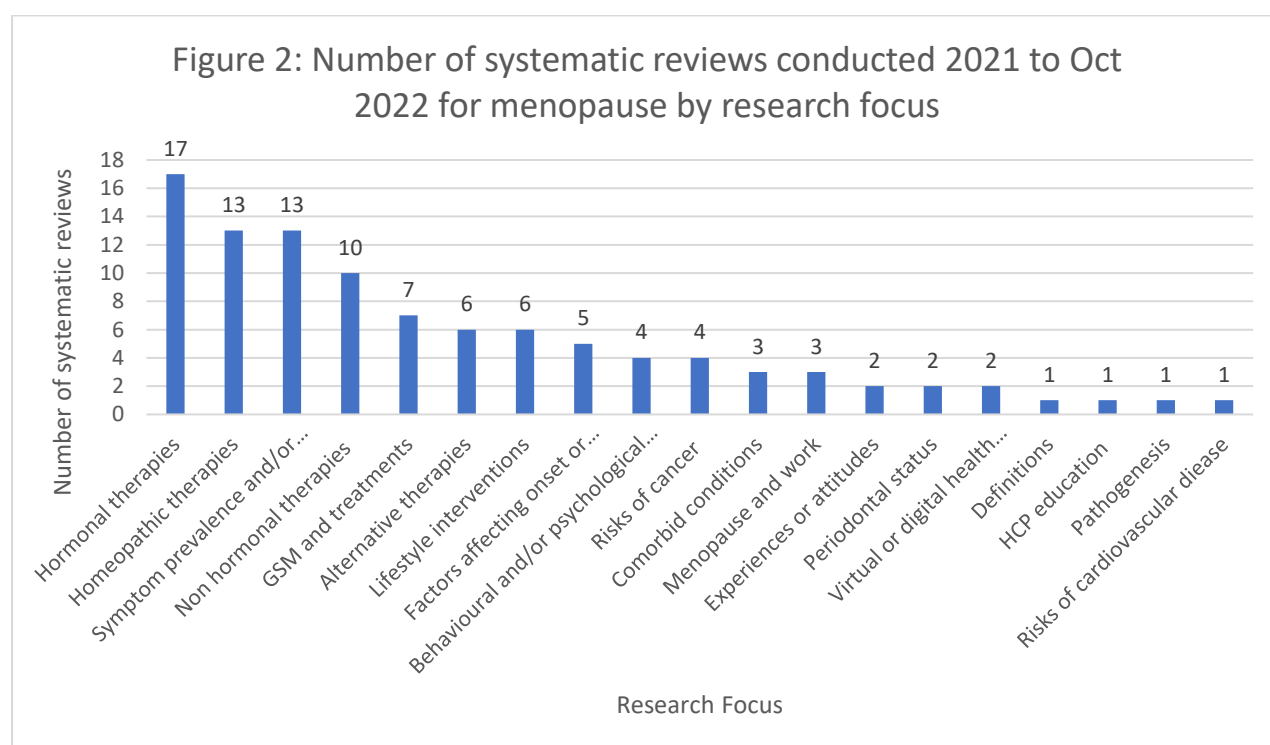
Table 3 maps current research priorities against open and recently closed calls for funding and systematic reviews conducted in since 2021.

### 2.3.1 Bottom line summary

A high-volume of secondary research evidence exists on the topic of endometriosis, with most systematic reviews focusing on medical and surgical treatments. Recent funding calls focus on laboratory research, aetiology of endometriosis and uterine disorders, and medical and surgical management. There is a lack of review evidence regarding education and resources for HCPs and doctors to reduce diagnostic times and improve care. Furthermore, there is an evidence gap for primary research regarding information, support interventions and tools for women with endometriosis to help them manage their symptoms and improve their quality of life.

## 2.4 Summary of the evidence for menopause

Searches retrieved **108** English language systematic reviews published between 2021 to October 2022. Figure 2 shows where the focus of the research lies with most studies being hormonal therapies, homeopathic therapies, symptom prevalence and management and non-hormonal therapies (some reviews explored more than one area of research).



Key: GSM: genitourinary syndrome of menopause; HCP: health care professional

### Research priorities for menopause

- The NICE guideline for menopause was published in 2015 (NICE 2015) and an update will be published in August 2023 (NICE 2022a). The recommendations for research as set out in the current guidance all focus on HRT and a broader scope that covers menopause symptoms what is being considered within the update (see Appendix 3).
- The British Menopause Society & Women's Health Concern (Hamoda et al. 2020) have produced recommendations on hormone replacement therapy in menopausal women with breast cancer or dementia (see Appendix 4).
- Other areas considered to be important by researchers within the field (Woods & Utian 2018, El Khoudary 2017, Stuckey et al. 2020) are shown in Table 4.



### ***Funding calls***

- Reproductive Health Policy Research Unit (RH PRU) (closed call August 2022) which will have menstrual and menopausal health as part of its remit.
- Health Technology Assessment: Testosterone for the treatment of menopause symptoms beyond altered sexual function Call opens December 2022.
- British Menopause Society: BMS Education fund offers up to five grants will be awarded between £500 and £2,000 each year, normally to those undergoing training, but applicants not undergoing training will also be considered. Part funding or matching funding towards larger projects will be considered.
- Department of Health & Social Care: Health and Wellbeing Fund 2022 to 2025: women's reproductive wellbeing in the workplace. Call closed 5<sup>th</sup> August 2022.

### **Planned and ongoing NIHR funded projects**

- NIHR135589: An evaluation of the current Women's Health Hub landscape

### ***Mapping of research priorities, funding calls and systematic reviews***

Table 4 maps current research priorities against open and recently closed calls for funding and systematic reviews conducted in since 2021.

#### **2.4.1 Bottom line summary**

A substantial amount of secondary evidence exists on the topic of menopause, with most systematic reviews focusing on hormone therapy, complimentary or alternative therapies, symptom prevalence, genitourinary syndrome and its management, lifestyle interventions, and factors influencing onset. There are many research priorities set by NICE and the BMS and include for example further research into HRT and breast cancer or dementia, dehydroepiandrosterone (DHEA) and cancer, treatments for vasomotor symptoms (VMS). Researchers in the field would like to see research conducted into different aspects of quality of life. It was beyond the scope of this REM however, to determine if any research had been conducted in these areas since the production of the guidelines and suggestions. Current funding calls are focusing on the menopause as part of the NIHR RH PRU, testosterone treatment, and women's reproductive wellbeing in the workplace.

### **2.5 Summary of the evidence for women's health and mental health issues**

Broad searches retrieved **37** English language systematic reviews published between 2012 to October 2022 on the topic of women's health and mental health issues (see Table 5). The evidence base is dominated by perinatal mental health (n=23) and there are a plethora of funding calls and active grants in this area.

There is also a significant amount of evidence for the mental health of women in general and within this the research focuses specifically on the following populations.

- Women in prison.
- Women in inpatient mental health services.
- Mental health of immigrants and refugee women.
- Mental health of women from different minority groups.

Specific searches (2018 to 2022) were conducted for the conditions related to menopause and menstrual health and wellbeing using the conditions listed in the Women's Health Wales Coalition document and included adenomyosis; endometriosis; fibroids; heavy menstrual

bleeding; PCOS, PMDD. The evidence base consisted of **ten** systematic reviews (see Table 6).

- The conditions covered were PCOS (n=4), endometriosis (n=4), menstruation (n=1) and menopause (n=1).
- One review for PCOS investigated the prevalence of mental health issues in Black, Asian and minority ethnic populations.
- There was no systematic review evidence for mental health and adenomyosis; fibroids; heavy menstrual bleeding or PMDD.
- The reviews focused on prevalence (n=4), associations (n=4) and management (n=2).

### ***Funding calls***

- The Pilgrim Trust: Young women's mental health grants. £20,000 to £30,000 per year for a 3 year project. For 2022 the focus is North East and North West England and Northern Ireland.
- NIHR Funding call: 22/80 Interventions to promote mental health and wellbeing among young women. What interventions are effective to promote good mental health and wellbeing among young women aged 12-24? Call opened 28 June 2022 and closes 29 November 2022.
- NIHR Funding call: 22/82 Improving mental health outcomes for women and partners who have experienced pregnancy not ending in live births. Which interventions are the most impactful in improving mental health outcomes in women or/and partners experiencing a pregnancy not ending in a live birth in the UK? Call opened 28 June 2022 and closes 29 November 2022.

### ***Active grants***

Medical Research Council: Perimenopause and risk of psychiatric disorders: a longitudinal, population-based study. Funding period: 2022-2025

<https://gtr.ukri.org/project/0510802D-9354-4182-AA13-59CA915CF45A>

### ***Research priorities for mental health across a range of conditions***

Across the condition specific NICE guidance and the National Association for Premenstrual Syndrome guidance there are no specific recommendations that focus on mental health and adenomyosis; endometriosis; menopause; fibroids; heavy menstrual bleeding; PCOS or PMDD.

#### **2.5.1 Bottom line summary for women's health and mental health issues**

A high-volume of secondary research evidence exists on the topic of perinatal mental health and general mental health issues, especially across seldom heard populations with funding calls also focusing on these areas. There is a lack of research recommendations and review evidence that address mental health issues and specific issues that affect a women's menstrual health such as adenomyosis, fibroids, heavy menstrual bleeding and PMDD.

## 2.6 Summary tables

**Table 1: Included evidence for communication within healthcare encounters**

Author Country (if a specific focus)	Population	Focus	Study design
<b><i>Any condition</i></b>			
Otey 2016 USA	Urban African women	Experiences: Communication during medical encounters	Mixed methods (Interviews)
Penney 2016 USA	Iraqi Muslim refugee women	Experiences: Primary care encounters	Qualitative study (Interviews)
<b><i>Breast cancer</i></b>			
Armes et al. 2016 UK	Women	Experiences: End of treatment consultations	Qualitative study (Interviews)
Buizza et al. 2021 Italy	Women with and without a companion	Management: Effectiveness of a communication tool during the first consultation with an oncologist	RCT
<b><i>Endometriosis</i></b>			
Pettersson and Bertero 2020	Women	Experiences: Health care encounters	SR (qualitative) 14 studies 2000-2019
<b><i>Gynaecological conditions</i></b>			
Mazzi et al. 2014 Europe	Women	Factors: Associated with gender of HCP and patient communication	Mixed methods study (Focus groups and rating scale)
<b><i>Maternal medicine</i></b>			
Barkensjo et al. 2018 Sweden	Undocumented female migrants	Experiences: Perinatal care	Qualitative study (Interviews)
Frederiksen et al. 2021 Denmark	Pregnant and postpartum women	Experiences: Key elements of supportive care practices during pregnancy and the post- natal period	Qualitative study (Ethnography)
Hogh et al. 2020 Denmark	Postpartum women who had experienced a critical perinatal event	Experiences: Postnatal consultation with an obstetrician	Qualitative study (Interviews)
<b><i>Perinatal mental health</i></b>			
Phillips and Thomas 2015 UK	Pregnant women with a diagnosis of mental illness	Experiences: First antenatal appointment	Qualitative study (Interviews)

Key: HCP: health care professional; RCT – randomised controlled trial; SR: systematic review

**Table 2: Included evidence for women's access to healthcare**

<b>Author Country</b> (if a specific focus)	<b>Population</b>	<b>Focus</b>	<b>Study design Included studies Dates of search</b>
<b><i>Any condition</i></b>			
Allen and Vottero 2020	Homeless women	Experiences: Access to community based healthcare	SR (Qualitative) 24 included studies Inception to 2018
Angus et al. 2013 Canada	Women in differing social, economic, and environmental circumstances	Barriers: Access to healthcare in Canadian settings	SR (Qualitative) 35 included studies Dates of search NR
Whitfield et al. 2022 Canada	Women living on a low income	Mapping the evidence: Access to health and social services	ScR (Mixed methods) Protocol Dates of search NR
<b><i>Cancer and cancer screening</i></b>			
Conti et al. 2022	Women with breast cancer from different socioeconomic and geographic locations	Associations: Relationship between geographical access to healthcare facilities (oncology services, mammography screening) and breast cancer outcomes	SR (Quantitative) 25 included studies Dates of search NR
Karanth et al. 2019 USA	Women with ovarian cancer from different socioeconomic and ethnic backgrounds	Predictors: Disparities in healthcare access	SR with MA 41 included studies 2000 to 2017
Khan-Gates et al. 2015	Women	Mapping the evidence: Geographical access to mammography	SR (Quantitative) 21 included studies 2000 to 2013
Pearson et al. 2021	Women with secondary breast cancer HCPs	Barriers and facilitators: Access and receipt of treatment to systemic anti-cancer therapies Perspectives: Access to systemic anti-cancer therapies	SR (Mixed methods) Protocol 2000 onwards
<b><i>HIV</i></b>			
Kim and Martin 2022 USA (n=23/24)	Women experiencing IPV	Barriers: Accessing HIV pre-exposure prophylaxis	SR (Mixed methods) 24 included studies 2007 to 2017
O'Brien et al. 2018 HICs	Women	Facilitators: Access to primary care in HICs	SR (Mixed methods) 44 included studies 2000 to 2017
<b><i>Mental health</i></b>			
DeSa et al. 2022 HICs	Refugee women	Barriers and facilitators: Access to mental health services	SR (Qualitative) 12 included studies Searched March 2020
Wohler and Dantas 2017 Australia	Culturally and linguistically diverse immigrant women	Barriers: Access to mental health services	SR Further details NR
<b><i>Maternal medicine</i></b>			
Blair et al. 2022 HICs	Pregnant women with physical disabilities	Experiences: Access to maternity care	ScR (Mixed methods) 27 included studies 2000 to 2020

Breckenridge et al. 2014	Pregnant women with disabilities experiencing domestic abuse	Factors: Associated with access to maternity care	SR (Not reported) 11 included studies Dates of search NR
Higginbottom et al. 2019 UK	Immigrant pregnant women	Experiences: Access to maternity care	SR (Not reported) 40 included studies 1990 to 2017
Lawler et al. 2013	Pregnant women with physical disabilities	Barriers and facilitators: Access to maternity services	SR Further details NR
Lennon et al. 2015	Pregnant women	Management: Effectiveness of interventions to improve access to and utilisation of prenatal care	SR (Quantitative) Protocol Further details NR
O'Mahony et al. 2022	Perinatal refugee women	Barriers and facilitators: Access to mental health services	SR (Qualitative) Protocol
McGeough et al. 2020	Pregnant homeless women	Barriers and facilitators: Access to antenatal and postnatal care	SR (Qualitative) Further details NR
Silva et al. 2022	Black women	Prevalence: Access to prenatal care during first trimester	SR with MA Further details NR
<b><i>Perinatal mental health</i></b>			
Markey et al. 2022 WHO European region	Refugee and asylum-seeking pregnant women	Barriers and facilitators: Access to perinatal mental health care services	ScR (Not reported) Protocol Dates of search NR
O'Mahoney et al. 2022	Pregnant refugee women	Barriers and facilitators: Access to mental health care and social support	SR (Qualitative) Protocol 2011 to present
Smith et al. 2019 UK	Pregnant women (including their partners and HCPs)	Barriers: Access to mental health services	SR (Qualitative) 35 included studies 2007 to 2018
Viveiros and Darling 2019 High resource settings	Pregnant women Midwives	Barriers: Access to perinatal mental health care in	ScR (Mixed methods) 26 included studies Inception to 2000
<b><i>Sexual and reproductive health</i></b>			
Davidson et al. 2022	Refugees and displaced women	Barriers and facilitators: Access to preventive sexual and reproductive health care	SR (Mixed methods) 28 included studies Inception to 2020
Jarvis et al. 2020 Canada	Vulnerable women	Factors: Determining access to primary sexual reproductive health care	ScR (Not reported) Protocol 2008 to present
Nguyen 2020	Women with physical disabilities	Barriers and facilitators: Access to reproductive health care	ScR (Qualitative) Protocol 2011 to present
O'Shea et al. 2020 OECD countries	Women	Barriers and facilitators: Access to abortion services	SR (Mixed methods) 32 included studies 2001 to 2018
Stirling et al. 2021 HICs	Resettled refugees and refugee-claimant women	Mapping the evidence: Access and use of sexual and reproductive health services	ScR (Mixed methods) Protocol Search dates NR

Key: HICs: High income countries; HIV: human immunodeficiency virus; IPV: intimate partner violence; MA: meta-analysis; NR: not reported; OCED; ScR: scoping review; SR: systematic review

**Table 3: Mapping of current priority areas by research funding awards and existing systematic reviews for endometriosis**

Priority area	Funding calls	Existing reviews
JLA 1: Can a cure be developed for endometriosis?	Closed funding call (June 2022) £250,000 in total over one to three years. <a href="#">Scottish Government &amp; Wellbeing of Women Funding Call for Endometriosis Research</a>	<b>Not searched</b> <b>Potentially evidence in this area</b>
JLA 2: What causes endometriosis?		<b>Not searched</b> <b>Potentially evidence in this area</b>
JLA 3: What are the most effective ways of educating healthcare professionals throughout the healthcare system resulting in reduced time to diagnosis and improved treatment and care of women with endometriosis?		<b>No systematic reviews and no primary research studies found*</b>
JLA 4 Is it possible to develop a non-invasive screening tool to aid the diagnosis of endometriosis?	Closed funding call (June 2022) £250,000 in total over one to three years. <a href="#">Scottish Government &amp; Wellbeing of Women Funding Call for Endometriosis Research</a>	<b>Not searched</b> <b>Potentially evidence in this area</b>
JLA 5: What are the most effective ways of maximising and/or maintaining fertility in women with confirmed or suspected endometriosis?		<a href="#">Richard et al. 2021</a> . Effect of postoperative hormonal suppression on fertility in patients with endometriosis after conservative surgery: a systematic review and meta-analysis
JLA 6: How can the diagnosis of endometriosis be improved? Brosens et al. 2017: Better and earlier diagnosis of endometriosis		<a href="#">Simpson et al. 2021</a> . Combating diagnostic delay of endometriosis in adolescents via educational awareness: a systematic review
LA 7: What is the most effective way of managing the emotional and/or psychological and/or fatigue impact of living with endometriosis (including medical, non-medical and self-management methods)?	Closed funding call (June 2022) £250,000 in total over one to three years. <a href="#">Scottish Government &amp; Wellbeing of Women Funding Call for Endometriosis Research</a>	<b>Not searched</b> <b>Potentially evidence in this area</b>
JLA 8: What are the outcomes and/or success rates for surgical or medical treatments which aim to cure or treat endometriosis, rather than manage it?		<b>Previous systematic reviews all appear to be aimed at managing the condition</b>
JLA 9: What is the most effective way of stopping endometriosis progressing and/or spreading to other organs (e.g. after surgery)?		<a href="#">Chiu et al. 2022</a> . Maintenance therapy for preventing endometrioma recurrence after

		endometriosis resection surgery - a systematic review and network meta-analysis <a href="#">Zakhari et al. 2021</a> . Endometriosis recurrence following post-operative hormonal suppression: a systematic review and meta-analysis
JLA 10: What are the most effective non-surgical ways of managing endometriosis-related pain and/or symptoms (medical/nonmedical)?		<b>Not searched</b> <b>Potentially evidence in this area</b>
NICE: Are pain management programmes a clinically and cost-effective intervention for women with endometriosis?		<b>Not searched</b> <b>Potentially evidence in this area</b>
NICE: Is laparoscopic treatment (excision or ablation) of peritoneal disease in isolation effective for managing endometriosis-related pain?		<b>Not searched</b> <b>Potentially evidence in this area</b>
NICE: Are specialist lifestyle interventions (diet and exercise) effective, compared with no specialist lifestyle interventions, for women with endometriosis?		<a href="#">Hanson et al. 2021</a> . Impact of <b>exercise</b> on pain perception in women with endometriosis: A systematic review <a href="#">Nirgianakis et al. 2022</a> . Effectiveness of <b>dietary interventions</b> in the treatment of endometriosis: a systematic review <a href="#">Sverrisdóttir et al. 2022</a> . Impact of <b>diet</b> on pain perception in women with endometriosis: A systematic review <a href="#">Tennfjord et al. 2021</a> . Effect of <b>physical activity</b> and <b>exercise</b> on endometriosis-associated symptoms: a systematic review <a href="#">Mardon et al. 2022</a> . The efficacy of <b>self-management strategies</b> for females with endometriosis: a systematic review
NICE: What information and support interventions are effective to help women with endometriosis deal with their symptoms and improve their quality of lives?		<b>No systematic reviews and no primary research studies found*</b>
As-Sanie et al. 2019: Quality of life		<a href="#">Kalfas et al. 2022</a> . Psychosocial factors associated with pain and health-related quality of life in Endometriosis: A systematic review
As-Sanie et al. 2019: The biology of endometriosis and possible endometriosis subtypes		<b>Not searched</b> <b>Potentially evidence in this area</b>

As-Sanie et al. 2019: Alternatives to hormonal therapy such as modulating angiogenesis and neuroinflammation		<b>Not searched Potentially evidence in this area</b>
Brosens et al. 2017: Origins of endometriosis		<b>Not searched Potentially evidence in this area</b>
<u>Boivin et al. 2018</u> : Further investigation of the care pathways for endometriosis in Wales		<b>Not searched Potentially evidence in this area</b>
<u>Boivin et al. 2018</u> : Development of educational resources for doctors about endometriosis and young girls about menstrual health		<b>No systematic reviews and no primary research studies found*</b>
Boivin et al. 2018: Development of support tools for women with endometriosis		<b>No systematic reviews and no primary research studies found*</b>

Key: JLA: James Lind Alliance; NICE: National Institute of Clinical Excellence

\* only searched since 2021 on one database so primary research studies may have been conducted in this area



**Table 4: Mapping of current priority areas by research funding awards and existing systematic reviews for menopause**

Priority area	Funding calls	Existing reviews
NICE: What is the safety and effectiveness of alternatives to systemic HRT as treatments for menopausal symptoms in women who have had treatment for breast cancer?		<b>Not searched Potentially evidence in this area</b>
NICE: What is the impact of systemic HRT usage in women with a previous diagnosis of breast cancer for the risk of breast cancer reoccurrence, mortality or tumour aggression?		<b>Not searched Potentially evidence in this area</b>
NICE: How does the preparation of HRT affect the risk of VTE		<b>Not searched Potentially evidence in this area</b>
NICE: What is the difference in the risk of breast cancer in menopausal women on HRT with progesterone, progestogen or selective oestrogen receptor modulators		<b>Not searched Potentially evidence in this area</b>
NICE: What is the impact of oestradiol in combination with the levonorgestrel-releasing intra-uterine system on the risk of breast cancer and VTE?		<b>Not searched Potentially evidence in this area</b>
NICE: What are the effects of early HRT use on the risk of dementia?		<b>Not searched Potentially evidence in this area</b>
NICE: What are the main clinical manifestations of premature ovarian insufficiency and the short- and long-term impact of the most common therapeutic interventions?		<b>Not searched Potentially evidence in this area</b>
NICE: Managing menopausal symptoms.		<b>Lots of systematic reviews in this area</b>
NICE: Cognitive behavioural therapy to manage symptoms associated with the menopause.		<p><u>Lam et al. 2022</u>. Behavioural interventions for improving sleep outcomes in menopausal women: a systematic review and meta-analysis</p> <p><u>Samami et al. 2022</u>. The effects of psychological interventions on menopausal hot flashes: A systematic review</p> <p><u>Ye et al. 2022</u>. Efficacy of cognitive therapy and behavior therapy for menopausal symptoms: a systematic review and meta-analysis</p>

NICE: Interventions to manage genitourinary symptoms associated with the menopause.		<b>Lots of systematic reviews in this area</b>
NICE: Effects of hormone replacement therapy on overall health outcomes.		<b>Lots of systematic reviews in this area</b>
NICE: using testosterone treatment of menopause symptoms beyond altered sexual function	<u>Health Technology Assessment</u> : Testosterone for the treatment of menopause symptoms beyond altered sexual function Call opens December 2022	
Woods and Utian 2018: Future studies of treatment effects of QOL will need to incorporate measures sensitive to multiple symptoms women experience in clusters, such as combinations of hot flashes, sleep disruption, and anxiety, not only VMS		<b>Not searched</b> <b>Potentially evidence in this area</b>
Woods and Utian 2018: Impact of women's experiences of menopause on QOL in relation to their overall health as well as in the broader context of their lives		<b>Not searched</b> <b>Potentially evidence in this area</b>
Stuckley et al. 2020: Efficacy and tolerability of bone mediation in CD Identifying CD in postmenopausal women should lead to modification of osteoporosis management		<b>Not searched</b> <b>Potentially evidence in this area</b>
El Khoudary 2017: The role of endogenous estradiol on cardiovascular health during the menopause transition		<b>Not searched</b> <b>Potentially evidence in this area</b>

Key: CD: Coeliac disease; HRT: Hormone replacement therapy; QoL: Quality of life; VMS: Vasomotor symptoms; VTE: venous thromboembolism

**Table 5: Included evidence for women's health and mental health issues**

Author	Population	Study design	Focus
<b><i>General mental health</i></b>			
Bartlett et al. 2015	Women offenders	SR with MA	Therapeutic interventions in forensic health settings, criminal justice institutions and in the community
Beber 2012	Women with intellectual disability in secure settings	NR (Not reported)	Mental health needs and development of secure services in the UK
Hidayati et al. 2021	Female prisoners	ScR (Not reported)	Identifying mental health problems
Kapadia et al. 2017 UK	Pakistani women	SR (Mixed methods)	Healthcare usage rates, and the nature of Pakistani women's social networks and how they may influence mental health service use
Orshak et al. 2022	Women veterans	ScR (Not reported)	Interventions of gender-sensitive care
Scholes et al. 2021	Women in inpatient mental health services HCPs	SR (Qualitative)	Women service users' experiences of inpatient mental health services and staff experiences of providing care
Wohler and Dantas 2017 Australia	Culturally and linguistically diverse immigrant women	SR (Qualitative)	Prevalence of mental health disorders
Stanton et al. 2016	Female prisoners after release from jail or prison	SR (Not reported)	Understanding of the mental health issues of women released from jail or prison
Patten et al. 2021	Women	SR (Quantitative)	Effectiveness of exercise interventions on mental health outcomes
<b><i>Intimate partner violence</i></b>			
Paphitis et al. 2022	Women survivors of IPV	Realist review	Management: Effectiveness of psychosocial interventions to support recovery
Reyes et al. 2021 USA	Hispanic women who are victims of IPV	ScR (Mixed methods)	Mapping the evidence
<b><i>Perinatal mental health</i></b>			
Ahmad and Vismara 2021	Pregnant women	RR (Not reported)	Psychological impact of COVID-19
Black et al. 2019	Postpartum indigenous women	SR with MA	Prevalence of postpartum MH disorders
Coates and Foureur 2019	Pregnant women with MH concerns	ScR (Mixed methods)	Role and competence of midwives in delivering MH care
Daehn et al. 2022	Pregnant women	SR (Quantitative)	Perinatal MH literacy
de Oliveira et al. 2014	Women who suffer IPV during pregnancy	SR (Quantitative)	Relationship between IPV and MH disorders
Demissie and Bitew 2021	Pregnant or lactating women	SR with MA	MH effects of COVID-19
Everitt et al. 2022	Pregnant women	ScR (Not reported)	Educational innovations and teaching strategies used to build skills and knowledge in HCPs
Ghahremani et al. 2022	Pregnant women	SR (Not reported)	Prevention, timely diagnosis and treatment, and referral to specialized services

Hansotte et al. 2017	Low-income postpartum women in Western countries	SR (Not reported)	Factors that hinder and improve access to postpartum depression treatment in low-income women after screening
Kapetanovic et al. 2014	HIV-seropositive women	SR (Not reported)	MH-related variables
Kesim et al. 2019	Pregnant women	SR (Quantitative)	Effectiveness of exercise on MH
Lever Taylor et al. 2018	Pregnant women partners	SR (Qualitative)	Views of perinatal MH care
Lucas et al. 2019 OECD	Pregnant women (< 20 years)	SR (Qualitative)	Perceptions of MH / wellbeing during and after pregnancy
Megninn-Viggars et al. 2015	Women with (or at risk of developing) antenatal or postnatal MH problems)	SR (Qualitative)	Experience of the care for MH problems
Mukherjee et al. 2014	Pregnant women in correctional facilities	SR (Quantitative)	Prevalence, determinants of MH problems
Nilaweera et al. 2014	South Asian Pregnant women who have migrated to HICs	SR (Quantitative)	Prevalence, determinants of MH problems
Noonan et al. 2017	Midwives	NR (Not reported)	Experiences: caring for women with MH issues
Owais et al. 2020	Indigenous pregnant women	SR with MA	Prevalence of MH issues
Viswanathan et al. 2021	Pregnant women with MH disorders	SR with MA	Effectiveness of pharmacotherapy
Waqas et al. 2022	Pregnant women	SR with MA	Effectiveness of screening programmes for perinatal depression and anxiety
Watson et al. 2019	Ethnic minority pregnant women in Europe	SR (Mixed methods)	Experiences of perinatal MH services
Yan and Li 2022	Women with or without MH issues	SR with MA	Effectiveness of mindfulness-based interventions
Yu et al. 2022	High-risk pregnant women	SR (Quantitative)	Effectiveness of nonpharmacological interventions
<b><i>Polycystic ovary syndrome</i></b>			
Conte et al. 2015	Women	NR (Quantitative)	Mapping the evidence on physical activity for improving MH
Warne et al. 2022	Women participating in fertility treatment	SR with MA	Effectiveness of group psychological interventions in improving MH
Yin et al. 2021	Women	SR with MA	Prevalence of MH problems

Key: HPC: health care professionals; IPV: intimate partner violence; MA: meta-analysis; MH: mental health; NR: narrative review; OECD: Organisation for Economic Co-operation and Development; RR: rapid review; ScR: scoping review; SR: systematic review

**Table 6: Included evidence for mental health issues across specific conditions**

Author Country	Population	Focus	Study design Included studies Dates of search
<b><i>Polycystic Ovary Syndrome</i></b>			
Delanerolle et al. 2022	Black Asian Minority Ethnic populations	Prevalence: Mental health issues including depression and anxiety	SR with MA 30 included studies 1990 to 2021
Douglas et al. 2021	Reproductive-aged females with a diagnosis of Axis I or II mental health disorder.	Prevalence: Rates of PCOS in mental health disorders.	SR (Quantitative) 11 included studies Searched August 2020
Patten et al. 2021	Women with PCOS	Management: Effectiveness of exercise interventions on mental health and HRQoL	SR (Quantitative) 11 included studies Search dates NR
Yin et al. 2020	Women, with and without PCOS	Associations: Depression, anxiety, emotional distress, QoL, binge eating and somatization	SR with MA 46 included studies. Inception to 2018
<b><i>Endometriosis</i></b>			
Delaneroole et al. 2021	Women with endometriosis	Prevalence Symptoms and psychiatric disorders associated with endometriosis	SR (Mixed methods/ MA) 34 includes studies 15 studies in MA Search dates NR
Gambadauro et al. 2018	Women with and without endometriosis, and with or without pelvic pain	Associations: Depressive symptoms and pelvic pain	SR with MA 24 included studies Searched Sept 2017
Van Barneveld et al. 2021	Women with endometriosis	Associations: Depression, anxiety and correlating factors	SR with MA 47 included studies (17 included MA) Search details NR
Wang et al. 2021	Women with endometriosis	Associations: Anxiety, depression, HRQoL	SR with MA 44 included studies Search dates NR
<b><i>Menstruation</i></b>			
Green and Graham 2021	Menstruating women	Prevalence: Symptom fluctuation over the menstrual cycle: anxiety disorders, PTSD and OCD	SR (NR) 14 included studies Searched April 2021
<b><i>Menopause</i></b>			
Wang et al. 2018	Menopausal depression:	Management: Adjuvant therapy of oral Chinese herbal medicine combined with pharmacotherapy.	SR with MA 22 studies included Inception to 2016

Key: HRQoL: health related quality of life; QoL: quality of life

### **3. STRENGTHS AND LIMITATIONS OF THIS REM**

A strength of this REM is that literature searches were conducted by an information specialist and an experienced systematic review methodologist across several databases and with different search term combinations to cover as many topics and conditions as possible. Moreover, grey literature, including clinical guidance, and funding body databases were also searched for research recommendations, planned and ongoing studies and funding calls, enabling the identification of gaps in knowledge. However, due to the rapid nature of REMs and certain streamlined process, such as study selection being conducted by one researcher, it is possible that available primary and secondary research studies were missed. Moreover, as women's health is a broad topic, this REM had to be limited to certain topics, such as access to care, communication, mental health, endometriosis, and menopause. Thus, research gaps in other areas and health conditions, in which women might experience inequality, were not identified.

While performing the searches, different time limits were used for topics due to the varying volume of research published in certain areas. For example, time limit of 2012 was set for searches in access and communication, while limits of 2018 or 2021 were used for different endometriosis and menopause searches due to the high volume of research identified in these topics (detailed search strategy is presented in the Additional material). This step was necessary to make the REM manageable, although this might also mean that potentially relevant research published prior to the limits were missed. Furthermore, critical appraisal was not conducted to enable rapid production of this REM. While critical appraisal is an optional step in REMs, it is possible that the quality of included primary and secondary research studies might be low, which could also present further need for research.

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## 5. RAPID EVIDENCE MAP METHODS

### 5.1 Eligibility criteria

The eligibility criteria for the rapid evidence map, based on the Population, Phenomenon of Interest, Context, Study design (PiCoS) framework, are presented in Table 7.

**Table 7: Eligibility Criteria**

	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
<b>Population</b>	Women, girls and those assigned female at birth	Men, boys and those assigned male at birth
<b>Phenomenon of Interest</b>	Healthcare professionals' communication with women during any clinical encounters, consultations, or appointments  Access to specialist services	
<b>Context</b>	<b>Women's health in general<sup>a,b</sup></b>  <b>Specific women's health needs &amp; conditions<sup>a</sup></b> Menstrual health and gynaecological conditions <ul style="list-style-type: none"> <li>- Pre-menstrual syndrome</li> <li>- Menstruation</li> <li>- Endometriosis</li> <li>- Adenomyosis</li> <li>- Polycystic ovarian syndrome</li> </ul> Menopause  Pregnancy and childbirth <ul style="list-style-type: none"> <li>- Pregnancy loss and miscarriage</li> </ul> Sexual and reproductive health <ul style="list-style-type: none"> <li>- Contraception</li> <li>- Fertility</li> <li>- Assisted conception</li> <li>- Abortion</li> </ul> Gynaecological cancers	Conditions not stated by National health strategy documents (Department of Health and Social Care 2022, Scottish Government 2021, Welsh Government 2022)
<b>Study design</b>	Primary research (qualitative and quantitative), systematic, rapid, scoping and umbrella reviews	Non-research papers Narrative reviews
<b>Geographical locations</b>	HICs	LMICs
<b>Language of publication</b>	English	
<b>Publication date</b>	2012 to September 2022	
<b>Publication type</b>	Published	

Key: HICs: High income countries; LMICs: low and middle income countries

<sup>a</sup> Based on data provided by Department of Health and Social Care 2022, Scottish Government 2021, Welsh Government 2022 and Women's Health Wales Coalition 2022).

<sup>b</sup> Anaesthesia; asthma; autism, autoimmune disease; B12 deficiency; behavioural disorders; bowel problems; cardiovascular health (heart disease, stroke); carpal tunnel syndrome; continence; dementia, Alzheimer's disease; dental issues; diabetes; eating disorders; eye health; fibroids; fibromyalgia; gastrointestinal issues; headaches, health impacts of violence against women and girls; migraine; healthy behaviours (healthy weight, exercise, smoking); HPV vaccination; mental health (anxiety,

depression, stress); musculoskeletal issues; neurodiversity; neurological conditions; obesity; osteoporosis and bone health; pain; pelvic health; prolapse; respiratory / pulmonary disease, skin problems; sterilisation; thrush; thyroid issues; urinary tract infection, bladder problems, eating disorders, self-harm, myalgic encephalomyelitis, hypermobility spectrum disorders, Ehlers-Danlos syndromes, long COVID, palliative and end of life care.

## **5.2 Evidence sources**

Separate searches were conducted for different topics (such as communication, access, endometriosis, menopause, and mental health) and combination of topics. The searches were conducted across four databases MEDLINE (on the OVID platform), Embase (on the OVID platform), APA PSYCinfo (on the OVID platform) and CINAHL (on the EBSCO platform) with different date limits applied up to September 2022 for English language citations. Different date limits were necessary due to the high volume of records found in certain topic combinations. To make the rapid evidence map manageable, searches were limited for different dates (2012: communication, access; 2018: endometriosis and menopause research gaps, mental health; 2021: endometriosis and menopause reviews) depending on the volume of records found. The complete search strategy is presented in the [additional materials](#).

## **5.3 Search strategy**

An initial key word search (within that title of a publication only) was undertaken on MEDLINE. The key words to be used were (women\* OR woman\* OR female AND health) AND access\* OR encounter OR communication. Based on the initial search findings, an analysis of the text words contained in the title and abstract and of the index terms used to describe each article was conducted to inform the development of a search strategy. A series of search strategies were developed for different topics presented in this review, such as communication, access, endometriosis, menopause, and mental health. Detailed search strategies and results are presented in the [additional materials](#). The search strategies were tailored for each information source.

### **5.3.1 Reference management**

All reports retrieved from the database searches were imported or entered manually into reference management software EndNote™ and duplicates removed. At the end of this process the remaining reports were imported into web-based application Rayyan™.

## **5.4 Study selection process**

One reviewer screened the reports using the information provided in the title and abstract using the web passed application Rayyan™. For reports that appear to meet the inclusion criteria, or in cases in which a definite decision cannot be made based on the title and/or abstract alone, the full texts of all reports were retrieved. The full texts were screened for inclusion by one reviewer. The flow of citations through each stage of the review process were displayed following the principles of PRISMA.

## **5.5 Data extraction and coding/charting**

The data extracted was extracted from the abstract only and included specific details about the populations, the focus of the research, study design and methodology, by one reviewer. No outcome data was extracted.

## **5.6 Assessment of methodological quality**

An assessment of methodological quality was not conducted.

### **5.7 Data summary**

The evidence was presented both narratively and in the form of tables and graphical evidence maps populated by information describing the number and types of studies and reviews by the women's health conditions and also noted if any interventions had been conducted.

## **6. ADDITIONAL INFORMATION**

### **6.1 Further information available**

- The Protocol is available on request
- Search strategies and PRISMA details

### **6.2 Conflicts of interest**

None

### **6.3 Acknowledgements**

Michael Bowdery (Health and Care Research Wales); Richard Chivers (Women & Children's Health Division); Lisa Daniels-Griffiths (Welsh Treasury), and Professor Jo Peden (Consultant in Public Health).

## 7. ABOUT THE WALES COVID-19 EVIDENCE CENTRE (WCEC)

The WCEC integrates with worldwide efforts to synthesise and mobilise knowledge from research.

We operate with a core team as part of [Health and Care Research Wales](#), are hosted in the [Wales Centre for Primary and Emergency Care Research \(PRIME\)](#), and are led by [Professor Adrian Edwards of Cardiff University](#).

The core team of the centre works closely with collaborating partners in [Health Technology Wales](#), [Wales Centre for Evidence-Based Care](#), [Specialist Unit for Review Evidence centre](#), [SAIL Databank](#), [Bangor Institute for Health & Medical Research/ Health and Care Economics Cymru](#), and the [Public Health Wales Observatory](#).

Together we aim to provide around 50 reviews per year, answering the priority questions for policy and practice in Wales as we meet the demands of the pandemic and its impacts.

**Director:**

Professor Adrian Edwards

**Contact Email:**

[WC19EC@cardiff.ac.uk](mailto:WC19EC@cardiff.ac.uk)

**Website:**

<https://healthandcareresearchwales.org/about-research-community/wales-covid-19-evidence-centre>

## 8. APPENDICES

### 8.1 Appendix 1: JLA Top 10 endometriosis research priority areas

1. Can a cure be developed for endometriosis?
  - What causes endometriosis?
  - What are the most effective ways of educating healthcare professionals throughout the healthcare system resulting in reduced time to diagnosis and improved treatment and care of women with endometriosis?
  - Is it possible to develop a non-invasive screening tool to aid the diagnosis of endometriosis?
  - What are the most effective ways of maximising and/or maintaining fertility in women with confirmed or suspected endometriosis?
  - How can the diagnosis of endometriosis be improved?
  - What is the most effective way of managing the emotional and/or psychological and/or fatigue impact of living with endometriosis (including medical, non-medical and self-management methods)?
  - What are the outcomes and/or success rates for surgical or medical treatments which aim to cure or treat endometriosis, rather than manage it?
  - What is the most effective way of stopping endometriosis progressing and/or spreading to other organs (e.g. after surgery)?
  - What are the most effective non-surgical ways of managing endometriosis-related pain and/or symptoms (medical/nonmedical)?

### 8.2 Appendix 2: NICE recommendations for research: endometriosis

1. Are pain management programmes a clinically and cost-effective intervention for women with endometriosis?
2. Is laparoscopic treatment (excision or ablation) of peritoneal disease in isolation effective for managing endometriosis-related pain?
3. Are specialist lifestyle interventions (diet and exercise) effective, compared with no specialist lifestyle interventions, for women with endometriosis?

Studies should aim to provide evidence-based options to support self-management of endometriosis. This would improve the quality of life of women with endometriosis, enabling them to manage pain and fatigue, and reducing the negative impact on their career, relationships, sex lives, fertility, and physical and emotional wellbeing.

4. What information and support interventions are effective to help women with endometriosis deal with their symptoms and improve their quality of lives?

The direct effectiveness of different types or formats of information and support interventions on measurable outcomes such as health-related quality of life and level of function (for example, activities of daily living) have not been tested.

### 8.3 Appendix 3: NICE recommendations for research: menopause

#### *Original guidance*

- What is the safety and effectiveness of alternatives to systemic HRT as treatments for menopausal symptoms in women who have had treatment for breast cancer?
- What is the impact of systemic HRT usage in women with a previous diagnosis of breast cancer for the risk of breast cancer reoccurrence, mortality or tumour aggression?
- How does the preparation of HRT affect the risk of venous thromboembolism (VTE)?
- What is the difference in the risk of breast cancer in menopausal women on HRT with progesterone, progestogen or selective oestrogen receptor modulators?
- What is the impact of oestradiol in combination with the levonorgestrel-releasing intra-uterine system (LNG-IUS) on the risk of breast cancer and VTE?
- What are the effects of early HRT use on the risk of dementia?
- What are the main clinical manifestations of premature ovarian insufficiency and the short- and long-term impact of the most common therapeutic interventions?

#### *Updated guidance*

The following areas have been identified for inclusion in the scope:

- Managing menopausal symptoms.
- Cognitive behavioural therapy to manage symptoms associated with the menopause.
- Interventions to manage genitourinary symptoms associated with the menopause.
- Effects of hormone replacement therapy on overall health outcomes.

The surveillance and scoping process did not identify any substantive new evidence on using testosterone beyond the current recommendations in the NICE guideline for using testosterone for altered sexual function. NICE discussed the need for evidence in this area with the NIHR who have agreed to scope new research.

### 8.4 Appendix 4: The BMS recommendations for research: menopause

- Vaginal DHEA use in cancer survivors.
- The effects of acupuncture on VMS before it can be considered a more effective therapy than placebo.
- Efficacy and safety of oral DHEA
- DHEA pessaries have recently been licensed for the treatment of vulvovaginal atrophy and may have some benefits for low libido. However, this requires further evaluation in adequately powered randomised studies.
- St John's wort and some isoflavone preparations may be effective for VMS but more research is required to confirm efficacy.
- Head-to-head comparisons of safety and efficacy of vaginal DHEA to topical vaginal oestrogens are not available and further research is required to assess this.

### 8.5 Appendix 5: NICE recommendations for research: adenomyosis

- The effects of uterine artery embolisation compared with other procedures to treat adenomyosis, particularly for patients wishing to maintain or improve their fertility.

## **8.6 Appendix 6: NICE recommendations for research: uterine fibroids**

- No recommendations for research within the guidance.

## **8.7 Appendix 7: NICE recommendations for research: heavy menstrual bleeding**

- Hysteroscopy compared with ultrasound or empiric pharmacological treatment in the diagnosis and management of heavy menstrual bleeding (HMB).
- Effectiveness of the progestogen-only pill, injectable progestogens, or progestogen implants in alleviating HMB.
- Long-term outcomes of pharmacological and uterine-sparing surgical treatments for HMB associated with adenomyosis.
- Hysteroscopic removal of submucosal fibroids compared with other uterine-sparing treatments for HMB.
- Are outcomes after second-generation endometrial ablation for women with HMB associated with myometrial pathology (adenomyosis and/or uterine fibroids) equivalent to those for women without myometrial pathology?

## **8.8 Appendix 8: The National Association for Premenstrual Syndrome: Guidelines on Premenstrual Syndrome:**

This guidance did not include specific recommendations for research into premenstrual syndrome (PMS) but did highlight some areas where there is insufficient data.

- Insufficient evidence of efficacy is available to give a recommendation for using Vitamin B6 in the treatment of PMS.
- Given that calcium and Vitamin D may also reduce the risk of osteoporosis and some cancers, clinicians may consider recommending these nutrients even for women with PMS, but more data are required to determine efficacy and to optimise regimens.
- More data are required before a clear recommendation can be made for isoflavone usage, but preliminary data are encouraging.
- Agnus Castus is the best researched complimentary therapy for PMS, but a lack of standardised quality controlled preparations is a problem.
- Initial data appear encouraging but larger studies are required before St John's Wort can be recommended for use in PMS.
- There are insufficient data to recommend the routine use of progestogens or natural progesterone in the treatment of PMS.

## **8.9 Appendix 9: NICE recommendations for research: Fertility problems (PCOS)**

- No recommendations for research included within the guidance.



## Additional material: Full search strategies

### Search 1a: Reviews conducted in women's health

		Medline	Embase	PsycINFO	Cinahl
1	Women* health.ti	6461	7995	1299	8613
2	Review.ti	630006	715177	169680	265606
3	1 AND 2	121	145	50	206
4	Limit to English (2012 to 2022)	119	143	50	206
<b>TOTAL</b>					518
<b>Duplicates</b>					248
<b>Reports imported into Rayyan for screening (title and abstract)</b>					270
<b>Reports screened (full text)</b>					15
<b>Reports included</b>					10

#### Excluded reviews (n=5)

Dolan et al 2022: Women's health update: a literature review impacting primary care.

*Reason for exclusion:* Narrative review, no methodology presented.

Jain and Laiteerapong 2015: Strategies for improving cardiovascular health in women with diabetes mellitus: a review of the evidence.

*Reason for exclusion:* Narrative review, no methodology presented.

Nielsen et al 2022: Randomised controlled trials in women's health in the last two decades: a meta-review.

*Reason for exclusion:* Geographical distribution of RCTs published in obstetrics or gynaecology.

Osborne et al 2017: Clinical updates in women's health care. Primary and preventive care review.

*Reason for exclusion:* Abstract for a monograph (unable to retrieve full text).

Maji and Dixit 2019: Self-silencing and women's health: a review.

*Reason for exclusion:* A critical review of the qualitative and quantitative research findings that have connected self-silencing to health and well-being of women.

## Summary of reviews conducted in women's health (search 1a)

Topic area	Review type	Included studies	Search dates	Countries of research
<b><i>Fertility, maternal health</i></b>				
Economic benefits of investing in women's health Onarheim et al 2016	SR	124	1970-2013	HICs and LMICs
<b><i>Internal medicine</i></b>				
Women's health curricula in residency programs Zhang et al 2019	ScR	16	1998-2018	North America
<b><i>Menopause</i></b>				
Hormone therapy Zhang et al 2021	UR	60**	Inception to 2017	Not reported
<b><i>Mental health services and pregnancy</i></b>				
Prevention, timely diagnosis, treatment, referral to specialised services Ghahremani et al 2022	NR	37	2000-2020	Not reported
<b><i>Multiple sclerosis</i></b>				
Topics relevant to women's health in MS Ross et al 2022	ScR	353*	1983-2020	Europe, North America, Africa
<b><i>Obstetrics and gynaecology</i></b>				
Effects of participation in RCTs Nijjar et al 2017	SR	21	Inception to 2015	HICs
<b><i>Women's health in general</i></b>				
Patient centred care Gagliardi et al 2019	RR	14	2008-2018	USA, Australia, China, Iran, Scotland
Patient centred care Gagliardi et al 2019	ScR	11	2008-2018	USA, Australia, Canada, Hungary, Iran, Mexico, Netherlands, Scotland
Research priority setting Graham et al 2020	SR	7	Inception to 2019	Not reported
Impact of Covid-19 Salami et al. 2021	NR	25	2021-2022	Not reported

Key: HICs: high income countries; LMICS: low and middle income countries; MS: multiple sclerosis; RR: rapid review; ScR: scoping review; SR: systematic review; UR: umbrella review

## Search 1b: Reviews conducted in women and health

MEDLINE 28/09/2022

Search Number	Description	Results
1	(women* or female* or woman* or girl*).ti.	472861
2	Health.ti.	719585
3	1 AND 2	27309
4	Review.ti.	632284
5	3 AND 4	711
6	limit 5 to English language	704
7	limit 3 to (English language and "review articles")	2,050
8	4 OR 5 (performed in endnote)	2754
9	Limit 2012 to 2022 (performed in endnote)	1262

EMBASE 03/10/2022

Search Number	Description	Results
1	(women* or female* or woman* or girl*).ti.	609921
2	health.ti.	828794
3	1 AND 2	33104
4	review.ti	746728
5	3 AND 4	817
6	limit 5 to English language	800
7	limit 3 to (English language and "reviews (best balance of sensitivity and specificity)")	3048
8	6 OR 7	3206
9	limit 8 to yr="2012 -Current"	1774

APA PsycInfo 03/10/2022

Search Number	Description	Results
1	(women* or female* or woman* or girl*).ti.	156788
2	health.ti.	190846
3	1 AND 2	10091
4	review.ti	170235
5	3 AND 4	315
6	limit 5 to English language	296
7	limit 3 to (English language and "reviews (best balance of sensitivity and specificity)")	3625
8	6 OR 7	3826
9	limit 8 to yr="2012 -Current"	2053

CINAHL 03/10/2022

Search Number	Description	Results
1	TI women* or female* or woman* or girl*	212293
2	TI health	457856
3	S1 AND S2	22820
4	TI review	266353
5	S3 AND S4	615
6	S3 AND S4 (Limiters – English language)	613
7	S1 AND S2 (Limiters – English language; Publication type: Review)	669
8	S6 OR S7	1205
9	S6 OR S7 ((Limiters - Published Date: 20120101-20221231)	761

<b>TOTAL</b>	5850
<b>Duplicates</b>	1822
<b>Reports to screen</b>	4028
<b>Conference abstracts removed</b>	211
<b>Reports filtered for priority areas<sup>a</sup></b>	699
<b>Reports imported into Rayyan for screening (title and abstract)</b>	699

<sup>a</sup> Key word search within ENDNOTE for communication, access, menopause, endometriosis and mental health

## Search 2: Communication

APA PsycINFO 29/09/2022

Search Number	Description	Results
1.	(women* or female* or gender* or woman* or girl*).ti.	210066
2.	health.ti.	190134
3.	1 AND 2	12529
4.	(premenstrual or menstrua* or menorrhagia or dysmenorrhoea or menopaus* or perimenopaus* or peri menopaus* endomet* or gynaecolo* or heavy periods or pre natal or prenatal or perinatal or peri natal or postnatal or postnatal or maternity or maternal or polycystic ovary syndrome or intrauterine devices or lumps or smear test* or labo?r or childbirth or cervical cancer or cervical screening or womb cancer or ovarian cancer or vulval cancer or vaginal cancer or breast cancer or fertility or contraception or abortion or assisted conception or pregnancy loss or miscarriage or Adenomyosis).ti.	66399
5.	((female* or women* or woman* or girl*) adj5 (pain* or sterili?ation or mental* or cardio* or heart or stroke* or neurolog* or fibroids or weight management or gastro* or respiratory or pulmonary or urinary tract infections or urolog* or autism or autistic or neurodiver* or B12 deficiency or chronic* or long term or diabetes or thyroid or eating disorder* or skin or dermatolog* or eye or stress or headache* or migraine* or thrush or asthma or autoimmune or screen* or ane?sesthesia or behavio?ral disorders or bone health or osteoporosis or musculoskeletal or carpal tunnel syndrome or bowel or bladder or dementia or Alzheimer* or dental or continence or fibromyalgia or hypermobili* or anxiety or depression or obesity or prolapse or research or prevent* or HPV vaccin* or violence or abuse or exercise or smoking or healthy behavio?r* or pelvic or trauma or post-traumatic or PTSD or eating disorder* or long covid or palliative or end of life care or Myalgic Encephalomyelitis or Ehlers-Danlos Syndromes or sexual health or reproductive health)).ti.	23776
6.	(experience* or perspective* or perception* or view* or attitude* or opinion*)	381334
7.	(communication or communicating).ti.	43174
8.	(encounter* or appointment* or consultation*).ti.	13750
9.	3 OR 4 OR 5	97119
10.	6 OR 7	420668
11.	8 AND 9 AND 10	48
12.	limit 11 to English language	44
13.	limit 12 to yr="2012 -Current"	23

MEDLINE 29/09/2022

Search Number	Description	Results
1.	(women* or female* or gender* or woman* or girl*).ti.	524867
2.	health.ti.	719278
3.	1 AND 2	31213
4.	(premenstrual or menstrua* or menorrhagia or dysmenorrhoea or menopause* or perimenopause* or peri menopause* endomet* or gynaecolo* or heavy periods or pre natal or prenatal or perinatal or peri natal or postnatal or postnatal or maternity or maternal or polycystic ovary syndrome or intrauterine devices or lumps or smear test* or labo?r or childbirth or cervical cancer or cervical screening or womb cancer or ovarian cancer or vulval cancer or vaginal cancer or breast cancer or fertility or contraception or abortion or assisted conception or pregnancy loss or miscarriage or Adenomyosis).ti.	618526
5.	((female* or women* or woman* or girl*) adj5 (pain* or sterili?ation or mental* or cardio* or heart or stroke* or neurolog* or fibroids or weight management or gastro* or respiratory or pulmonary or urinary tract infections or urolog* or autism or autistic or neurodiver* or B12 deficiency or chronic* or long term or diabetes or thyroid or eating disorder* or skin or dermatolog* or eye or stress or headache* or migraine* or thrush or asthma or autoimmune or screen* or ane?sesthesia or behavio?ral disorders or bone health or osteoporosis or musculoskeletal or carpal tunnel syndrome or bowel or bladder or dementia or Alzheimer* or dental or continence or fibromyalgia or hypermobili* or anxiety or depression or obesity or prolapse or research or prevent* or HPV vaccin* or violence or abuse or exercise or smoking or healthy behavio?r* or pelvic or trauma or post-traumatic or PTSD or eating disorder* or long covid or palliative or end of life care or Myalgic Encephalomyelitis or Ehlers-Danlos Syndromes or sexual health or reproductive health)).ti.	74103
6.	(experience* or perspective* or perception* or view* or attitude* or opinion*)	682645
7.	(communication or communicating).ti.	65327
8.	(encounter* or appointment* or consultation*).ti.	29712
9.	3 OR 4 OR 5	706260
10.	6 OR 7	744307
11.	8 AND 9 AND 10	121
12.	limit 11 to English language	104
13.	limit 12 to yr="2012 -Current"	62

Search Number	Description	Results
1.	(women* or female* or gender* or woman* or girl*).ti.	642640
2.	health.ti.	790791
3.	1 AND 2	37263
4.	(premenstrual or menstrua* or menorrhagia or dysmenorrhoea or menopaus* or perimenopaus* or peri menopaus* endomet* or gynaecolo* or heavy periods or pre natal or prenatal or perinatal or peri natal or postnatal or postnatal or maternity or maternal or polycystic ovary syndrome or intrauterine devices or lumps or smear test* or labo?r or childbirth or cervical cancer or cervical screening or womb cancer or ovarian cancer or vulval cancer or vaginal cancer or breast cancer or fertility or contraception or abortion or assisted conception or pregnancy loss or miscarriage or Adenomyosis).ti.	782090
5.	((female* or women* or woman* or girl*) adj5 (pain* or sterili?ation or mental* or cardio* or heart or stroke* or neurolog* or fibroids or weight management or gastro* or respiratory or pulmonary or urinary tract infections or urolog* or autism or autistic or neurodiver* or B12 deficiency or chronic* or long term or diabetes or thyroid or eating disorder* or skin or dermatolog* or eye or stress or headache* or migraine* or thrush or asthma or autoimmune or screen* or ane?sesthesia or behavio?ral disorders or bone health or osteoporosis or musculoskeletal or carpal tunnel syndrome or bowel or bladder or dementia or Alzheimer* or dental or continence or fibromyalgia or hypermobili* or anxiety or depression or obesity or prolapse or research or prevent* or HPV vaccin* or violence or abuse or exercise or smoking or healthy behavio?r* or pelvic or trauma or post-traumatic or PTSD or eating disorder* or long covid or palliative or end of life care or Myalgic Encephalomyelitis or Ehlers-Danlos Syndromes or sexual health or reproductive health)).ti.	96679
6.	(experience* or perspective* or perception* or view* or attitude* or opinion*)	824379
7.	(communication or communicating).ti.	71582
8.	(encounter* or appointment* or consultation*).ti.	35361
9.	3 OR 4 OR 5	893122
10.	6 OR 7	891742
11.	8 AND 9 AND 10	145
12.	limit 11 to English language	131
13.	limit 12 to yr="2012 -Current"	85

Search Number	Description	Results
S1.	TI (women* or female* or woman* or girl*) AND TI health	25581
S2.	TI (premenstrual or menstrua* or menorrhagia or dysmenorrhoea or menopause* or maternal medicine or perimenopause* or peri menopause* endomet* or gynaecolo* or heavy periods or pre natal or prenatal or perinatal or peri natal or postnatal or postnatal or maternity or maternal or polycystic ovary syndrome or intrauterine devices or lumps or smear test* or labo?r or childbirth or cervical cancer or cervical screening or womb cancer or ovarian cancer or vulval cancer or vaginal cancer or breast cancer or fertility or contraception or abortion or assisted conception or pregnancy loss or miscarriage or Adenomyosis).ti.	203668
S3.	TI ((female* or women* or woman* or girl*) N5 (pain* or sterili?ation or mental* or cardio* or heart or stroke* or neurolog* or fibroids or weight management or gastro* or respiratory or pulmonary or urinary tract infections or urolog* or autism or autistic or neurodiver* or B12 deficiency or chronic* or long term or diabetes or thyroid or eating disorder* or skin or dermatolog* or eye or stress or headache* or migraine* or thrush or asthma or autoimmune or screen* or ane?sesthesia or behavio?ral disorders or bone health or osteoporosis or musculoskeletal or carpal tunnel syndrome or bowel or bladder or dementia or Alzheimer* or dental or continence or fibromyalgia or hypermobili* or anxiety or depression or obesity or prolapse or research or prevent* or HPV vaccin* or violence or abuse or exercise or smoking or healthy behavio?r* or pelvic or trauma or post-traumatic or PTSD or eating disorder* or long covid or palliative or end of life care or Myalgic Encephalomyelitis or Ehlers-Danlos Syndromes or sexual health or reproductive health))	51801
S4.	S1 OR S2 OR S3	266961
S5.	TI (experience* or perspective* or perception* or view* or attitude* or opinion*)	311954
S6.	TI (communication or communicating)	38007
S7.	TI (encounter* or appointment* or consultation*)	16290
S8.	S5 OR S6	346954
S9.	S4 AND S7 AND S8	103
S10.	limit S10 to English language	99
S11.	Limit 2012 to current	66

<b>TOTAL</b>	236
<b>Removing duplicates</b>	109
<b>Reports to screen</b>	127
<b>Conference abstracts removed</b>	41
<b>Reports imported into Rayyan for screening (title and abstract)</b>	86



## Search 3: Access

CINAHL 29/09/2022

Search Number	Description	Results
S1.	TI (women* or female* or woman* or girl*) AND TI health	25581
S2.	TI (premenstrual or menstrua* or menorrhagia or dysmenorrhoea or menopaus* or maternal medicine or perimenopaus* or peri menopaus* endomet* or gynaecolo* or heavy periods or pre natal or prenatal or perinatal or peri natal or postnatal or postnatal or maternity or maternal or polycystic ovary syndrome or intrauterine devices or lumps or smear test* or labo?r or childbirth or cervical cancer or cervical screening or womb cancer or ovarian cancer or vulval cancer or vaginal cancer or breast cancer or fertility or contraception or abortion or assisted conception or pregnancy loss or miscarriage or Adenomyosis).ti.	203668
S3.	TI ((female* or women* or woman* or girl*) N5 (pain* or sterili?ation or mental* or cardio* or heart or stroke* or neurolog* or fibroids or weight management or gastro* or respiratory or pulmonary or urinary tract infections or urolog* or autism or autistic or neurodiver* or B12 deficiency or chronic* or long term or diabetes or thyroid or eating disorder* or skin or dermatolog* or eye or stress or headache* or migraine* or thrush or asthma or autoimmune or screen* or ane?sesthesia or behavio?ral disorders or bone health or osteoporosis or musculoskeletal or carpal tunnel syndrome or bowel or bladder or dementia or Alzheimer* or dental or continence or fibromyalgia or hypermobili* or anxiety or depression or obesity or prolapse or research or prevent* or HPV vaccin* or violence or abuse or exercise or smoking or healthy behavio?r* or pelvic or trauma or post-traumatic or PTSD or eating disorder* or long covid or palliative or end of life care or Myalgic Encephalomyelitis or Ehlers-Danlos Syndromes or sexual health or reproductive health))	51801
S4.	S1 OR S2 OR S3	266961
S5.	TI Access*	41030
S6.	S4 and S5	1831
S7.	Limit English language / 2012 to current	1357
S8>	TI review OR AB review	131

Search Number	Description	Results
1.	(women* or female* or gender* or woman* or girl*).ti.	642739
2.	health.ti.	790893
3.	1 AND 2	37268
4.	(premenstrual or menstrua* or menorrhagia or dysmenorrhoea or menopaus* or perimenopaus* or peri menopaus* endomet* or gynaecolo* or heavy periods or pre natal or prenatal or perinatal or peri natal or postnatal or postnatal or maternity or maternal or polycystic ovary syndrome or intrauterine devices or lumps or smear test* or labo?r or childbirth or cervical cancer or cervical screening or womb cancer or ovarian cancer or vulval cancer or vaginal cancer or breast cancer or fertility or contraception or abortion or assisted conception or pregnancy loss or miscarriage or Adenomyosis).ti.	782224
5.	((female* or women* or woman* or girl*) adj5 (pain* or sterili?ation or mental* or cardio* or heart or stroke* or neurolog* or fibroids or weight management or gastro* or respiratory or pulmonary or urinary tract infections or urolog* or autism or autistic or neurodiver* or B12 deficiency or chronic* or long term or diabetes or thyroid or eating disorder* or skin or dermatolog* or eye or stress or headache* or migraine* or thrush or asthma or autoimmune or screen* or ane?ssthesia or behavio?ral disorders or bone health or osteoporosis or musculoskeletal or carpal tunnel syndrome or bowel or bladder or dementia or Alzheimer* or dental or continence or fibromyalgia or hypermobili* or anxiety or depression or obesity or prolapse or research or prevent* or HPV vaccin* or violence or abuse or exercise or smoking or healthy behavio?r* or pelvic or trauma or post-traumatic or PTSD or eating disorder* or long covid or palliative or end of life care or Myalgic Encephalomyelitis or Ehlers-Danlos Syndromes or sexual health or reproductive health)).ti.	96703
6.	access*.ti.	106771
7.	3 OR 4 OR 5	893280
8.	6 AND 7	3073
9.	Review.ti,ab.	2449577
10.	8 AND 9	304
11.	limit 10 to yr="2012 -Current"	267
12.	limit 11 to English language	262

MEDLINE 30/09/2022

Search Number	Description	Results
1.	(women* or female* or gender* or woman* or girl*).ti.	524867
2.	health.ti.	719278
3.	1 AND 2	31213
4.	(premenstrual or menstrua* or menorrhagia or dysmenorrhoea or menopaus* or perimenopaus* or peri menopaus* endomet* or gynaecolo* or heavy periods or pre natal or prenatal or perinatal or peri natal or postnatal or postnatal or maternity or maternal or polycystic ovary syndrome or intrauterine devices or lumps or smear test* or labo?r or childbirth or cervical cancer or cervical screening or womb cancer or ovarian cancer or vulval cancer or vaginal cancer or breast cancer or fertility or contraception or abortion or assisted conception or pregnancy loss or miscarriage or Adenomyosis).ti.	618526
5.	((female* or women* or woman* or girl*) adj5 (pain* or sterili?ation or mental* or cardio* or heart or stroke* or neurolog* or fibroids or weight management or gastro* or respiratory or pulmonary or urinary tract infections or urolog* or autism or autistic or neurodiver* or B12 deficiency or chronic* or long term or diabetes or thyroid or eating disorder* or skin or dermatolog* or eye or stress or headache* or migraine* or thrush or asthma or autoimmune or screen* or ane?sesthesia or behavio?ral disorders or bone health or osteoporosis or musculoskeletal or carpal tunnel syndrome or bowel or bladder or dementia or Alzheimer* or dental or continence or fibromyalgia or hypermobili* or anxiety or depression or obesity or prolapse or research or prevent* or HPV vaccin* or violence or abuse or exercise or smoking or healthy behavio?r* or pelvic or trauma or post-traumatic or PTSD or eating disorder* or long covid or palliative or end of life care or Myalgic Encephalomyelitis or Ehlers-Danlos Syndromes or sexual health or reproductive health)).ti.	74126
6.	access*.ti.	85499
7.	3 OR 4 OR 5	706448
8.	6 AND 7	2409
9.	Review.ti,ab.	2000387
10.	8 AND 9	205
11.	limit 10 to yr="2012 -Current"	174
12.	limit 11 to English language	172

Search Number	Description	Results
1.	(women* or female* or gender* or woman* or girl*).ti.	210577
2.	health.ti.	190846
3.	1 AND 2	12562
4.	(premenstrual or menstrua* or menorrhagia or dysmenorrhoea or menopause* or perimenopause* or peri menopause* endomet* or gynaecolo* or heavy periods or pre natal or prenatal or perinatal or peri natal or postnatal or postnatal or maternity or maternal or polycystic ovary syndrome or intrauterine devices or lumps or smear test* or labo?r or childbirth or cervical cancer or cervical screening or womb cancer or ovarian cancer or vulval cancer or vaginal cancer or breast cancer or fertility or contraception or abortion or assisted conception or pregnancy loss or miscarriage or Adenomyosis).ti.	66573
5.	((female* or women* or woman* or girl*) adj5 (pain* or sterili?ation or mental* or cardio* or heart or stroke* or neurolog* or fibroids or weight management or gastro* or respiratory or pulmonary or urinary tract infections or urolog* or autism or autistic or neurodiver* or B12 deficiency or chronic* or long term or diabetes or thyroid or eating disorder* or skin or dermatolog* or eye or stress or headache* or migraine* or thrush or asthma or autoimmune or screen* or ane?ssthesia or behavio?ral disorders or bone health or osteoporosis or musculoskeletal or carpal tunnel syndrome or bowel or bladder or dementia or Alzheimer* or dental or continence or fibromyalgia or hypermobili* or anxiety or depression or obesity or prolapse or research or prevent* or HPV vaccin* or violence or abuse or exercise or smoking or healthy behavio?r* or pelvic or trauma or post-traumatic or PTSD or eating disorder* or long covid or palliative or end of life care or Myalgic Encephalomyelitis or Ehlers-Danlos Syndromes or sexual health or reproductive health)).ti.	23837
6.	access*.ti.	14597
7.	3 OR 4 OR 5	97375
8.	6 AND 7	523
9.	Review.ti,ab.	397531
10.	8 AND 9	45
11.	limit 10 to yr="2012 -Current"	38
12.	Limit 11 to English language	31

<b>TOTAL</b>	595
<b>Duplicates removed</b>	304
<b>Reports to screen</b>	291
<b>Conference abstracts removed</b>	96
<b>Reports imported into Rayyan for screening (title and abstract)</b>	195

## Search 4: Improvement

MEDLINE 03/10/2022

Search Number	Description	Results
1	(women* or female* or woman* or girl*).ti.	472991
2	health.ti.	719916
3	improv*.ti.	360982
4	1 and 2 and 3	795
5	limit 4 to (english language and "review articles")	71
6	review*.tw.	2577275
7	4 and 6	105
8	limit 7 to english language	105
9	5 or 8	127
10	limit 9 to yr="2012 -Current"	90

EMBASE 03/10/2022

Search Number	Description	Results
1	(women* or female* or woman* or girl*).ti.	609921
2	health.ti.	828794
3	improv*.ti.	483402
4	1 and 2 and 3	1009
5	limit 4 to (english language and "reviews (best balance of sensitivity and specificity)")	123
6	review*.tw.	3395831
7	4 and 6	156
8	limit 7 to english language	153
9	5 or 8	200
10	limit 9 to yr="2012 -Current"	150

APA PsycInfo 03/10/2022

Search Number	Description	Results
1	(women* or female* or woman* or girl*).ti.	156788
2	health.ti.	190846
3	improv*.ti.	48089
4	1 and 2 and 3	198
5	limit 4 to (english language and "reviews (best balance of sensitivity and specificity)")	86
6	review*.tw.	589779
7	4 and 6	26
8	limit 7 to english language	25
9	5 or 8	99
10	limit 9 to yr="2012 -Current"	62

CINAHL 03/10/2022

Search	Description	Results
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Number		
1	TI women* or female* or woman* or girl*	212293
2	TI health	457856
3	TI improv*	145054
4	S1 AND S2 AND S3	661
5	S1 AND S2 AND S3 (Limiters – English language; Publication Type: Review)	15
6	TI review	41501
7	AB review	144081
8	S6 OR S7	162444
9	S4 AND S8	5
10	S4 AND S8 (Limiters – English language)	5
11	S5 OR S10	15
12	S5 OR S10 (Limiters - Published Date: 20120101-20221231)	8

<b>TOTAL</b>	310
<b>Duplicates</b>	106
<b>Reports to screen</b>	204
<b>Conference abstracts removed</b>	49
<b>Reports imported into Rayyan for screening (title and abstract)</b>	155

<b>Search 1b: Reviews conducted in women and health</b>	699
<b>Search 2: Communication</b>	195
<b>Search 3: Access</b>	86
<b>Search 4: Improvement</b>	15
<b>Reports imported into Rayyan for screening (title and abstract)</b>	1180
<b>Duplicates</b>	185
<b>TOTAL</b>	995

## Search 5a: Research gaps – endometriosis and menopause

14/10/2022

Search Number	Description	Medline	Embase	PsycINFO	Cinahl
1	(menopaus* or endometriosis).ti.	35970	48461	2098	10148
2	(gap* or priorit* or unmet need*).ti.	62070	68192	12952	27809
3	(recommend* adj2 research).ti.	435	464	227	520
4	2 or 3	62477	68623	13174	28295
5	1 and 4	28	48	2	18
4	2018 to current	14	26	1	12
	limit 6 to english language	14	26	0	12
<b>TOTAL</b>					52
<b>Duplicates</b>					37
<b>Reports imported into Rayyan for screening (title and abstract)</b>					25
<b>Reports screened (full text)</b>					7
<b>Reports included</b>					
<b>Endometriosis</b>					4
<b>Menopause</b>					3

## Search 5b: Research gaps mental Health

Medline 10.10.2022

Search Number	Description	Results
1	(gap* or priorit* or unmet need*).ti	62,036
2	(recommend* adj2 research).ti.	436
3	1 or 2	62,444
4	(women* or woman or girl* or female* or mother*).ti.	522639
5	(mental* or psych*).ti	501,335
6	3 and 4 and 5	34
7	Limit 6 to yr="2018-current"	13

Database	Results
Medline (Ovid)	13
EMBASE (Ovid)	14
PsycINFO (Ovid)	10
CINAHL	12
<b>TOTAL</b>	<b>49</b>
<b>Duplicates</b>	<b>31</b>
<b>Reports imported into Endnote for screening (title and abstract)</b>	<b>18</b>
<b>Reports screened (full text)</b>	<b>4</b>



## Search 6a: Endometriosis and systematic reviews

Endometriosis AND Review (limit 2021 to 2022, English language)

14/10/2022

Database	Results
Medline (Ovid)	101
EMBASE (Ovid)	102
PsycINFO (Ovid)	1
CINAHL	46
<b>TOTAL</b>	<b>250</b>
<b>Duplicates</b>	<b>118</b>
<b>Reports imported into Endnote for screening (title and abstract)</b>	<b>133</b>
<b>Reports included in map</b>	<b>120</b>

## Search 6b: Menopause and systematic reviews

Menopaus\* AND Review (limit 2021 to 2022, English language)

18/10/2022

Database	Results
Medline (Ovid)	111
EMBASE (Ovid)	119
PsycINFO (Ovid)	5
CINAHL	73
<b>TOTAL</b>	<b>308</b>
<b>Duplicates</b>	<b>174</b>
<b>Reports imported into Endnote for screening (title and abstract)</b>	<b>134</b>
<b>Reports included in map</b>	<b>108</b>

## Search 7: Mental health (condition specific) and review

(mental\* or depress\* or anx\* or emotion\*).ti.

(endometriosis or adenomyosis or leiomyoma or fibroids or menorrhagia or menstrual\* or polycystic ovary syndrome or menopaus\* or premenstrual dysphoric disorder).ti.

review\*.ti.

1 and 2 and 3

limit 4 to (english language and yr="2018 -Current")

14/10/2022

Database	Results
Medline (Ovid)	18
EMBASE (Ovid)	25
PsycINFO (Ovid)	3
CINAHL	16
<b>TOTAL</b>	<b>62</b>
<b>Duplicates</b>	<b>28</b>
<b>Reports imported into Endnote for screening (title and abstract)</b>	<b>34</b>
<b>Reports included in map</b>	<b>14</b>