NHS
Cheshire and Merseyside

Hospital Gynaecology and Maternity Services in Liverpool

Case for Change

23 September 2024

V 0.6 and Final

Document Revision History

Date	Version	Revision	Author / Editor
16.05.24	0.1		Clare Powell
30.05.24	0.2	Updates / additions for gaps in draft 1	Clare Powell
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16.07.24	0.2.2	Removed the outdated term 'SUI', removed the term 'global majority' and replaced with 'ethnic minority groups', added 'draft' when referencing the current draft case for change.	Clare Powell
28.08.24	0.3	Updates / additions for gaps in draft 2 and incorporating feedback from engagement meetings. Notes for the Reader updated. Explanation of 'isolated' site. *Map to be added.* More detailed notes about lack of comparative data. SUI term re-added – footnote added to explain change to review framework. Re-write of workforce section. New Additions: • Foreword • Stakeholder support page • Inequalities section • South East Clinical Senate - Clinical Co-Dependencies of Major Acute Services • Population health summaries for Sefton and Knowsley • Appendices	Clare Powell
05.09.24	0.4	Final draft for Women's Services Committee approval. Proof read version. Map added. Minor changes to wording of risks 1 and 3 in section 2.	Clare Powell
13.09.24	0.5	Updated map. Statement about commitment to Crown Street.	Clare Powell
23.09.24	0.6 and Final	Updated map. Removed watermark	Clare Powell

Notes for the Reader

This case for change has been developed with input from clinicians and staff working in or supporting gynaecology and maternity hospital services in Liverpool.

It is important to acknowledge that it is not only people who identify as women (or girls) who access women's health and reproductive services to maintain their sexual and reproductive health and wellbeing. The terms 'woman' and 'women's health' are used for brevity, on the understanding that transmen and non-binary individuals assigned female at birth also require access to these services. Delivery of care must therefore be appropriate, inclusive, and sensitive to the needs of those individuals whose gender identity does not align with the sex they were assigned at birth.

The terms 'women's services' or 'women's hospital services' are used for brevity and in the context of this work refer to hospital gynaecology and maternity services.

The information within the case for change has come from a variety of sources and references are provided for further information where applicable.

There is limited comparative data available for the clinical evidence presented. Much of the evidence has come from specific bespoke reviews carried out locally, using Trust data sources. Comparisons are also difficult to make given the unique and unusual arrangements of services in Liverpool, overlaid with the very specific population health challenges in the local area.

For clarity, Liverpool Women's NHS Foundation Trust (LWFT) is the organisation that delivers services from the Liverpool Women's Hospital (LWH) on the Crown Street site. Both terms and abbreviations are used in the document depending on the context.

Liverpool University Hospitals NHS Foundation Trust (LUHFT) is the organisation that delivers services at Aintree University Hospital and the Royal Liverpool University Hospital, and in this document, are referred to as 'Aintree Hospital' and 'the Royal Liverpool Hospital'. LUHFT also delivers services at Broadgreen Hospital which is not referred to in this case for change.

An earlier draft of the case for change was shared with stakeholders and feedback has been incorporated where possible.

Information from the case for change will be set out in a public-facing document to support wider engagement.

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Foreword

Hospital gynaecology and maternity services are a crucial part of our local NHS.

Each year, Liverpool Women's Hospital sees nearly 30,000 gynaecological procedures performed, while at the same time welcoming around 7,500 new babies into the world.

Staff working in gynaecology and maternity services are passionate about the care they provide and want the best possible experience and outcomes for the population they serve.

Liverpool Women's Hospital delivers high-risk, high complexity and highly specialised care, but the hospital is separate from other adult health services. This means that there is sometimes a need to transfer patients to different hospitals in the city, often when they are at their most sick and vulnerable.

To manage this situation, the most complex gynaecology surgery is performed at the Royal Liverpool Hospital, with support from a wide range of other clinicians and services. In addition, some women with complex pregnancies must go to Manchester to have their babies because the full range of services they need cannot be provided at Liverpool Women's.

To protect services, and to ensure that they remain safe and sustainable, we must look at how we can deliver hospital gynaecology and maternity care better in the future. To do this we need to fully understand the challenges we are currently facing.

That's what this case for change is about.

This doesn't mean that local services are standing still. Just some of the developments already delivered, or underway, in women's hospital services in Liverpool include:

- Introducing an extreme preterm pathway and proactive management of maternity safety incidents, which has led to improved survival rates and safety for mothers and babies.
- Installing a new permanent MRI scanner alongside the existing CT scanner in the community diagnostic centre, meaning women can now access scans at Liverpool Women's rather than being transferred to other hospitals.
- Developing a new, dedicated Medical Emergency Care Team to enable optimal care for the most acutely unwell patients and timely transfers between hospitals, where necessary.
- Developing a blood transfusion laboratory at Liverpool Women's Hospital.

However, while these are important advances, we know that they are not enough to tackle all of the issues in hospital gynaecology and maternity care in Liverpool.

We want to protect the services we've got in Liverpool, which are used by people across Cheshire and Merseyside. This means addressing the challenges set out in this case for change, so that we can meet the national requirements for delivering care in those areas where we are currently unable to.

It's really important to stress that this document doesn't contain proposals for the future, and no decisions have yet been made.

This case for change was developed with input from clinical staff and other local stakeholders, but it's crucial that we hear the voices of people who use and depend on gynaecology and maternity services.

Over the coming months, we'll be asking patients, the public, families and carers to share their views on the situation described in the pages that follow.

Then we can begin to work together to look at how we make sure hospital gynaecology and maternity services in Liverpool are safe and secure for the future.

H M Garratt

Professor Hilary Garratt CBE
Chair, Women's Services Committee and Non-Executive Director, NHS Cheshire and Merseyside

Christine M Douglas

Christine Douglas MBE
Senior Responsible Officer, Women's Hospital Services in Liverpool Programme and
Director of Nursing and Care, NHS Chesire and Merseyside

Stakeholder Support for the Case for Change

The following stakeholders have given their support for the case for change:

The Trust Board Liverpool Women's FT	**The Trust Board Alder Hey Children's FT**
The Trust Board Liverpool University Hospitals FT	**The Trust Board The Clatterbridge Cancer Centre**
One Liverpool Partnership Board	**Sefton Partnership Board**
Knowsley Healthier Together Board	**Cheshire & Merseyside Acute and Specialist Trusts Medical Directors Group**
Medical Director, Cheshire and Merseyside Cancer Alliance	**Clinical Lead, Congenital Heart Disease Network**
Clinical Lead, Cheshire and Merseyside Local Maternity and Neonatal System (LMNS)	**Cheshire and Merseyside Critical Care Network**
Clinical Lead, Cheshire and Merseyside Gynaecology Network	**North West Clinical Senate**
Liverpool Local Medical Committee	

Executive Summary

The way hospital-based gynaecology and maternity services are currently organised in Liverpool does not provide women[1] and their families with the best possible care and experience.

Liverpool Women's NHS Foundation Trust (LWFT) runs the main hospital site at Crown Street which is isolated from other acute hospital services in Liverpool. This means the hospital is less able to manage acutely ill or rapidly deteriorating patients, women with complex surgical needs or significant medical co-morbidities.

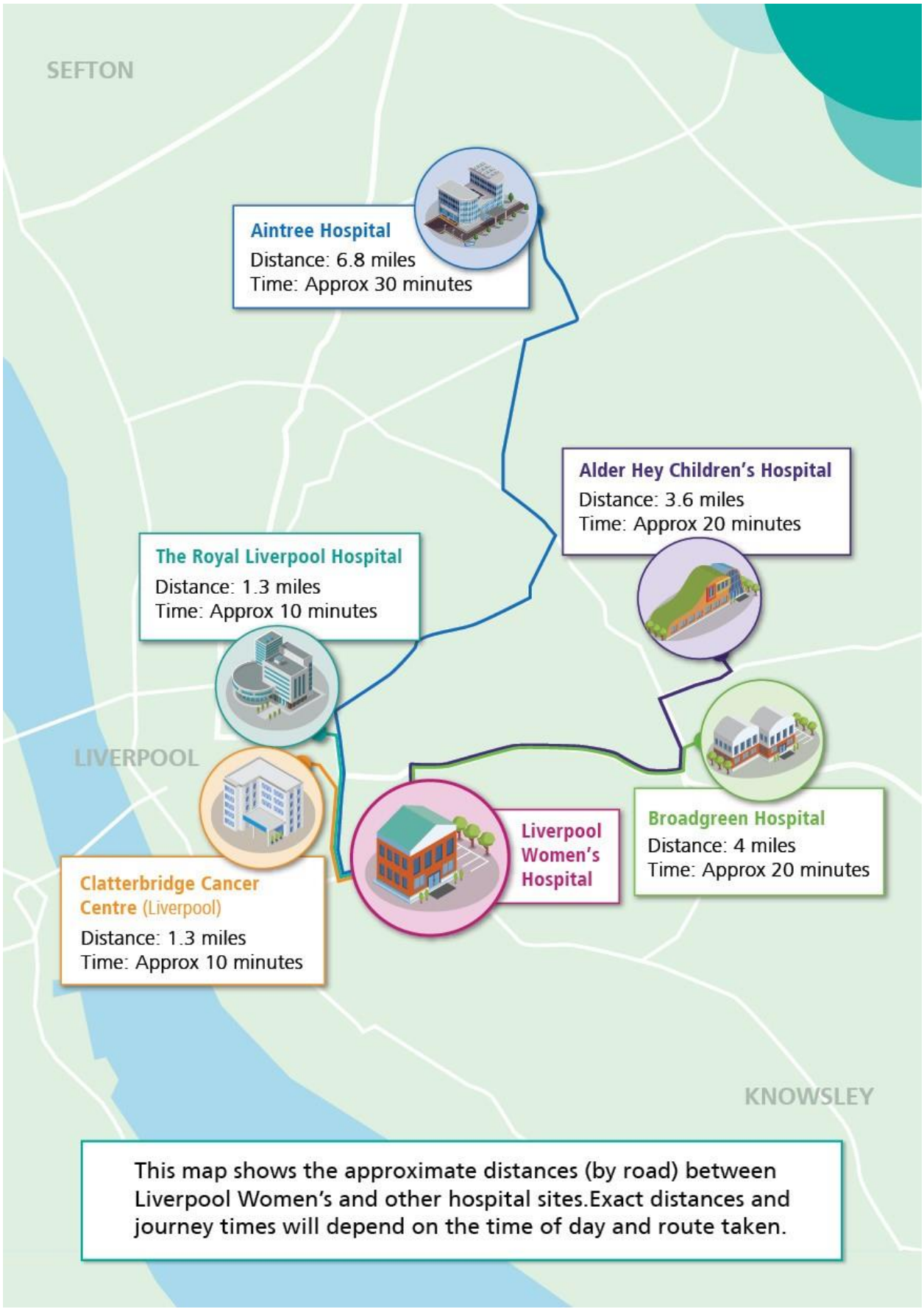
In the case for change, services at Liverpool Women's Hospital are referred to as being 'isolated' from other hospital services because, although other hospitals might not seem far from Liverpool Women's, when an emergency occurs, any distance is a problem. Clinicians may need to stop what they are doing at one hospital and travel to another, or patients may have to be transferred by ambulance from one hospital to another which can take some hours to organise safely.

The map below illustrates the distances between hospital sites in Liverpool; for example, by road, the Royal Liverpool Hospital and the Clatterbridge Cancer Centre are 1.3 miles away, Alder Hey Children's Hospital is 3.6 miles away, and Aintree Hospital is 6.8 miles away.

Most acute and emergency hospital services are not available at the Crown Street site but are provided at other hospitals. This means that women needing these services must be transferred for that care and treatment, often when they are at their most sick and vulnerable. For example, most women who need intensive care are transferred to the Royal Liverpool Hospital.

Similarly, other acute hospital sites in Liverpool do not have gynaecology and maternity services and are therefore less able to meet women's medical needs when they present at the emergency department or when they are inpatients at these other acute sites.

[1] It is important to acknowledge that it is not only people who identify as women (or girls) who access women's health and reproductive services to maintain their sexual and reproductive health and wellbeing. The terms 'woman' and 'women's health' are used for brevity, on the understanding that transmen and non-binary individuals assigned female at birth also require access to these services. Delivery of care must therefore be appropriate, inclusive, and sensitive to the needs of those individuals whose gender identity does not align with the sex they were assigned at birth. (DHSC Women's Strategy for England, August 2022)


SEFTON
Aintree Hospital
Distance: 6.8 miles
Time: Approx 30 minutes
Alder Hey Children's Hospital
Distance: 3.6 miles
Time: Approx 20 minutes
The Royal Liverpool Hospital
Distance: 1.3 miles
Time: Approx 10 minutes
LIVERPOOL
Broadgreen Hospital
Distance: 4 miles
Time: Approx 20 minutes
Liverpool Women's Hospital
Clatterbridge Cancer Centre (Liverpool)
Distance: 1.3 miles
Time: Approx 10 minutes
KNOWSLEY
This map shows the approximate distances (by road) between Liverpool Women's and other hospital sites.Exact distances and journey times will depend on the time of day and route taken.

There is very clear clinical guidance in the NHS about which services should be provided together, on the same site[2]. This is because, in an emergency, services need to be able to respond within very short time frames to avoid patient harm and achieve good outcomes.

This guidance, originally published in 2014 and updated in 2024, was developed by senior clinicians and has subsequently been used to inform service standards and specifications which are referred to later.

The isolated nature of Liverpool Women's Hospital, as the specialist and tertiary gynaecology and maternity service provider for Chesire and Merseyside, and the secondary care provider for Liverpool and North Mersey, has created a significant gender inequality in access to services for women.

Women using gynaecology and maternity services in Liverpool are at a significant disadvantage when compared to:

- men and women using other services at other hospitals in Liverpool.
- women using gynaecology and maternity services in other parts of the country.

The current organisation of women's hospital services in Liverpool results in delays to care which impacts on the quality of care women and babies experience and increases risks for clinical and care staff to manage; this includes a lack of immediate availability of clinical expertise, as well as facilities for specialist medical care and radiological procedures.

Psychological harm affecting women, their families and staff members is also an increasing risk due to the fragmented way services are being delivered and the impact that can have on clinical outcomes, quality of care, and patient and staff experience.

Other impacts on the wider workforce at LWFT include difficulties in recruitment and retention, particularly for consultant obstetric anaesthetists, and an inability to meet national care standards.

Despite many developments on the Crown Street site, and improvements in joint service delivery with partner organisations, there remain significant clinical risks and challenges.

[2] https://secsenate.nhs.uk/wp-content/uploads/2024/01/The-Clinical-Co-Dependencies-of-Acute-Hospital-Services-Final.pdf

Evidence of these risks and challenges (set out in more detail in section 3 of the case for change), includes the following:

- 60% of women (circa 5,000 each year) who book their maternity care with LWFT are placed on an intermediate or intensive ante-natal care pathway because they have more complex needs.

- Around 120 pregnant women present at either the Royal Liverpool Hospital or Aintree Hospital emergency departments every month (4 per day); over 70% of these women have a diagnosis that could impact on their pregnancy.

- In addition, a further 60 women per month (known to gynaecology services) who present at either the Royal Liverpool Hospital or Aintree Hospital emergency departments (ED) also attend (or are admitted to) the (Liverpool Women's Hospital (LWH) site within 24 hours of the ED attendance (2 per day).

- From 2018 – 2022, there were 69 episodes of critical care transfer from LWH. At least another 12 women were transferred from LWH, and were accompanied by a senior doctor from anaesthetics, because they were judged to be too unstable to be transferred without support.

- There were 285 critical care bed days at Liverpool University Hospitals NHS FT (LUHFT) (Royal Liverpool and Aintree sites) for gynaecology and maternity patients between April 2022 and March 2024.

- From 2018 – 2022, there were 73 serious clinical incidents in gynaecology and maternity services. In a clinical review of these incidents, isolation of women's services from other hospital services was found to be a major causal factor in 19 cases; 7 of the 19 cases involved transfer for critical care.

- From July 2022 – March 2024 (21 months), there were 148 clinical incidents that were caused in full or in part by women's hospital services being provided on an isolated site.

- 155 women in the ante-natal or post-natal period, who were admitted to nearby hospitals, were supported by the outreach midwife between 2021 and 2023. 145 of these women (95%) were inpatients at either the Royal Liverpool or Aintree Hospitals.

- There are around 220 ambulance transfers between LWH and either the Royal Liverpool or Aintree Hospitals per year. Category 1 (life-threatening) or Category 2 (emergency) transfers make up around half of these ambulance journeys.

- There are over 1,000 Level 2 High Dependency Unit (HDU) bed days at LWH per annum for women who need enhanced levels of care.

- Women needing critical care transfer and those attending EDs whilst pregnant are significantly more likely to be from ethnic minority groups and socially deprived backgrounds.

- 25% of LWFT staff have self-referred or been referred to the staff trauma-based psychology service in the last 18 months.

All these clinical issues and events are taking place in an area of significant deprivation and where population health outcomes are already statistically worse than for most other populations.[3] [4] [5]

There are also significant numbers of women from ethnic minority populations using gynaecology services and maternity services at Liverpool Women's Hospital. At least 15% of all inpatient and day case gynaecology patients, and 20% of all users of maternity services, come from ethnic minority backgrounds, and are more likely to have poorer outcomes.

There is national evidence of specific inequalities in maternity services, for example:

- Women living in the most deprived areas continue to have the highest rates of maternal mortality.
- Black mothers are 3.7 times more likely, and Asian mothers 1.8 times more likely, to die than white British mothers; and
- 1 in 9 of the women who died during, or up to a year after pregnancy, in the UK, were at severe and multiple disadvantage. (MBRRACE-UK, 2022[6])

The gender inequalities experienced by women in the current arrangement of services are therefore compounded by the deprivation and ethnicity seen in the population, exacerbating the poorer outcomes felt by these groups.

[3] https://liverpool.gov.uk/media/y45lmvvm/health-in-liverpool-2040.pdf

[4] https://www.sefton.gov.uk/your-council/plans-policies/business-intelligence-insight-performance/joint-strategic-needs-assessment-jsna/

[5] https://knowsleyknowledge.org.uk/knowsley-2030/

[6] MBRRACE-UK. (2022) Saving Lives, Improving Mothers' Care Core Report - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2018-20

In 2022, NHS Cheshire and Merseyside Integrated Care Board (ICB) commissioned a review of the way services are organised across Liverpool hospitals. The objective of the review was to realise opportunities for greater collaboration between acute and specialised trusts, to optimise clinical pathways in acute care in Liverpool, with an aim to improve care and reduce clinical risks.

Overwhelmingly, the most important challenge identified by stakeholders during the review was the clinical sustainability of services for women in Liverpool and the associated clinical risk. If the challenges in hospital-based gynaecology and maternity services are not addressed, the avoidable risks for women who require co-located acute services will rise as co-morbidities and complexity continue to increase; in addition, the gender inequalities in healthcare will widen.

A broader risk is that some services may cease to be provided in Liverpool because local arrangements mean that the required standards for delivering this care cannot be met. Some women already have to go to other hospitals outside Cheshire and Merseyside to receive specialist co-located care which cannot safely be provided in Liverpool.

Addressing the challenges in women's hospital services will improve their sustainability, reduce patient risk, and ensure that all women, particularly those with complex and specialist gynaecology and maternity conditions, can continue to be cared for within Liverpool and the wider Cheshire and Merseyside area.

If the issues described in the case for change can be resolved, the following benefits could be achieved:

- ✓ A reduction in gender inequalities in gynaecology and maternity hospital services in Liverpool.
- ✓ A reduction in health inequalities for women from lower socio-economic groups and those from ethnic minority groups accessing gynaecology and maternity services.
- ✓ Future-proofed gynaecology and maternity services with the right capacity, in the right place and at the right time to meet women's needs.
- ✓ Improved and more timely access to holistic care for women using gynaecology and maternity hospital services.
- ✓ Better clinical outcomes and experience for women and their families.
- ✓ Fewer clinical incidents and reduced episodes of actual and potential harm or death.
- ✓ Better management of women with complex pregnancies and gynaecology conditions.
- ✓ Fewer interactions with emergency care services.
- ✓ Reduced episodes of psychological trauma for women and staff.
- ✓ More availability of ambulances due to a reduction in transfers.
- ✓ Greater system-wide service and pathway integration.
- ✓ Liverpool hospitals are a more attractive place to train and work.

- ✓ Liverpool hospitals can sustain and develop more specialised services for the Cheshire and Merseyside population.
- ✓ Liverpool hospitals can increase their service offer for women and families.
- ✓ More opportunities for training, research and innovation.

These benefits will be explored more fully during the next phase of the work to design a new model of care.

This case for change does not seek to provide proposals or solutions; these will be explored with partners, stakeholders, patients, and the public later in the work and after engagement with people with lived experience of gynaecology and maternity services.

Nevertheless, it is important to state that the hospital on Crown Street is a highly valued NHS asset and service developments continue to be implemented at this site.

There are no plans to close Crown Street, and whatever proposals are developed for the future of gynaecology and maternity services, the site will continue to be used for the provision of NHS services.

1. Background and Introduction

1.1 Health Inequalities and the Population Health Context for the Case for Change

There are significant health inequalities in North Mersey (Liverpool, Sefton and Knowsley) and as illustrated later, the majority of women using gynaecology and maternity hospital services in Liverpool, come from these areas.

People from poorer backgrounds are much more likely to suffer significant health inequalities.[7]

Almost two in three residents in Liverpool live in the poorest 20% of households in England with Liverpool being the third most deprived borough in the country (out of 326 Local Authorities). Knowsley is the second most deprived borough in England and Sefton, in its entirety, is in the most deprived fifth of English Local Authorities. A summary of the health of the North Mersey population, and links to further information, are provided later in Appendix 2.

Nationally, the NHS is seeking to reduce health inequalities for the most challenged population groups through the Core20plus5 programme. Maternity services are being given a particular focus as women from ethnic minority groups and deprived communities have been shown to have significantly poorer outcomes in maternity services than their white British counterparts.[8]

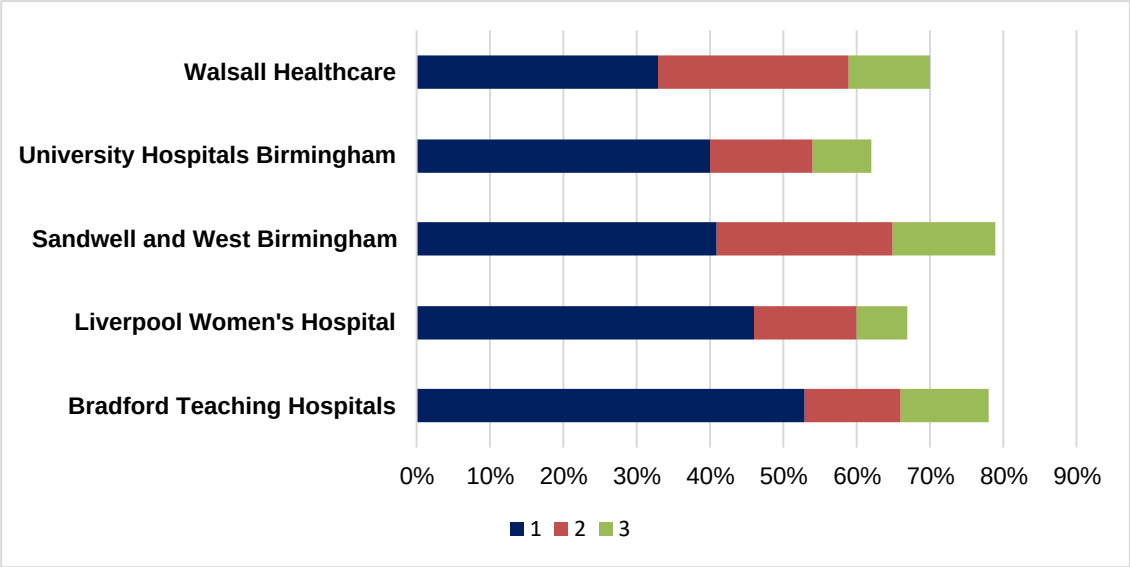
At least 15% of inpatient and day case gynaecology patients, and 20% of users of maternity services in Liverpool, come from ethnic minority backgrounds, and are more likely to have poorer outcomes.

In Liverpool, 50% of women accessing maternity services and 42% of women accessing gynaecology services come from the poorest 10% of addresses in England. Figure 1 below shows that across the country, only Bradford Hospital currently serves more maternity users from the most deprived 10% of addresses than Liverpool Women's Hospital.

One of the main priorities of NHS Cheshire and Merseyside is tackling health inequalities in access, outcomes and experience. The women's services programme is fully aligned with this ambition as it is specifically about improving access, outcomes and experience of gynaecology and maternity hospital services.

[7] https://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review
[8] https://www.england.nhs.uk/about/equality/equality-hub/national-healthcare-inequalities-improvement-programme/core20plus5/

Figure 1 - The five maternity providers in England serving the most deprived populations (Source – *National Maternity Services Dashboard*[9])



Key: ***1 = social deprivation decile 1 (the poorest 10% of the population)***
2 = decile 2 ***3 = decile 3***

The way women's hospital services are currently delivered, separate from other acute hospital services in Liverpool, has created a significant gender inequality for the women and families accessing these services from Cheshire and Merseyside and beyond.

This service configuration is compounding the existing health inequalities for women from socially deprived backgrounds and those from ethnic minority groups that use these services. (See Appendix 1 for an Equalities Analysis of the case for change).

1.2 The Liverpool Clinical Services Review

In 2022, Cheshire and Merseyside Integrated Care System (ICS) commissioned an independent review to identify opportunities and provide recommendations for greater collaboration between acute and specialised trusts, that would optimise the model for acute care in Liverpool and beyond.

The review was also asked to consider alignment and interdependencies with One Liverpool, the city's health and wellbeing strategy and the wider Cheshire and Merseyside system.

[9] https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/maternity-services-data-set/maternity-services-dashboard. NB this dashboard uses 12 months data on a rolling basis and is therefore updated monthly.

The focus of the review was primarily the six acute and specialist trusts in the city i.e. Alder Hey Children's NHS Foundation Trust; The Clatterbridge Cancer Centre NHS Foundation Trust; Liverpool Women's NHS Foundation Trust; Liverpool Heart and Chest Hospital NHS Foundation Trust; Liverpool University Hospitals NHS Foundation Trust; and The Walton Centre NHS Foundation Trust. Other partners core to the Liverpool system, also involved in the review, included general practice, Mersey Care NHS Foundation Trust and Liverpool City Council.

The deliverables for the review were:

- To make a clear and compelling case for greater collaboration.
- Identify priorities for collaboration and the reasons for them.
- Develop a blueprint for the collaborative opportunities to be implemented.
- To articulate the conditions for success, setting out the supporting arrangements to be put in place.
- To produce an implementation roadmap to deliver the blueprint.

Through the review process, twelve opportunities emerged, some of which were / are already being implemented through the delivery of the One Liverpool strategy and through ICS-wide programmes led by Cheshire and Merseyside Acute and Specialist Trusts (CMAST), Community and Mental Health Collaborative and the Cancer Alliance.

NHS Cheshire and Merseyside Integrated Care Board (ICB) received the review report and recommendations at its Board meeting on 26 January 2023.[10]

The review highlighted the sustainability of women's hospital services in the city as the overwhelming priority for the system.

The report stated:

"Opportunity 6: Solving clinical sustainability challenges affecting women's health in Liverpool.

Overwhelmingly, the most important challenge stakeholders identified as needing to be addressed was the clinical sustainability of services for women and the clinical risk in the current model of care.

Specifically, seven of twelve co-dependencies for maternal medicine centres and therefore for consultant-led obstetric services are not currently met at the Crown Street site.

[10] The Liverpool Clinical Services Review report to the ICB can be found here: Women's Services page of the NHS Cheshire and Merseyside website (see pgs 5,6,8,25,26,37-40.)

This results in fragmentation of services for women and babies, with some requiring ambulance transfer to other providers to receive the care they need. This, given the clinical circumstances necessitating the transfer, carries an inherent risk, and also results in mothers and babies being separated.

There is an imperative opportunity and shared will amongst the acute and specialist providers to respond to the current case for change, developing a future care model to ensure the best possible care for women and babies across Liverpool."

One of the recommendations from the review was establishing an ICB-led programme to address the sustainability challenges and clinical risks and consequently the Women's Hospital Services in Liverpool Programme was established.

1.3 Introduction to the Women's Hospital Services in Liverpool Programme

The primary purpose of the Women's Hospital Services in Liverpool Programme is to:

Develop a clinically sustainable model of care for hospital-based gynaecology and maternity services that are delivered in Liverpool.

This includes:

- acute, emergency and planned gynaecology and maternity hospital services provided in Liverpool; and
- secondary, tertiary and specialised gynaecology and maternity hospital services provided in Liverpool.

This will involve understanding all the clinical sustainability challenges hospital-based gynaecology and maternity services in Liverpool face (this case for change) and exploring how those challenges can be addressed and resolved over the short, medium and long term.

The work will involve undertaking an options appraisal of the potential solutions for making these hospital services clinically sustainable for the future.

Any recommendations for change will be made to NHS Cheshire and Merseyside Integrated Care Board.

A wide range of stakeholders will be involved in the work to ensure that there are no unintended consequences for women, their families and other Cheshire and Merseyside providers that are served by Liverpool's tertiary (specialised) services, and a full impact assessment will be completed on any future proposals.

The programme will follow the process set out in the NHS England Guidance for Planning, Assuring and Delivering Service Change (2018)[11].

1.4 Programme Dependencies

Women's hospital services have many dependencies and connections to other service areas and programmes of work. The following dependencies are the main ones that the programme will need to take account of, noting that this is not an exhaustive list, and that new dependencies may emerge in the life of the programme.

1.4.1 Neonatology

Neonatal services (services for newborn babies), by their nature, need to be provided alongside maternity services. The two services are fully dependent on each other and cannot be separated.

Whilst this programme does not intend to make any proposals about how neonatal services are delivered, they could be affected by proposals for how hospital maternity services are provided in the future.

Liverpool Women's NHS FT and Alder Hey Children's NHS FT have led the Liverpool Neonatal Partnership (LNP), a formal operational and strategic partnership between the two organisations, since 2018. The LNP will be a key stakeholder group in the development and delivery of any future proposals for maternity services, and it will be essential to ensure that any future developments are aligned with LNP plans. Colleagues from the LNP will be directly involved in the programme governance to ensure we achieve this alignment.

A parallel stream of service improvement work for neonates, led by the LNP, will also be taking place outside of the scope of the women's services programme. There may be opportunities to improve neonatal services alongside maternity services and it is essential to ensure there is alignment in any proposals for future developments. Any future changes to maternity services would need to be synchronised with neonatal services and vice versa. The LNP and the Neonatal Operational Delivery Network (NODN) would be fully engaged in this work.

In addition, NHS England is currently leading a review of specialised Neonatal Intensive Care services in the Northwest region; dependencies with this review will also need to be managed with specialised commissioning colleagues.

[11] https://www.england.nhs.uk/publication/planning-assuring-and-delivering-service-change-for-patients/

1.4.2 Other hospital-based services for adults

The programme will not be making proposals about how other hospital-based services for adults will be provided; however, the clinical quality and safety issues the programme is trying to solve will include how gynaecology and maternity services can integrate more closely with other services that may be needed during a woman's care and treatment.

For example, a woman may need to receive urgent care or opinion from other medical or surgical specialities during her maternity or gynaecology episode due to a deterioration in a known chronic condition or the acute development of a new condition; specialities required may include critical care, cardiology, neurology, renal, haematology, oncology, general surgery, colorectal, urology, and vascular surgery.

There are also services that pregnant women or women with gynaecology needs may have to access that are technically unrelated to their maternity or gynaecological condition such as accident and emergency (A&E), ear, nose and throat (ENT), and orthopaedics. These specialities may not be aware of specific requirements for pregnant and postnatal women.

All these other acute hospital services would also benefit from gynaecology and maternity hospital services being more integrated with them.

1.4.3 Cheshire and Merseyside Cancer Alliance

Cheshire and Merseyside Cancer Alliance has an active gynaecology cancer programme underway. At this stage there are no conflicts between the scope of the Alliance programme of work and the intended scope of the Women's Hospital Services in Liverpool Programme; however, it will be critical to ensure that the programmes remain aligned, and representatives from the Alliance will be part of the programme governance.

1.4.4 Maternal Medicine Network (MMN)

LWFT is the Maternal Medicine Centre (MMC) for Cheshire and Merseyside as part of the North West region MMN. The MMN seeks to ensure that key clinical standards in the MMN service specification are met for all women requiring these specialised services. As such, the MMC requires clinical support from other medical specialities and access to critical care services. The aims and objectives of the MMN are entirely consistent with the aims of the women's hospital services programme i.e. to improve the quality, standards and outcomes in maternity care. This alignment will be kept under review through the women's services programme governance arrangements and stakeholder engagement.

1.4.5 North West Ambulance Service (NWAS)

NWAS is a key provider of clinical services in Liverpool. Women's hospital services rely heavily on NWAS for the transfer of women from one hospital site to another. The programme will be aiming to reduce the numbers of ambulance transfers between sites and NWAS will therefore be a key stakeholder in future design work.

1.4.6 Cheshire and Merseyside Critical Care Network (CCN)

One of the key clinical issues the programme is attempting to resolve is a lack of comprehensive critical care services at the Crown Street site. The Critical Care Network will therefore be a key stakeholder in the design of any future model of care.

1.4.7 Other Cheshire and Merseyside Transformation Programmes

NHS Cheshire and Merseyside ICB has a range of transformation programmes in progress or in development. It will be essential to ensure that these programmes are not negatively impacted by the women's hospital services programme and vice versa. For example, the Shaping Care Together programme in Sefton Place is also looking to transform hospital services; it will be important to ensure the programmes are aligned and not in conflict, to create optimal outcomes for both.

1.4.8 Other dependencies

As proposals are developed, and before any changes are made, a full impact assessment will be completed to understand the potential consequences for women and their families, service providers inside and outside Liverpool, and other programmes of work such as those being led by the Local Maternity and Neonatal System (LMNS).

In the meantime, a wide range of stakeholders will be engaged in the work, along with the public and those who have lived experience of these services, to ensure that our plans and proposals are aligned with other work and do not have any unintended consequences.

A comprehensive stakeholder engagement plan is in place that includes all the relevant providers and clinical networks. In addition, there are several working groups supporting the programme board, including a clinical leaders' group and a much broader clinical reference group; this will enable the programme team to identify and accommodate clinical service interdependencies as plans are developed.

1.5 Programme Exclusions

The programme needs to be focussed on hospital-based gynaecology and maternity services delivered in Liverpool; this is an important and complex set of services with lots of dependencies as described above.

It is therefore, quite deliberately, not focussing on:

- Children's services.
- Neonatology – except in relation to the dependency with hospital-based maternity services.
- Adult services – except in relation to their dependency with hospital-based women's services.
- Primary care and community services.
- Mental health services.
- Hospital-based gynaecology and maternity services provided outside of Liverpool.
- Other women's and maternity work being managed in Cheshire and Merseyside by the Local Maternity and Neonatal System (LMNS) and the Women's Health and Maternity Programme (WHAM) programme such as the development of Women's Health Hubs (WHH).

A wide range of stakeholders will be involved in the work to ensure that there are no unintended consequences for other services and a full impact assessment will be completed on any future proposals.

It is also important to note that the programme is not focussing on the delivery of national recommendations emanating from the Ockenden review, or the findings of CQC inspections. These are 'business as usual' quality issues that are being dealt with through existing operational improvement structures at LWFT and with system partners. However, it is noted that if the issues reflected in the case for change are resolved, this is likely to go some way to supporting day-to-day quality and experience in gynaecology and maternity hospital services.

1.6 People who could be affected by the Programme

Women and families accessing women's hospital services in Liverpool may be affected by potential changes; that means, women using the hospital-based gynaecology and maternity services provided by Liverpool Women's NHS FT at the Crown Street Hospital site and those women with maternity or gynaecology needs who access services at other hospitals in the city (e.g. A&E, critical care, cardiology etc).

The largest proportion of women using gynaecology and maternity hospital services live in Liverpool, however, there are also significant numbers of women from Sefton and Knowsley and the wider Cheshire and Merseyside area accessing these services.

- In 2023/24, 65% of maternity deliveries were for women residing in Liverpool postcodes. 16% came from Sefton, 9% from Knowsley and 6% from other parts of Cheshire and Merseyside. 3% of deliveries were to women from outside of Cheshire and Merseyside.

- In 2023/24, 52% of all gynaecology inpatients and day cases were for women living in Liverpool. 19% were from Sefton; 9% from Knowsley and 12% from other areas of Cheshire and Merseyside. 7% of gynaecology episodes were for women living outside of Cheshire and Merseyside.

- The proportions for gynaecology cancer are slightly different, reflecting the specialised nature of these services, with just over half of the 456 cancer admissions in 2023 coming from North Mersey (Liverpool 30%, Sefton 18% and Knowsley 9%) and 43% coming from outside of the North Mersey area.

Staff may also be affected if there are proposals about how hospital-based gynaecology and maternity services are delivered in Liverpool in future.

Staff, patients, the public and those with lived experience will be involved throughout the programme so that they can directly influence the design of future services.

Delivery of the communications and engagement plan for the programme will ensure that all key stakeholders, including staff, patients, and the public, are involved, engaged, and communicated with on a regular basis.

A full impact assessment will be completed for any proposals that come from the programme. If proposals for change are significant, they will be subject to formal public consultation.

1.7 Programme Governance

NHS Cheshire and Merseyside Integrated Care Board (ICB) is leading this work; they are the lead commissioners for hospital-based gynaecology and maternity services in Liverpool, along with specialised commissioners from NHS England.

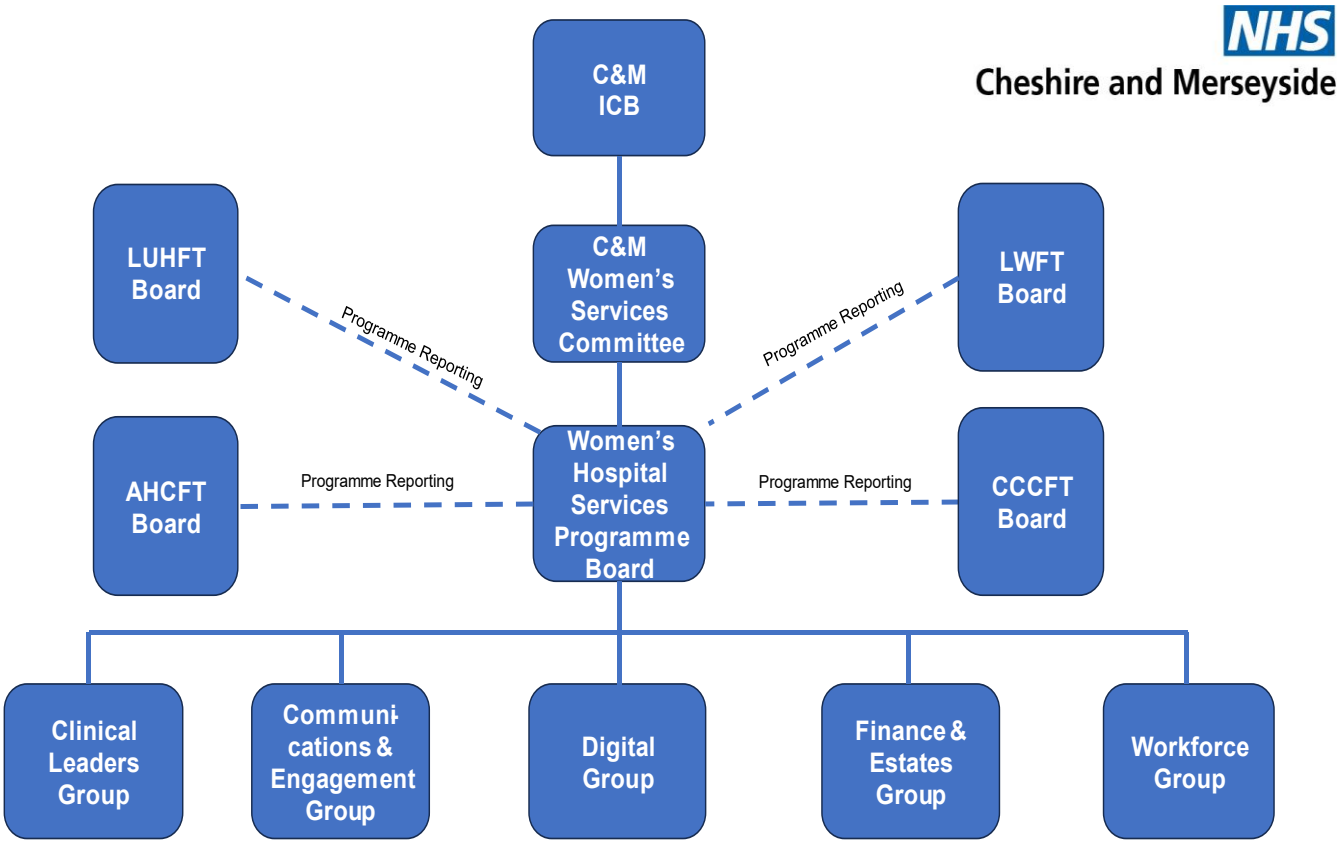
A Women's Services Committee (WSC), a sub-committee of the ICB, has been set up to oversee and assure delivery of the work programme. This Committee is chaired by a non-executive board member of the ICB.

A provider-led Programme Board has been established and is chaired by the Chief Executive of Liverpool Women's FT (LWFT) and Liverpool University Hospitals FT (LUHFT). The Programme Board is tasked with developing proposals for women's hospital services that will reduce the risks and issues currently being experienced in these services. The providers represented on the programme board are LWFT, LUHFT, Alder Hey Children's NHS FT (AHCFT) and The Clatterbridge Cancer Centre NHS FT (CCCFT).

The four trusts are working together to ensure that the clinical risks are properly articulated and that plans are put in place to reduce the risks in the short and medium term.

The programme governance is set out in Figure 2 below.[12]

Figure 2: Programme Governance



[12] The Terms of Reference for the Women's Services Committee and the Programme Board can be found at the Women's Services page of the NHS Cheshire and Merseyside website

2. Women's Hospital Services – The Current State

2.1 Services Provided by Liverpool Women's NHS Foundation Trust (LWFT)

Liverpool Women's NHS FT primarily operates from its main site, the Liverpool Women's Hospital (LWH) on Crown Street in Toxteth. The Trust's 1,400 staff take care of more than 50,000 patients a year, from the Liverpool city region, the surrounding areas and across the UK.

Liverpool Women's FT is in a unique position as it is the only tertiary provider of gynaecology and maternity services that operates from a stand-alone site; all other specialised providers in England have co-located acute and emergency hospital services.

LWH is the only hospital that provides maternity services in Liverpool and is the recognised specialist provider in Cheshire and Merseyside of high-risk maternity care including fetal medicine and the highest level of neonatal care. It also delivers neonatal surgical care for babies across Cheshire and Merseyside and neonatal cardiac care for the whole North West region in collaboration with Alder Hey.

LWH is the designated maternal medicine centre in Cheshire and Merseyside as part of the North West maternal medicine network providing tertiary-level care to women with complex medical problems in pregnancy. It provides the regional specialist congenital heart disease service; these services are provided with partners from LUHFT, Liverpool Heart and Chest Hospital and Alder Hey. The specialist level 1 congenital heart centre covers patients from the whole of the North West of England, North Wales and the Isle of Man.

The Trust is the regional specialist centre for a number of gynaecology services including gynaecology cancer services (also known as gynaecology oncology) and reproductive medicine services, which includes in vitro fertilisation (IVF) and specialist laboratory services.

LWH has a Type 2 emergency department (ED) for gynaecology emergencies; there are around 1,200 attendances at the gynaecology ED per month.

Outpatient services are also provided at the Aintree Centre for Women's Health offering care to women from north Liverpool, Sefton and Knowsley.

Specialised regional clinical genetics services are also delivered by the Liverpool Centre for Genomic Medicine serving a population of around 2.8 million people across Merseyside, Cheshire, and the Isle of Man.

In 2023/24 the Trust:

- Supported the ante-natal care of 7,699 women.
- Delivered 7,258 babies (7,440 in 2022/23) – an average of 20 babies born at Liverpool Women's every day.
- Undertook gynaecological 3983 inpatient procedures and 25,841 gynaecological outpatient procedures.
- Cared for 1,244 babies in our neonatal intensive and high dependency care units.
- Performed 1,146 cycles of in vitro fertilisation (IVF).

2.2 Key Issues in the Current Configuration of Services

Although the Crown Street hospital site was purpose-built in 1995, its stand-alone position has resulted in a number of challenges in the current configuration of services:

- The Crown Street site is an isolated acute site, without other adult services readily available (e.g. critical care, urology, GI, cardiology, interventional radiology, specialist therapies, 24/7 laboratory services, and the full range of diagnostic services).

- Other acute sites in Liverpool do not have onsite gynaecology and maternity services present.

- For women who are under the care of gynaecology and maternity services in Liverpool:

    - Hospital services are less able to manage acutely ill or rapidly deteriorating women, women with complex surgical needs and women with significant medical co-morbidities;
    - Women may have to be transferred to and from Liverpool hospital sites for the care they need, often when at their most clinically vulnerable.

- The current configuration of hospital-based gynaecology and maternity services, isolated from other acute and emergency services, creates gender inequalities in access to care and suboptimal quality of care for women and their families in Liverpool.

- Women from deprived backgrounds and ethnic minority groups are disproportionately affected by the current configuration of these services.

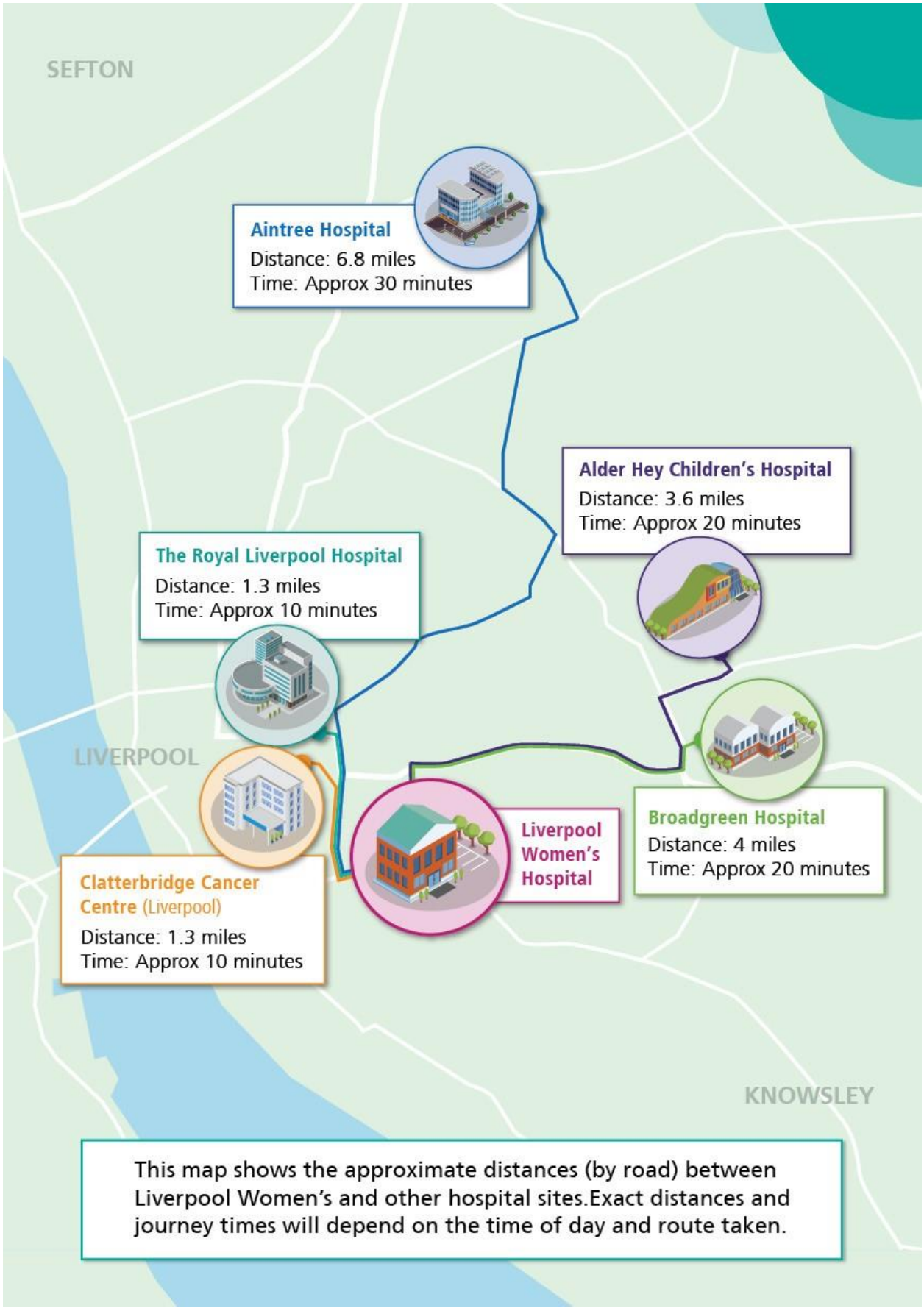
In this case for change, services at Liverpool Women's Hospital are referred to as being 'isolated' from other hospital services.

Although other hospitals might not seem far from Liverpool Women's when an emergency occurs, any distance is a problem. Clinicians may need to stop what they are doing at one hospital and travel to another, or patients may have to be transferred by ambulance from one hospital to another which can take some hours to organise safely.

The map below illustrates the distances between hospital sites in Liverpool; for example, by road, the Royal Liverpool Hospital and the Clatterbridge Cancer Centre are 1.3 miles away, Alder Hey Children's Hospital is 3.6 miles away, and Aintree Hospital is 6.8 miles away.

There is very clear clinical guidance in the NHS about which services should be provided together, on the same site.[13] This is because in an emergency, services need to be able to respond within very short time frames to avoid patient harm and achieve good outcomes. This guidance, originally published in 2014 and updated in 2024, was developed by senior clinicians and has subsequently been used to inform service standards and specifications which are referred to later.

[13] https://secsenate.nhs.uk/wp-content/uploads/2024/01/The-Clinical-Co-Dependencies-of-Acute-Hospital-Services-Final.pdf


SEFTON
Aintree Hospital
Distance: 6.8 miles
Time: Approx 30 minutes
Alder Hey Children's Hospital
Distance: 3.6 miles
Time: Approx 20 minutes
The Royal Liverpool Hospital
Distance: 1.3 miles
Time: Approx 10 minutes
LIVERPOOL
Broadgreen Hospital
Distance: 4 miles
Time: Approx 20 minutes
Liverpool Women's Hospital
Clatterbridge Cancer Centre (Liverpool)
Distance: 1.3 miles
Time: Approx 10 minutes
KNOWSLEY
This map shows the approximate distances (by road) between Liverpool Women's and other hospital sites.Exact distances and journey times will depend on the time of day and route taken.

2.3 Other Exacerbating Factors

There are other factors that will make the issues described above even more challenging:

- The medical and surgical complexity of patients is increasing.
- The medical workforce has become hyper-specialised with an increased reliance upon multidisciplinary care being factored into their training.
- Subspecialisation of consultants in specialist centres, such as LWFT, has resulted in less generalists with skills in both obstetrics and gynaecology; many current consultants require additional surgical support in the management of complex surgical issues in pregnant or postnatal women and in gynaecology.
- Changes to medical training mean that there are fewer experienced junior doctors available (e.g. in anaesthetics).
- Fewer midwives are now also registered nurses and therefore less able to deal with the range of nursing needs they may be faced with.

If the current service configuration continues to be maintained, there are real risks to the long-term sustainability of secondary and tertiary women's hospital services in Liverpool. This in turn, will create risks for the sustainability of other acute hospital services in Liverpool.

2.4 Recent Improvements and Developments

A range of developments have been implemented recently to improve the quality and experience of women's hospital services in Liverpool, and to address some of the challenges described above. For example:

In gynaecology services:

- ✓ Weekly operating sessions have been established at the Royal Liverpool Hospital for complex gynaecology patients likely to require critical care and / or surgical support from other specialities e.g. colorectal surgery and urology.
- ✓ Gynaecology and gynae-oncology clinicians provide surgical support and post-operative care for women who have had pelvic surgery at the Royal Liverpool Hospital.
- ✓ Gynaecology patients with complex needs are managed through joint multi-disciplinary teams (MDTs) and joint operating lists on both the LWH site and the Royal Liverpool Hospital site.
- ✓ A gynaecology robotic service has been established on the Crown Street site, to enable greater numbers of higher-risk women to be treated whilst reducing the risks of open surgery.

- ✓ Staff working on the gynaecological high dependency unit (HDU) at Crown Street have undertaken additional accredited training in critical care.

In maternity services:

- ✓ LWH has been designated as the Cheshire and Merseyside Maternal Medicine Centre, part of the North West Maternal Medicine Network. Routine outpatient appointments are delivered jointly by obstetric physicians and physicians from LUHFT. A weekly maternal medicine MDT is held which includes specialists from LUHFT as well as an obstetric physician.
- ✓ A Placenta Accreta[14] team has been formed at LWH.
- ✓ The outreach midwife service provides support to inpatients who are pregnant at other Trusts in the city.

In neonatal services:

- ✓ The Liverpool Neonatal Partnership (LNP) between LWFT and AHCFT has recruited a dedicated team to support the care of babies needing surgery at the Alder Hey site.
- ✓ Building work for a new, dedicated neonatal surgical centre has started on the Alder Hey site.
- ✓ The extended and improved neonatal unit on the LWH site has seen a reduction in infection rates in newborn babies.

Other improvements:

- ✓ There have been new consultant appointments in gynaecology, obstetrics and neonatology and joint appointments in anaesthetics with LUHFT; recruitment is ongoing to deliver 24/7 resident consultant cover for obstetrics and neonatology by 2025.
- ✓ Crown Street site now hosts a community diagnostics centre with CT (computed tomography) and MRI (magnetic resonance imaging) from 8am – 8pm, and urgent access to CT 24/7, which has delivered improved access to scans and reduced transfers for these diagnostic tests.
- ✓ Innovations in bedside blood clotting analysis and administration of fibrinogen concentrates have been introduced to counteract life-threatening massive haemorrhage.

[14] Placenta Accreta Spectrum (PAS), also known as abnormally invasive placenta (AIS), is a rare complication of pregnancy. It refers to a group of conditions that involve an abnormal attachment of the placenta to the wall of the uterus (womb).

- ✓ Courier protocols have been implemented for the transfer of urgent blood samples to reduce delays.
- ✓ LWH has appointed resuscitation officers, improved resuscitation training and invested in resuscitation equipment.
- ✓ The LWFT and LUHFT Partnership Board has been established and continues to work on shared risks and improving patient pathways for women's hospital services.
- ✓ A staff psychology service has been developed to provide trauma-informed support for LWFT employees who experience psychological distress or symptoms of trauma due to work-related events, pressures or stressors.

2.5 Current Initiatives to Improve Quality and Safety

There is ongoing work in the current year to continue to reduce risks and improve quality and experience in women's hospital services.

For example:

- A Medical Emergency Care Team is being recruited to enable optimal care and timely transfers where necessary.
- 24/7 resident obstetric consultant presence will be embedded on site at Crown Street.
- A 24/7 blood transfusion lab and imaging service will be developed at Crown Street.
- LWH is participating in the 'deteriorating patient collaborative' to improve earlier recognition of clinical deterioration.
- Scoping work will be undertaken for a shared anaesthetics team between LUHFT and LWFT.
- There will be increased capacity and access to MDTs and specialist therapy staff for women at Crown Street.
- Treatment and delivery thresholds for higher-risk women will be reviewed to determine where they are treated and birthed.
- A range of clinical pathways will be reviewed for women receiving care and/or needing transfers in Liverpool.
- LWFT is working with specialised commissioners to become a designated specialist provider for complex TOP (termination of pregnancy), endometriosis, placenta accreta and fetal therapies (fetal laser therapy and, with Alder Hey, fetal surgery).
- LWFT is implementing an 'Actively Anti-Racist' improvement programme to shape and embed an organisational culture which is Actively Anti-Racist, and where the care delivered, and the employment offered is welcoming, inclusive, and culturally competent.

Taken together, these recent developments and current initiatives have, and will, improve the quality and experience of women's hospital services.

However, they will not solve all the challenges and risks that have been created by the configuration of services in Liverpool and specifically the isolation of gynaecology and maternity services from other hospital services.

2.6 Key Clinical Risks Driving the Programme

Despite all the developments described above, due to the current configuration of services, there are five key clinical risks that need to be managed, mitigated and resolved by the gynaecology and maternity hospital services programme.

These risks have been agreed by the programme board have been tested and validated with the programme's nascent Clinical Reference Group at a clinical engagement event in May 2024[15]. Risk 5 was added as a consequence of that engagement.

It should be acknowledged that there are already actions being taken and plans in place to reduce the risks primarily through a range of short and medium-term actions, including more joint working across LWFT and LUHFT, as described in 2.5 above.

Risk 1: Acutely deteriorating women cannot be managed on site at Crown Street reliably which has resulted in adverse consequences and harm.

This risk is caused by a lack of a range of onsite services and specialist staff e.g. critical care, medical and surgical specialties, 24/7 blood transfusion labs.

Potential impacts include untimely transfers to other sites, delays to care and treatment, poorer outcomes, patient harm, and death.

[15] The Clinical Reference Group is a wide group of clinicians from across the Liverpool and Cheshire and Merseyside area. It met for the first time on 3 May to review and comment on the content of the early draft case for change. 70 clinicians, service managers and people with lived experience were involved. This case for change reflects feedback from the Group.

Risk 2: Women presenting at other acute sites (e.g. A&E), being taken to other acute sites by ambulance, or being treated for conditions unrelated to their pregnancy or gynaecological condition at other acute sites, do not get the holistic care they need.

This risk is caused by a lack of women's services and specialist staff at other sites in Liverpool.

Potential impacts are the same as for Risk 1; i.e. untimely transfers to other sites, delays to care and treatment, poorer outcomes, patient harm, and death.

Risk 3: Failure to meet service specifications and clinical quality standards in the medium term could result in a loss of some women's services from Liverpool.

This risk is caused by an inability to meet key clinical co-dependencies due to lack of co-location of women's hospital services with other adult hospital services.

The potential impact of this risk is that services could be decommissioned from Liverpool and/or become operationally impossible due to staffing constraints. Women and their families may have to travel out of Liverpool or Cheshire and Merseyside to access more specialist services.

This risk would disproportionately impact women and families from more deprived backgrounds who may not have the resources to travel outside of the area.

Risk 4: Recruitment and retention difficulties in key clinical specialties are exacerbated by the current configuration of adult and women's services in Liverpool.

This is caused by the inability to provide comprehensive onsite multi-disciplinary team working and training on acute sites. MDT training and working is emphasised in current clinical practice; however, this is hard to achieve in women's hospital services in Liverpool. Roles in Liverpool may be seen as less attractive because of the current service configuration. Clinicians may feel exposed and/or unable to perform their duties without onsite support from the wider MDT.

The potential impact of this risk is that vacancies may persist. Services could become increasingly fragile and difficult to deliver. There would be a negative impact on existing staff leading to increasing turnover and recruitment difficulties.

Risk 5: Women receiving care from women's hospital services, their families, and the staff delivering care, may be more at risk of psychological harm due to the current configuration of services.

There is a risk that pre-existing levels of psychological harm and stress could be exacerbated for women, their families and staff, by the suboptimal way services are currently organised.

There is evidence that 4-5% of women develop post-traumatic stress disorder (PTSD) every year after giving birth and high numbers of staff working in gynaecology and maternity services report work related trauma and symptoms of PTSD.

Delays and workarounds in care can have a negative impact on clinical outcomes, quality of care and patient experience which could create or compound psychological trauma for women, their families and staff.

3. Clinical Case for Change – The Evidence

The following section sets out a range of data and evidence to support the clinical case for change. Data sources and references are noted throughout.

There is limited comparative data available for the clinical evidence presented. Much of the evidence has come from specific bespoke reviews carried out locally, using Trust data sources.

Comparisons are also difficult to make given the unique and unusual arrangements of services in Liverpool, overlaid with the very specific population health challenges in the local area.

That said, the programme team will continue to seek comparative data where it can add value, in particular when developing the future model of care.

3.1 Summary of Key Clinical Evidence

- 60% of women (circa 5,000 people per annum) who book their maternity care with LWH are placed on an intermediate or intensive ante-natal care pathway because they have more complex needs.

- Around 120 pregnant women present at either the Royal Liverpool Hospital or Aintree Hospital emergency departments every month (4 per day); over 70% of these women have a diagnosis that could impact on their pregnancy.

- In addition, a further 60 women per month (known to gynaecology services) who present at either the Royal Liverpool Hospital or Aintree Hospital emergency departments also attend (or are admitted to) the LWH site within 24 hours of the ED attendance (2 per day).

- From 2018 – 2022, there were 69 episodes of critical care transfer from LWH. At least another 12 women were transferred from LWH, and were accompanied by a senior doctor from anaesthetics, because they were judged to be too unstable to be transferred without support.

- There were 285 critical care bed days at LUHFT for gynaecology and maternity patients between April 2022 and March 2024.

- From 2018 – 2022, there were 73 serious clinical incidents in gynaecology and maternity services. In a clinical review of these incidents, isolation of women's

services from other hospital services was found to be a major causal factor in 19 cases (26%); 7 of the 19 cases also involved transfer for critical care.

- From July 2022 – March 2024 (21 months), there were 148 clinical incidents that were caused in full or in part by women's hospital services being provided on an isolated site.

- 155 women in the ante-natal or post-natal period, admitted to nearby hospitals, were supported by the LWH outreach midwife between 2021 and 2023. 145 of these women (95%) were inpatients at either the Royal Liverpool or Aintree Hospitals.

- There are around 220 ambulance transfers between LWH and either the Royal Liverpool or Aintree Hospitals per year. Category 1 (life-threatening) or Category 2 (emergency) transfers make up around half of these ambulance journeys.

- There are over 1,000 Level 2 High Dependency Unit (HDU) bed days at LWH per annum for women who need enhanced levels of care.

- Women needing critical care transfer and those attending EDs whilst pregnant are significantly more likely to be from ethnic minority groups and socially deprived backgrounds.

- 25% of LWFT staff have self-referred or been referred to the staff trauma-based psychology service in the last 18 months.

3.2 Adult Critical Care

3.2.1 Current Critical Care Service Arrangements

LWH provides some, but cannot provide all, types of Level 2 critical care, also called High Dependency Care. There is no Level 3 care, the highest level of critical care (also called Intensive Care) provided at LWH.

Women needing some Level 2 services and all Level 3 services, pre or post-operatively or pre or post-delivery must be transferred to other units, usually the Royal Liverpool Hospital as the designated 'parent' intensive care unit.

The national standards for critical care require that Level 2 services are co-located with Level 3 services. All women needing Level 2 or Level 3 care should be under the care of a consultant intensivist and have access to 24/7 specialist critical care outreach support and have on-site support from a range of other specialist therapists. LWH does not meet these standards.

The Cheshire and Merseyside Critical Care Network (CCN) have confirmed that while services are configured in the current way it will not be possible to meet the required standards for a Level 3 unit. In addition, there are staffing and training constraints with the current service that make it unfeasible to run a Level 3 at the Crown Street site.

At LWH, consultant anaesthetists, rather than intensivists, currently provide critical care alongside their other clinical duties, for example, responding to clinical emergencies, with the support of nurses and midwives who have had additional training. Critical care outreach with support from specialist therapies is not currently available at Crown Street; however current improvement initiatives will be looking to improve this position.

LWH clinical staff do not have the day-to-day support from specialists on site or frequent exposure to the range of critical care issues on an acute site; keeping practical skills up to date is therefore far more difficult.

The deteriorating patient collaborative, an improvement project that is currently in progress, will be looking at how the current critical care arrangements at LWH can be improved and will make recommendations in due course.

3.2.2 Adult Critical Care Transfers 2018 – 2022

A clinical review of critical care transfers was undertaken using internal Trust (LWFT) data.

Over a five-year period (January 2018 – December 2022 inclusive), there were 69 episodes of adult critical care transfer from LWH involving 68 women.

At least another 12 women were transferred from LWH, and were accompanied by a senior doctor from anaesthetics, because they were judged to be too unstable to be transferred without support.

There is no evidence that the frequency of these transfers is decreasing over time.

The likelihood is that demographic changes and medical advances will increase the need for critical care in the population serviced by LWH over time.

Four of the 68 women who underwent critical care transfer died; they were all gynaecology patients. The delays in accessing appropriate care may have played a part in the eventual outcome in two of these cases.

i. Social Deprivation

There was a very high rate of social deprivation in this cohort of patients.

- All of the maternity patients requiring critical care transfer had a postcode with an Index of Multiple Deprivation (IMD) score in the lowest decile of the UK population; this means that they came from the poorest 10% of addresses.

- By comparison, 50% of woman who delivered their babies with LWH in 2023/24 were in the lowest deprivation decile.

- 19 out of 21 (90.5%) gynaecology patients requiring critical care transfer had an IMD score in the lowest decile. The other two gynaecology patients were in the second lowest decile.

- By comparison, 42% of women discharged from gynaecology in 2023/24 were from the lowest decile and 55% from the lowest two deciles.

This suggests that those from deprived backgrounds are significantly more at risk of requiring critical care transfer.

Table 1 below gives further details about the women who were transferred for critical care in this period.

Table 1: Demographics and Survival Data for all Patients and by Specialty – Critical Care Transfers (2018 – 2022)

	MATERNITY PATIENTS (n=43)	GYNAECOLOGY PATIENTS (n=25)	ALL PATIENTS TRANSFERRED
AGE - MEDIAN (RANGE)	32 (17-45)	59 (28-84)	34 (17 to 84)
NON-ENGLISH SPEAKER	8 (18%)	0	8 (12%)
SMOKING	6 (14%)	3[#] (19%)	8 (14%)
IMD <C10th	43 (100%)	20 [§] (87%)	63 (97%)
IMD <C20TH	43 (100%)	23 of 23 with a scoreable postcode (100%)	66 (100%)
SURVIVAL TO DISCHARGE HOME AFTER THIS IN-PATIENT EPISODE	42*	21[$]	63

Notes to Table 1

9 gynaecology patients with no smoking status recorded.

§ 2 patients could not have an IMD calculated (address not known).

*1 unknown – treated in Arrowe Park, no further information in LWH notes.

[$] 1 woman died following repatriation to LWH. 1 woman died on ITU in Whiston. 2 women died on ITU at RLUH.

ii. Co-morbidities

An analysis of co-morbidities was undertaken as part of the review of the 69 critical care transfers.

Co-morbidity was defined as a morbidity that was separate to the maternity or gynaecology diagnosis. The rate of co-morbidities was high with 39 (57%) having at least 1 co-morbidity and 14 (21%) having 2 or more co-morbidities.

Women with co-morbidities are more likely to require clinical input from other specialities not readily available at the Crown Street site.

Table 2 gives further details about the co-morbidities in this cohort of patients.

Table 2: Co-morbidities in the Critical Care Transfer Cohort (2018 – 2022)

	MATERNITY PATIENTS (n=43)	GYNAECOLOGY PATIENTS (n=25)	ALL PATIENTS
DIABETES	4 (9%)	5 (20%)	9 (13%)
HYPERTENSION	5 (12%)	8 (32%)	13 (19%)
BMI>30	10 (23%)	10 (45%)*	20 (31%)
OTHER CO-MORBIDITY	6 (14%)	12 (48%)	18 (28%)
1 OR MORE CO-MORBIDITY	20 (47%)	19 (76%)	39 (57%)
2 OR MORE CO-MORBIDITIES	4 (9%)	10 (40%)	14 (21%)

*3 gynaecology patients without a BMI recorded or calculable.

iii. Principal Diagnosis

There were more maternity patients (63%) than gynaecology patients (37%) transferred for critical care in this cohort. Of the maternity patients, 33 were in the post-natal period, which equates to 77% of the maternity patients transferred and 49% of all patients transferred.

Half of the diagnoses for the maternity patients were for haemorrhage, a quarter were for infections and the remainder were for a variety of conditions including pre-eclampsia, cardiac problems and seizures.

iv. Receiving Hospitals

As the designated 'parent unit', the Royal Liverpool Hospital was the main receiving hospital for the critical care transfers in this cohort. Table 3 below shows the destination units over the period reviewed.

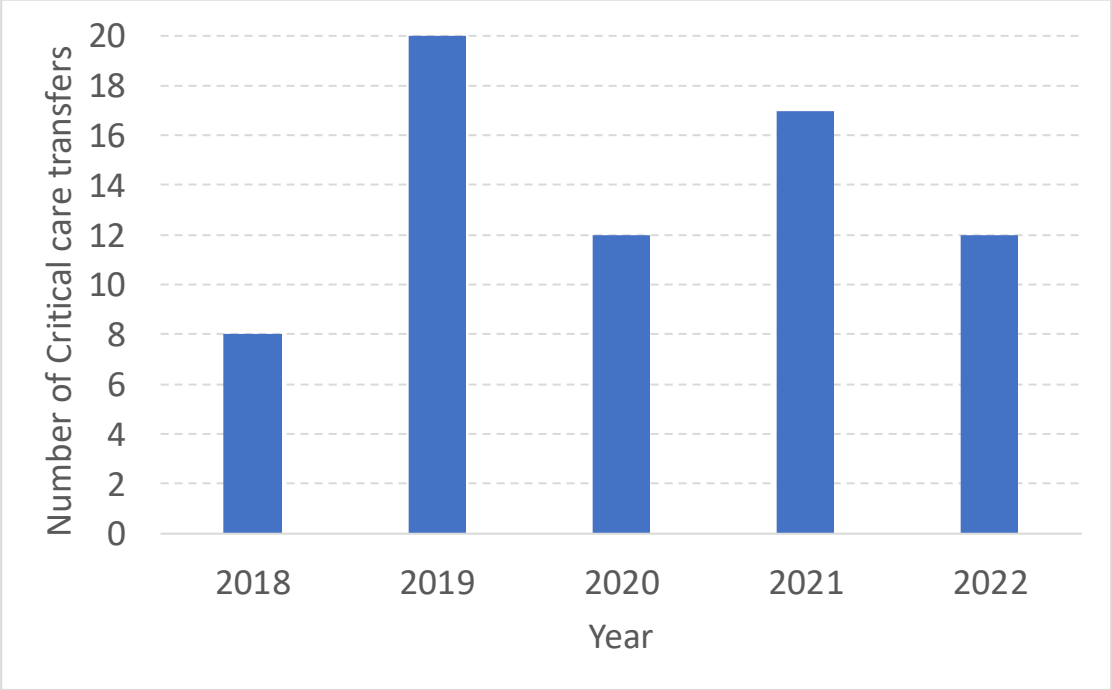
Table 3: Number of Critical Care Transfers by Destination Unit (2018 – 2022)

Destination unit	Number of Critical Care Transfers
Royal Liverpool	62
Aintree	2
Liverpool Heart and Chest	2
Whiston	2
Arrowe Park	1

v. Numbers of Transfers by Year

The median number of transfers per year was 12, but the number of transfers per year varied from 8 in 2018 to 20 in 2019, with no consistent trend.

Figure 3: Number of Critical Care Transfers by Year (2018 – 2022)



vi. Critical Care Bed Days at LUHFT -– April 2022 – March 2024

There has continued to be significant critical care activity at LUHFT for patients of LWFT over the last two financial years.

The following two charts illustrate this activity. Data is from the shared LWFT and LUHFT information system.

There were 285 critical care bed days over the two years shown below.

There were more bed days for gynaecology patients (232 days) than for maternity patients (53 days) in this period.

Figure 4: Critical Care Bed Days – Maternity (53 bed days in total) – April 2022 – March 2024

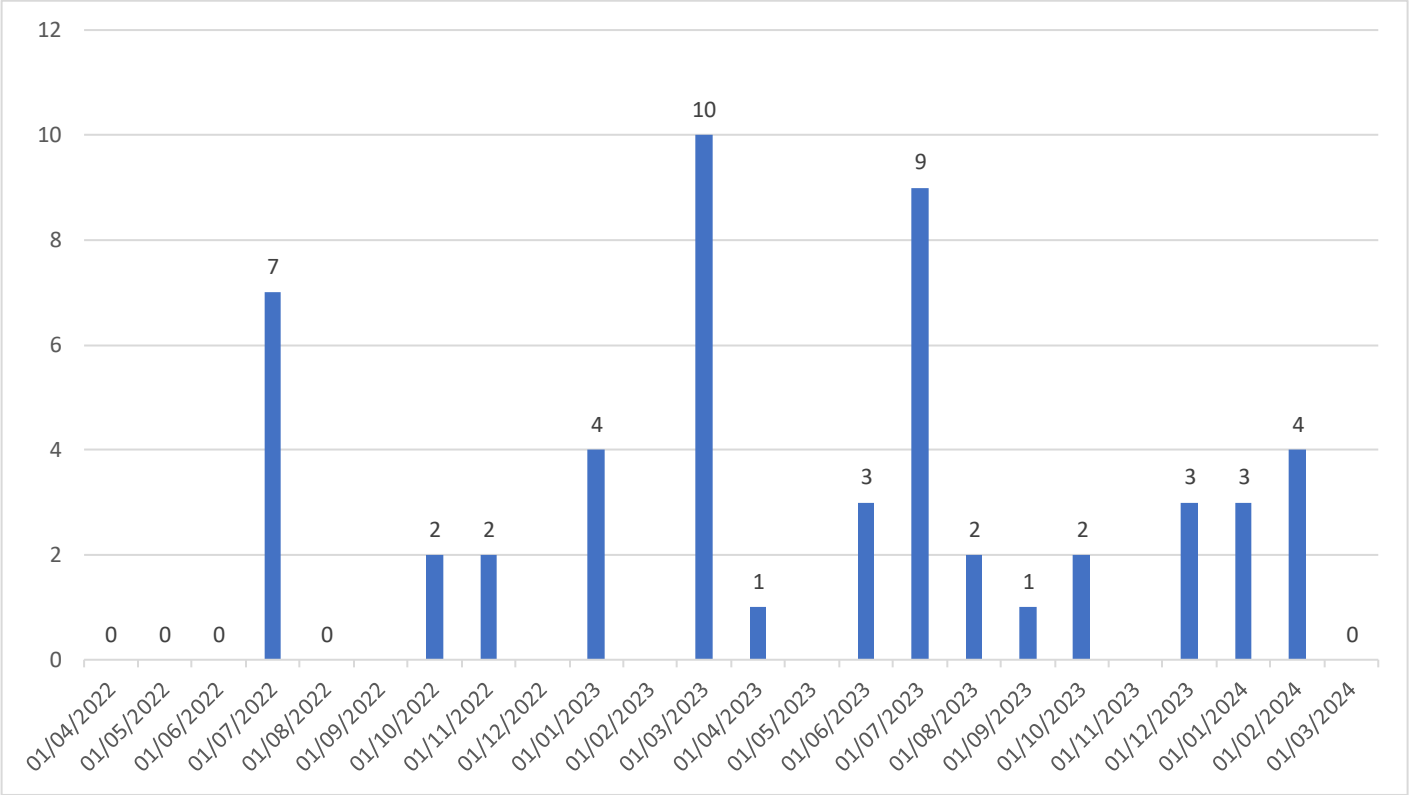
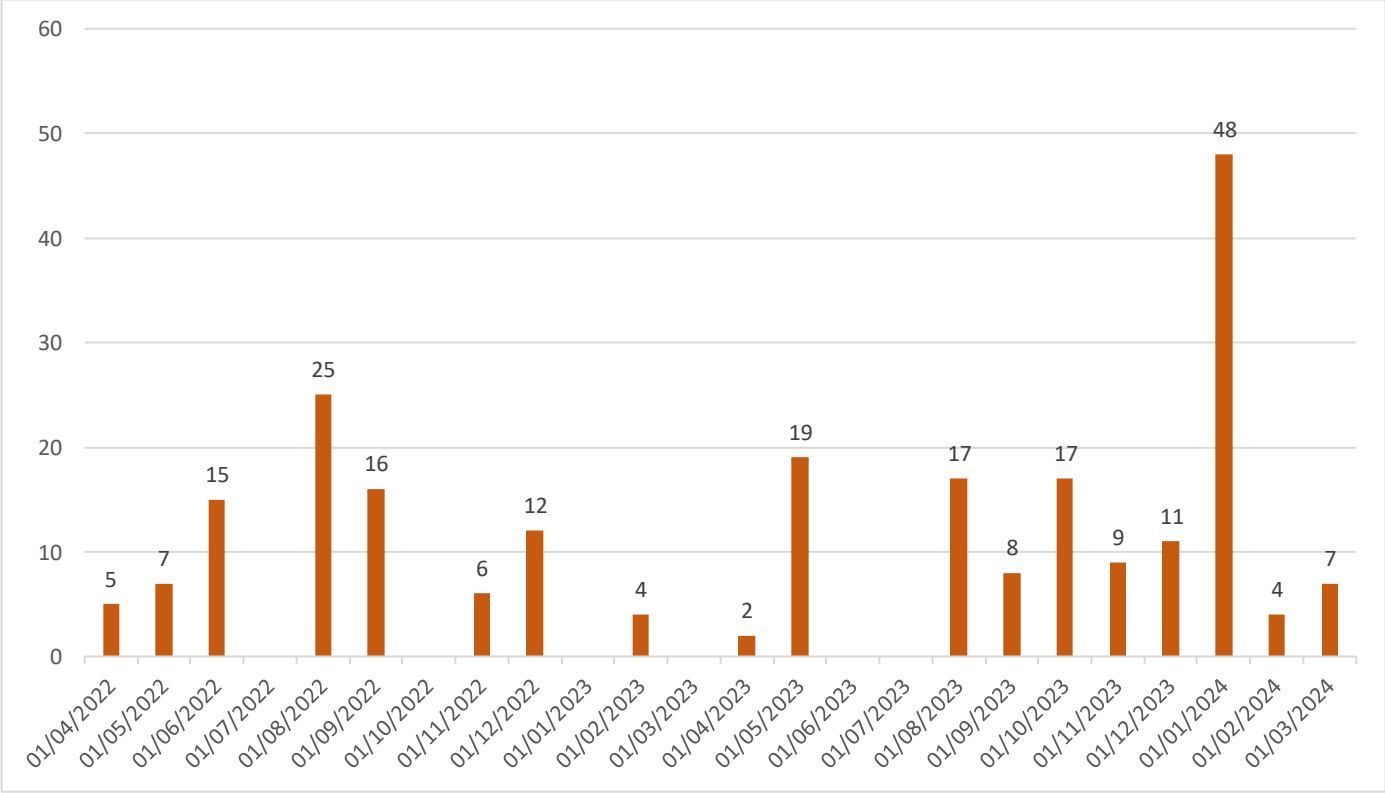


Figure 5: Critical Care Bed Days – Gynaecology (232 bed days in total) – April 2022 – March 2024



vii. HDU Activity at LWH (partial Level 2 Critical Care)

As noted earlier, LWH provides some, but cannot provide all, types of Level 2 critical care, also called High Dependency Care.

Table 4 illustrates the number of bed days of high dependency care at LWH.

Table 4: HDU Bed Days per annum at LWH (LWFT data) – 2018/19 – 2023/24

HDU BED DAYS	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Obstetrics	1,103	820	907	878	927	785
Gynaecology	205	210	216	167	158	388
Total	1,308	1,030	1,123	1,045	1,085	1,173

There are consistently over 1,000 HDU bed days per annum at LWH. This activity reflects the need for enhanced levels of care for both obstetrics and gynaecology.

Whilst most women will 'step down' from HDU to standard ward care, inevitably some women will need to 'step up' to a higher level of care that is not provided at LWH, resulting in a critical care transfer.

3.3 Clinical Complexity in Maternity

Women are now living longer, with more complex conditions and health needs. Women are also having babies later in life, while advances in medicine mean more premature and unwell babies are surviving when they might not have done so in the past. All of these factors mean that women need more specialist and complex care and not all of this care is, or can be, provided at Liverpool Women's Hospital.

The number of women with complex co-morbidities who require more support during their pregnancy is rising; this reflects the growth in numbers of people with one or more long-term conditions.

When women book their pregnancies with a maternity unit in England, they are placed on a standard, intermediate or intensive ante-natal pathway, based on the complexity of their pregnancy.[16]

About 60% of the women who book their maternity care with LWH are placed on an intermediate or intensive ante-natal care pathway; they may have complex needs such as co-morbidities, high BMI, previous complications, or multiple pregnancies (e.g. twins, triplets); furthermore, their babies are also more likely to need specialist neonatal care.

Over 12% of women booking were placed on the intensive pathway since 2021/22 – up from 8% in 2018/19 (see Table 5 below).

Despite proactive care management for these women and their babies, inevitably they are more likely to require support from other specialties or transfers for additional care.

Table 5: Numbers of Women on Each Maternity Pathway per annum (LWFT data) 2018/19 – 2023/24

Maternity Pathway	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Ante-natal Intensive	764 (8.23%)	793 (9.33%)	870 (9.88%)	1024 (12.31 %)	983 (12.25%)	947 (12.30%)
Ante-natal Intermediate	4,763 (51.32%)	4,311 (50.71%)	4,097 (46.51%)	3,757 (45.15%)	4,017 (50.04%)	3,732 (48.47%)
Ante-natal Standard	3,754 (40.45%)	3,397 (39.96%)	3,840 (43.60%)	3,540 (42.54%)	3,027 (37.71%)	3,020 (39.23%)
Total	9,281	8,501	8,807	8,321	8,027	7,699

[16] https://assets.publishing.service.gov.uk/media/5a7cdc12ed915d7c849adad8/dh_133226.pdf

3.4 Clinical Incident Reviews (Maternity & Gynaecology)

A shared risk register between LWFT and LUHFT has been developed that describes the risks of women's hospital services being on an isolated site.

Since May 2022, staff reporting a clinical incident on the LWFT Ulysses system have had to check a mandated field to state whether LWH being an isolated site had contributed to the incident. These incidents are validated by a senior clinician to verify if isolation was a contributory factor. Where an incident has been found to have been caused (either in full or in part) by being isolated, that incident is mapped to the LWFT / LUHFT joint risk register.

A quarterly analysis of these clinical incidents is being completed and reported to the LWFT Quality Committee.

In the 21 months from July 2022 – March 2024 there were:

- 148 clinical incidents that were caused in full or in part by LWH being on an isolated site.
- 75% (111) were related to risks rated 'red' on the joint risk register.
- 39% (57) were caused due to a lack of onsite support from other adult specialities.
- 17% (25) were due to a lack of onsite intensive care services at LWH.
- 16% (24) were related to women's services not being available at other sites in Liverpool; this is likely to be an underestimate as there will be incidents occurring at other sites that have not been captured by the LWH system.

Table 6 below, shows the incidents mapped to the risks.

Table 6: Clinical Incidents Mapped to Shared Risk Register (July 2022 – March 2024)

Risk Description								
	Q3 22/23	Q4 22/23	Q1 23/24	Q2 23/34	Q3 23/24	Q4 23/24		
Lack of ITU on the Crown Street Site	0	2	3	4	6	4	**19**	**15%**
Lack of access to other adult acute specialties at Crown Street and lack of access to urgent/acute clinical support, including cardiac arrest team and medical and surgical on call.	11	11	7	4	5	7	**45**	**36%**
Lack of access to obstetric, gynaecological and midwifery care for women on LUHFT sites.	2	4	10	1	1	4	**22**	**17%**
Lack of onsite 24/7 transfusion laboratory and other laboratory diagnostics at Crown Street.	0	9	0	3	1	1	**14**	**11%**
Lack of access to diagnostic imaging.	8	0	0	2	2	2	**14**	**11%**
Lack of access to clinical support services at Crown Street.	0	8	2	2	0	0	**12**	**10%**
Totals	**21**	**34**	**22**	**16**	**15**	**18**	**126**	**100%**

3.5 Thematic Review of Maternity Serious Untoward Incidents (SUIs)

A 'look back' exercise was undertaken at LWFT to review maternity serious untoward incidents (SUIs) from January 2017 to June 2022.[17]

There were 48 serious untoward incidents (SUIs) in maternity over the period of the review. The isolation of women's hospital services from other adult hospital services was found to be a major causal factor in nine (20%) of the SUIs.

Five cases (10%) were women requiring transfer to ITU for ongoing care. This was only able to be facilitated in four cases due to regional bed pressures in ITU. In all of these cases, the transfer to ITU required separation of mother and baby as these women were postnatal at the time of transfer.

Other adult services that were required in the nine cases included cardiology, diabetes, general surgery, CT imaging, cardiac ECHO and renal.

The ethnic background of women in this sample reflected the ethnic background of women booking for ante-natal care, i.e. there was not an over-representation of any ethnic group in the SUI sample.

A significant proportion of women were from deprived communities with 51% coming from the most deprived 10% of addresses; this reflects the social deprivation profile across all women delivering with LWFT. 82% of the SUIs in this sample occurred to women with addresses in deciles 1 – 5.

3.6 Birth Trauma

It could be assumed that women involved in maternity clinical incidents will be more likely to experience psychological harm and trauma.

Research evidence shows that 4-5% of women develop post-traumatic stress disorder (PTSD) every year after giving birth[18], amounting to approximately 30,000 women in the UK, while about a third of women experience birth as traumatic.[19]

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[17] Since the review took place, the Trust has ceased using this risk management approach and now uses the Patient Safety Incidence Response Framework (PSIRF).

[18] Yildiz P, Ayers S and Phillips L (2017) The prevalence of posttraumatic stress disorder in pregnancy and after birth: A systematic review and meta-analysis. Journal of Affective Disorders 15, 208, 634–645. doi: 10.1016/j.jad.2016.10.009

[19] Soet, J, Brack, G, Dilorio, C (2003) Prevalence and Predictors of Women's Experience of Psychological Trauma During Childbirth. Birth 30, 1, 36-46. doi: 10.1046/j.1523-536x.2003.00215.x

This would amount to over 350 women giving birth with LWFT in 2023/24.

At the time of writing, there is no hard evidence that is available to collect, to assess if these trauma events occur more or less often at LWH when compared to other maternity units.

3.7 Thematic Review of Gynaecology & Clinical Support Services (CSS) Serious Untoward Incidents (SUIs)

A 'look back' exercise was undertaken at LWFT to review gynaecology and CSS serious untoward incidents (SUIs) from January 2017 to June 2022.[20]

There were 25 SUIs in the period which were mapped to the LUHFT / LWFT joint risk register.

- Ten (40%) serious untoward incidents in this sample can be directly attributed to the isolation of women's hospital services from other hospital services.

- Six of these SUIs related to post-operative complications or acute patient deterioration i.e.

    - Two patients unexpectedly required ITU transfer – both of these patients subsequently died.

    - Three incidents related to lack of access to general surgeons and resulted in patients experiencing significant delays to receiving the required care and treatment.

    - One patient required post-operative assessment and treatment at the Royal Liverpool Hospital and subsequently died.

- Four incidents related to lack of timely access to imaging reports – 3 of these resulted in a delay in the diagnosis of cancer.

It should be noted that for the thematic reviews of incidents for maternity, gynaecology and clinical support services over the January 2017 – June 2022 period, there will have been an under-reporting of SUIs. This is because critical care transfers were not considered to be SUIs at this time and these pathways had become normalised. This is not the case today; all critical care transfers are now recorded as serious incidents.

[20] Since the review took place, the Trust has ceased using this risk management approach and now uses the Patient Safety Incidence Response Framework (PSIRF).

3.8 Learning from Maternal Deaths – January 2014 – November 2023

A review of maternal deaths was undertaken using LWFT data sources.

From January 2014 to November 2023 there were 17 maternal deaths recorded for women who booked with, or received care from, LWH. One maternal death was excluded from in-depth analysis as the woman only received an external review from an obstetric consultant and was not booked or received any other antenatal care at Liverpool Women's Hospital.

The definitions of maternal death are as follows:

Maternal death – a death of a woman during a pregnancy event irrespective of the duration and site of the pregnancy or within 42 days (six weeks) of the end of the pregnancy (including birth, ectopic pregnancy, miscarriage and termination of pregnancy) from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

Direct maternal death – resulting from obstetric complications of the pregnant state, and from interventions, omissions, incorrect treatment, or from a chain of events resulting from any of the above. These deaths are directly attributable to the physiological effects of pregnancy.

Indirect maternal death - resulting from previous existing disease or disease that developed during pregnancy not due to direct obstetric causes but was aggravated by the physiologic effects of pregnancy. These deaths are classified as maternal deaths because the pregnancy contributed to the worsening of the underlying condition.

The maternal mortality rate for LWH is in line with national rates; this includes direct and indirect maternal deaths and is 9.6 per 100,000 maternities compared to 9.5 per 100,000 nationally.

Nationally, there has been an increase in the maternal mortality rate in the last five years specifically related to indirect deaths. There are key themes identified in these deaths that are also seen in the national MBRRACE data.[21] These include higher mortality in areas of social deprivation and an increase in deaths linked to mental health.

Across the country, cardiac disease remains the largest single cause of indirect maternal deaths, followed by neurological causes (epilepsy and stroke). Thrombosis

[21] MBRRACE-UK. (2022) Saving Lives, Improving Mothers' Care Core Report - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2018-20

and thromboembolism (deep vein thrombosis) remains the leading cause of direct maternal death during or up to six weeks after the end of pregnancy.

The causes of maternal death (all types) in the LWFT review included mental health (suicide), thrombosis / thromboembolism, malignancies, cardiac disease, sepsis, neurological disease and homicide.

Care may have been impacted by lack of co-located adult hospital services in seven (41%) of these cases. Only two of the deaths occurred at LWH.

Table 7 below shows place of death and whether co-location with other adult services was a factor.

Table 7: Place of Death

Place of Death	Number of Deaths	Was lack of co-location of services in Liverpool a factor?
Liverpool Women's Hospital	2/17	Co-location was a definite factor in one case and is likely to have been a factor in the other.
Royal Liverpool Hospital	3/17	One death occurred in ED and one occurred in ITU. In all 3 cases, care was impacted by the lack of onsite women's services.
St Mary's Hospital, Manchester	1/17	Woman was transferred to access co-located services.
Sheffield Maternity Unit	1/17	Woman was transferred to access co-located services.
Aintree Hospital (ED)	1/17	Co-location was not a factor.
Walton Centre	1/17	Co-location was not a factor.
Arrowe Park Hospital	1/17	Co-location was not a factor.
East Lancashire Trust	1/17	Co-location was not a factor.
Community / Home	5/17	Co-location was not a factor.

3.9 Massive Obstetric Haemorrhage (MOH)[22] and Placenta Accreta Spectrum Disorder (PAS)[23]

Two of the major clinical risks that the LWH clinical teams have to manage are massive obstetric haemorrhage (MOH) and Placenta Acceta Spectrum Disorder (PAS). MOH is a major cause of maternal morbidity.

Both conditions can require the support of a range of acute specialities that are not present at Crown Street, and in particular, a 24/7 blood transfusion laboratory.

A review of MOH at LWH was undertaken over three years (1st Aug 2017 – 31st Aug 2020) which identified 33 women who experienced MOH in the period.

- 21% of the 33 cases were emergency deliveries.

- 50% of the cases involved abnormal placental site.

- 40% of the women intending to have a regional anaesthetic (e.g. epidural) went on to have a general anaesthetic.

- 21% required post-operative transfer for Level 3 critical care.

- 76% (25 women) had caesarean section (CS) deliveries of which:
  - 12 also had caesarean hysterectomies – 11 of these women were documented as having PAS prior to delivery.
  - There were four cases of PAS without the need for hysterectomy.
  - Two women had a ruptured uterus.

- Of the eight vaginal deliveries involving MOH, seven resulted in a delivery in theatre.

FIGO (the International Federation of Gynaecology and Obstetrics) published Consensus Guidelines on Placenta Accreta Spectrum (PAS) Disorders in 2018. The FIGO guidelines state that:

- There is increasing evidence that management of PAS by multi-disciplinary teams at centres of excellence decreases morbidity and mortality.
- Half of cases of PAS are undiagnosed prior to delivery.
- There has been a 10-fold increase of PAS as a result of rising caesarean section numbers.

[22] MOH = Large blood loss during or soon after giving birth.
[23] Placenta Accreta Spectrum (PAS), also known as abnormally invasive placenta (AIS), is a rare complication of pregnancy. It refers to a group of conditions that involve an abnormal attachment of the placenta to the wall of the uterus (womb).

- The incidence of PAS increases for women who have had 2 or more caesareans.

Currently LWFT cannot provide a full 24/7 PAS service at the Crown Street site due to a lack of other co-located acute hospital services. The LWH team works with specialist colleagues across the North West to manage this service, and women with the most complex PAS have to travel to Manchester to have their babies delivered.

The LWH team plans to deliver complex women at risk of MOH during daytime with all the staff and services required. However, as shown by the review above, there will be occasions when a MOH or PAS is unexpected and must be dealt with as an emergency; possibly out of hours, when there are less staff immediately available to support.

3.10 Pregnant Women – Activity at LUHFT sites

The review of ED activity at LUHFT sites was completed using LUHFT and LWFT data sources.

3.10.1 Review of Pregnant Women Attending LUHFT Emergency Departments

There is no onsite specialist support for pregnant women attending the Emergency Departments (EDs) in LUHFT (Aintree and the Royal Liverpool Hospitals).

A significant number of women are known to attend these EDs during pregnancy and there have been several clinical incidents related to the care that these women have received.

A review of the activity associated with pregnant women attending the two EDs was completed. This was supported by examination of clinical case notes in samples of women.

The key findings were as follows:

- Between 1/4/2021 and 31/12/2023 there were 3,134 attendances at the Aintree and Royal Liverpool EDs by 2,445 women during 2,453 pregnancies.
- The women who attended the EDs were more likely to be from socio-economically deprived backgrounds and more likely to be from ethnic minority groups.
- On average there are 122 ED attendances by pregnant women per month.
- 38% of attendances had a diagnosis that was pregnancy-related or likely to have an impact on the pregnancy.
- A further 35% had a diagnosis for which there was a potential impact on the pregnancy.
- Two women required admission to LUHFT Critical Care after attending an ED.
- Women attended both the EDs at LUHFT and LWH during the same clinical episode on 743 occasions (24% of attendances).
- In addition, women were transferred from the LUHFT ED directly to an inpatient bed at LWH on 86 occasions (3% of attendances).
- Taking these episodes together, this approximates to one transfer per day.
- This does not include inpatient transfers or the transfer of gynaecology patients.
- About 14% of journeys to ED were made by ambulance transport, although the bulk were made by women using their own, or public, transport.

The data that was analysed in this review was aggregated for the Royal and Aintree EDs; in future work, it would be helpful to understand the split by site.

i. Social Deprivation

The increased rate of social deprivation among the women who attended the ED compared to the rate seen in women who did not attend the ED was ***statistically significant*** when considering the lowest decile or the lowest quintile ($P<0.00001$ for both tests). Tables 8 and 9 below, illustrate.

Table 8: Distribution of pregnant women attending a LUHFT ED after booking for antenatal care at LWFT by deprivation score decile (April 2021 – December 2023)

Deprivation Decile	n	%	% of those recorded
1	1461	59.8	60.3
2	319	13.0	13.2
3	149	6.1	6.1
4	114	4.7	4.7
5	136	5.6	5.6
6	67	2.7	2.8
7	74	3.0	3.1
8	68	2.8	2.8
9	24	1.0	1.0
10	11	0.4	0.5
Not Recorded	22	0.9	

Table 9: Rates of deprivation (lowest decile and lowest quintile) for pregnant women who attended a LUHFT ED compared to pregnant women who did not attend a LUHFT ED (April 2021 – December 2023)

	ED attenders	Non ED Attenders
% in lowest decile	59.8	48.5
% in lowest quintile	72.8	61.3

ii. Ethnicity

The group of women who attended the ED during pregnancy contained a greater proportion of women from ethnic minority groups (20.5%) than women who did not attend the ED (17.5%); this was a ***statistically significant*** difference (p=0.0003).

iii. Diagnoses

An analysis of the diagnoses for the women in this cohort is shown in Table 10.

Table 10: Diagnoses for Pregnant Women Attending LUHFT EDs (April 2021 – December 2023)

Description	Number
No diagnosis recorded	369
No abnormality detected	840
Patient left department	16
"Referred to GP" or "Referred to service"	137
Recognised diagnosis recorded	1778

Of those with a diagnosis recorded, these were categorised into one of three categories as illustrated in Table 11.

Table 11: Pregnant Women Attending LUHFT EDs with Recognised Diagnosis Recorded (April 2021 – December 2023)

	Recognised diagnosis recorded	n	% of those with a diagnosis	% of all attendances
Cat 1	Pregnancy-related or likely to have an impact on or be impacted by the pregnancy.	878	49	28 (actual) 38 (assumed*)
Cat 2	Potential for diagnosis or treatment to have an impact on or of the pregnancy.	576	32	18 (actual) 35 (assumed*)
Cat 3	Not pregnancy-related and unlikely to have any impact on the pregnancy.	324	18	10

*Assumed following case note review – see below

Of the 1,209 attendances with “No diagnosis recorded” or “No abnormality detected”, a case note review was performed for a random sample of 20 episodes. This showed that 5 (25%) had a category 1 diagnosis and 9 (45%) had a category 2 diagnosis.

If this sample is representative of the distribution of diagnostic categories among those attendances with no diagnosis recorded, then the number of attendances with a category 1 diagnosis would be in the region of 1,180 (878 + 25% of 1209). This would also equate to 38% of all attendances.

Similarly, this would equate to 1,113 category 2 diagnoses (569 + 45% of 1209), accounting for 35% of all attendances.

The isolation of clinical services at LWH from the EDs provides a significant clinical risk to pregnant women in Liverpool, creates enormous inefficiency in the system and has a negative impact on patient experience.

3.10.2 Attendances and Admissions at LUHFT

Figure 6 shows the number of pregnant women booked to have their babies with LWH, who attended LUHFT EDs by month from 1 April 2022 – 31 March 2024. Reflecting the analysis above we would expect over 70% of these attendances to be pregnancy-related.

Figure 6: LUHFT ED Attendances for LWH Booked Pregnancies (April 2022 – March 2024)

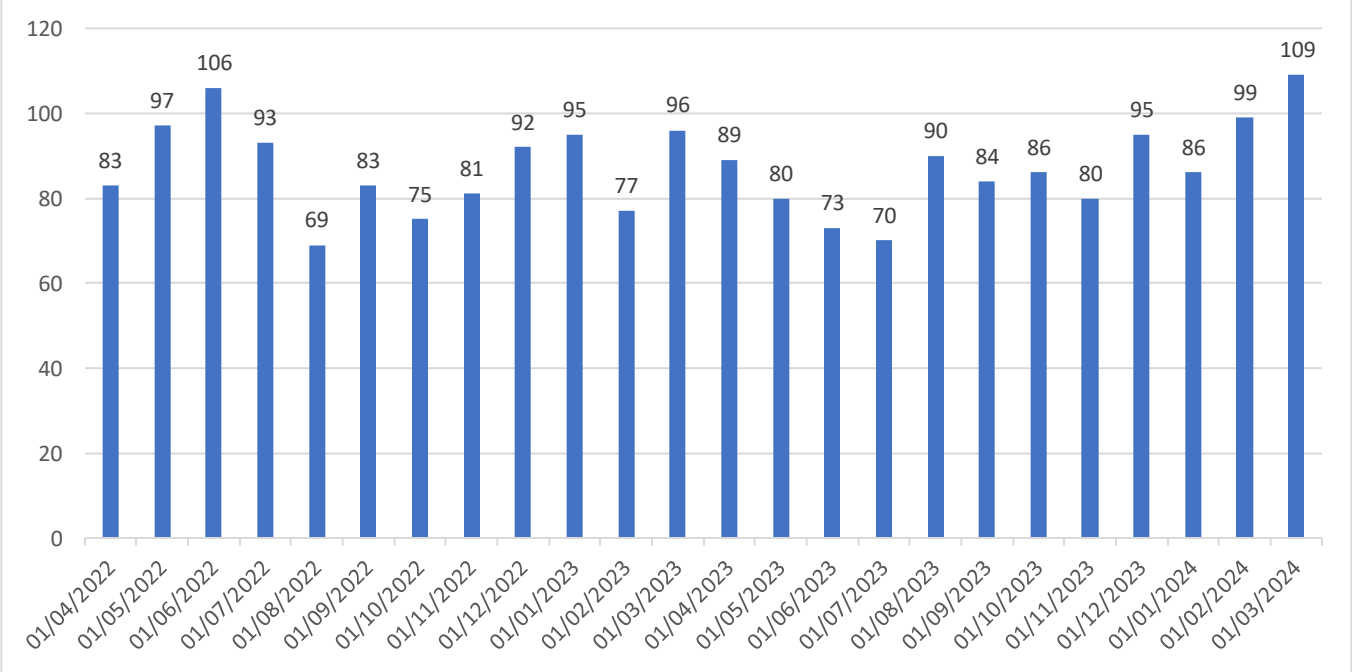
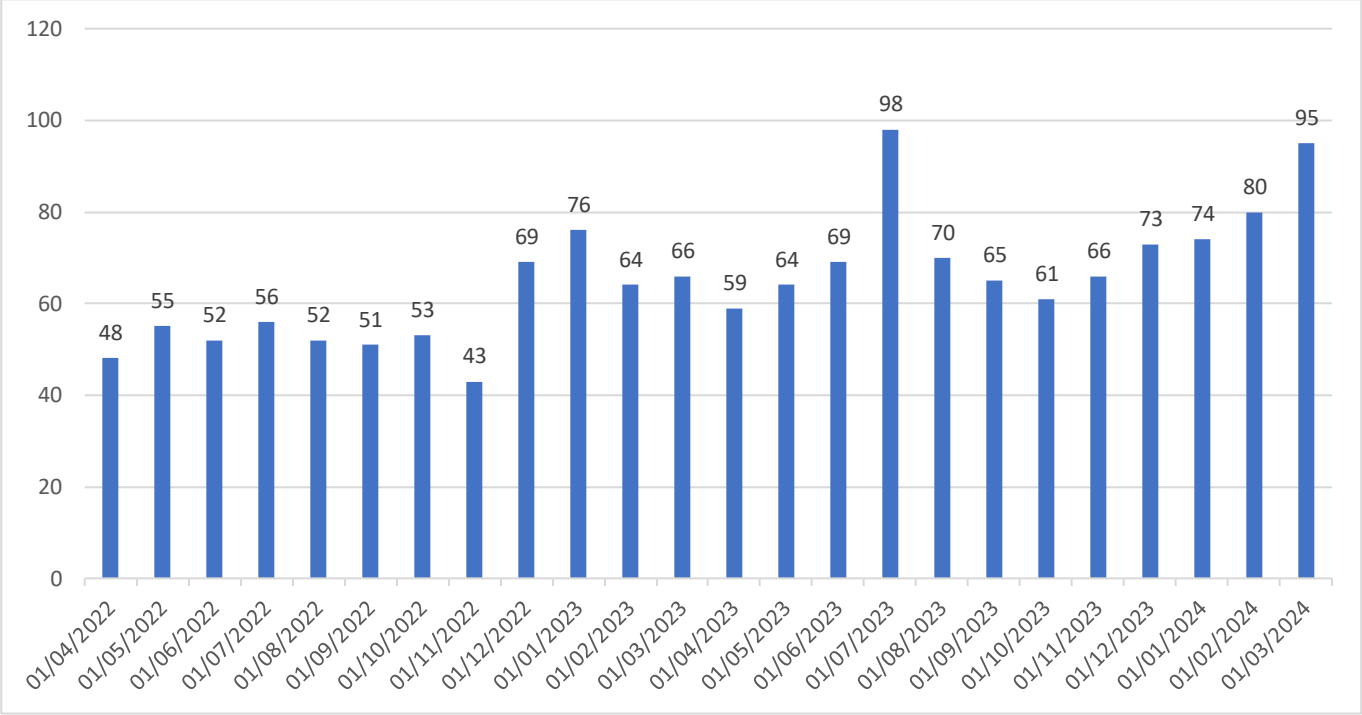


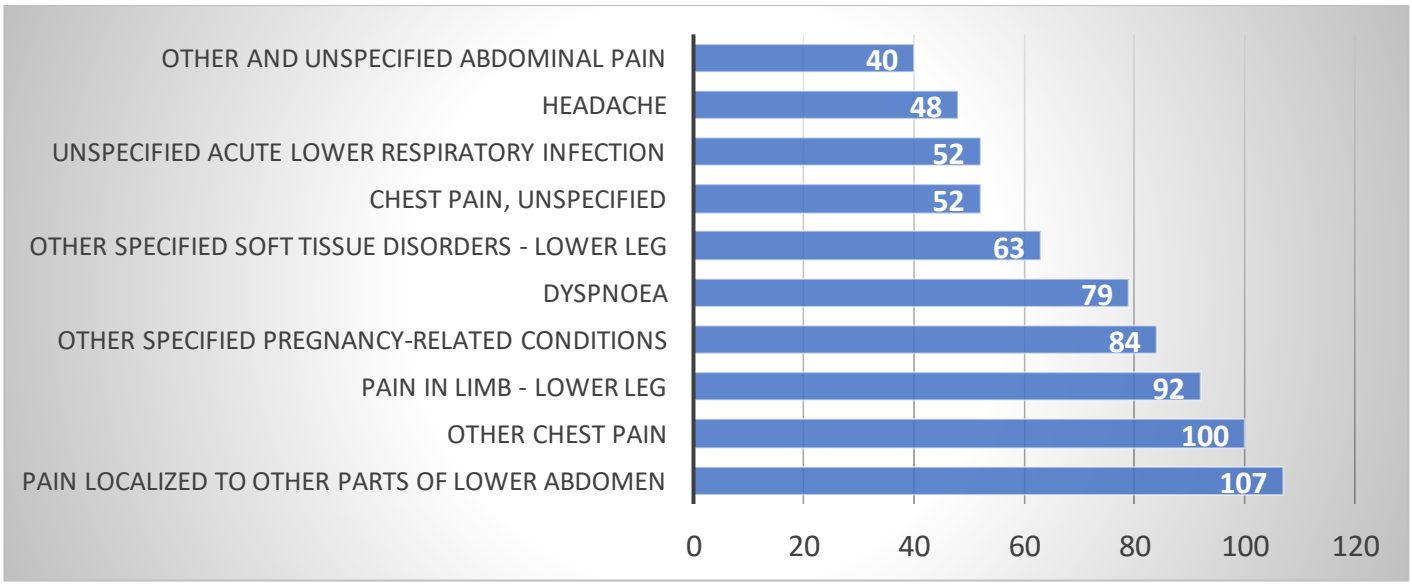
Figure 7 shows the numbers of women who had booked their pregnancy with LWFT and who were admitted to either the Royal Liverpool or Aintree Hospitals (by month 1/4/22 – 31/3/24).

Figure 7: LUHFT Admissions for LWH Booked Pregnancies (April 2022 – March 2024)



As illustrated in Figure 8 below, many of the reasons for admission could be pregnancy-related or could affect a pregnancy.

Figure 8: LUHT Admissions showing top 10 Diagnoses (April 2022 – March 2024)



3.11 Gynaecology Services

3.11.1 Review of Gynaecology Patients Attending LUHFT Emergency Departments (EDs)

There were 4,073 attendances at RLH or Aintree EDs by 3018 women known to the LWFT gynaecology service between 29/3/21 and 21/2/24.

i. Diagnoses

2,482 attendances (61%) had a diagnosis recorded in the patient record; 1,591 (39%) did not have a diagnosis recorded.

Of those with a diagnosis recorded, these were categorised into one of three categories as illustrated in Table 12.

Table 12: Gynaecology Patients Attending LUHFT EDs with Recognised Diagnosis Recorded (29/3/21 – 21/2/24)

	Recognised diagnosis recorded	n	% of those with a diagnosis	% of all attendances
Cat 1	Gynaecology diagnosis	609 attends 587 women	24.6	15
Cat 2	Diagnosis that may have a gynaecological component or gynaecological implications.	161 attends 147 women	6.5	4
Cat 3	Non-gynaecological diagnoses	1,712 attends 1,198 women	69	42

To date, a case note review of the women in category 3 has not yet been completed. This would enable an estimation of the proportion of women with no diagnosis recorded that were in category 1 or 2 (as noted above for attendances by pregnant women).

From the analysis completed to date:

- Between 15% and 24.6% of attendances by these women were for a primary gynaecology diagnosis; this is equivalent to 1 – 1.6 women attending every week.

- Between 4% and 6.5% of attendances were with a diagnosis that may have had a gynaecology component or implication; this is equivalent to 0.25 – 0.4 attendances per week.

Of the attendances with a Category 1 diagnosis, nine women required critical care for between 2 and 12 days (median 3 days). The total number of days of critical care required by this cohort was 40 days.

None of the women with a category 2 diagnosis required critical care.

ii. Attendances at both a LUHFT ED and LWH

Of the 4,073 attendances at a LUHFT ED:

- 1,956 attendances (48%) were accompanied by an attendance at the LWH ED in the same 24-hour period. Of the 1,814 women with an accurate LWH attendance time record recorded 1,679 (93%) attended LUHFT first. (142 women did not have a valid LWH attendance time recorded).

- A further 95 women (2.3%) were admitted to an inpatient bed at LWH from one of the LUHFT EDs.

- Therefore, 2,051 (50%) of the attendances at a LUHFT ED were accompanied by contact with the LWH site within 24 hours of the ED attendance; that is, two women every day, known to LWH gynaecology services, are seen at both LUHFT ED and LWH ED (or have a LWH admission).

Attendances at both LUHFT ED and the LWH site for this group of women is likely to result in delays to care and treatment potentially impacting on outcomes, poor patient experience, duplication of clinical activity (diagnostics etc) and inefficient use of the clinical workforce.

iii. Social Deprivation

Of the 3,018 women who attended a LUHFT ED and were also known to LWH, 2,975 had a deprivation score recorded. Their deprivation scores are shown in Table 13 below.

Table 13 Deprivation Scores – Women Attending LUHFT EDs Known to LWH Gynaecology Services (29/3/21 – 21/2/24)

Deprivation Decile	n	% of those recorded
1	1600	53.8
2	410	13.8
3	210	7.1
4	163	5.5
5	197	6.6
6	83	2.8
7	115	3.9
8	118	4.0
9	51	1.7
10	28	0.9
Total with a score recorded	2975	
No score recorded	43	1.42% of the 3018

577 women with a primary gynaecological diagnosis (see Table 12 above) had a deprivation score recorded. Table 14 below shows the distribution of scores for this group of women.

Table 14: Deprivation Scores – Women with a Primary Gynaecological Diagnosis (29/3/21 – 21/2/24)

Deprivation Decile	n	% of those recorded
1	299	51.8
2	75	13.0
3	44	7.6
4	34	5.9
5	44	7.6
6	23	4.0
7	19	3.3
8	24	4.2
9	11	1.9
10	4	0.7
Total with a score recorded	577	
No score recorded	10	1.7% of the 587

By comparison, a similar proportion of women attending the gynaecology emergency department at Crown Street were from the lowest decile for social deprivation (54%).

iv. Ethnicity

Of the 3,018 women who attended ED over the period of the review, 336 (11%) had no ethnicity recorded.

Of the 2,682 with an ethnicity recorded 355 (13.2%) were from ethnic minority groups.

Of the 587 with a primary gynaecological diagnosis, 76 (13%) had no ethnicity recorded.

Of the 511 with an ethnicity recorded, 82 (16%) were from ethnic minority groups.

3.11.2 Attendances and Admissions at LUHFT

There are significant numbers of women attending the two EDs after recent gynaecology interventions although a proportion of these attendances will be unrelated to their gynaecology episode.

Figure 9 shows the numbers of women attending a LUHFT ED within four weeks of a gynaecology episode with LWFT.

Figure 9: Attendances at LUHFT Following Recent Gynaecology Activity 1/4/22 – 31/3/24

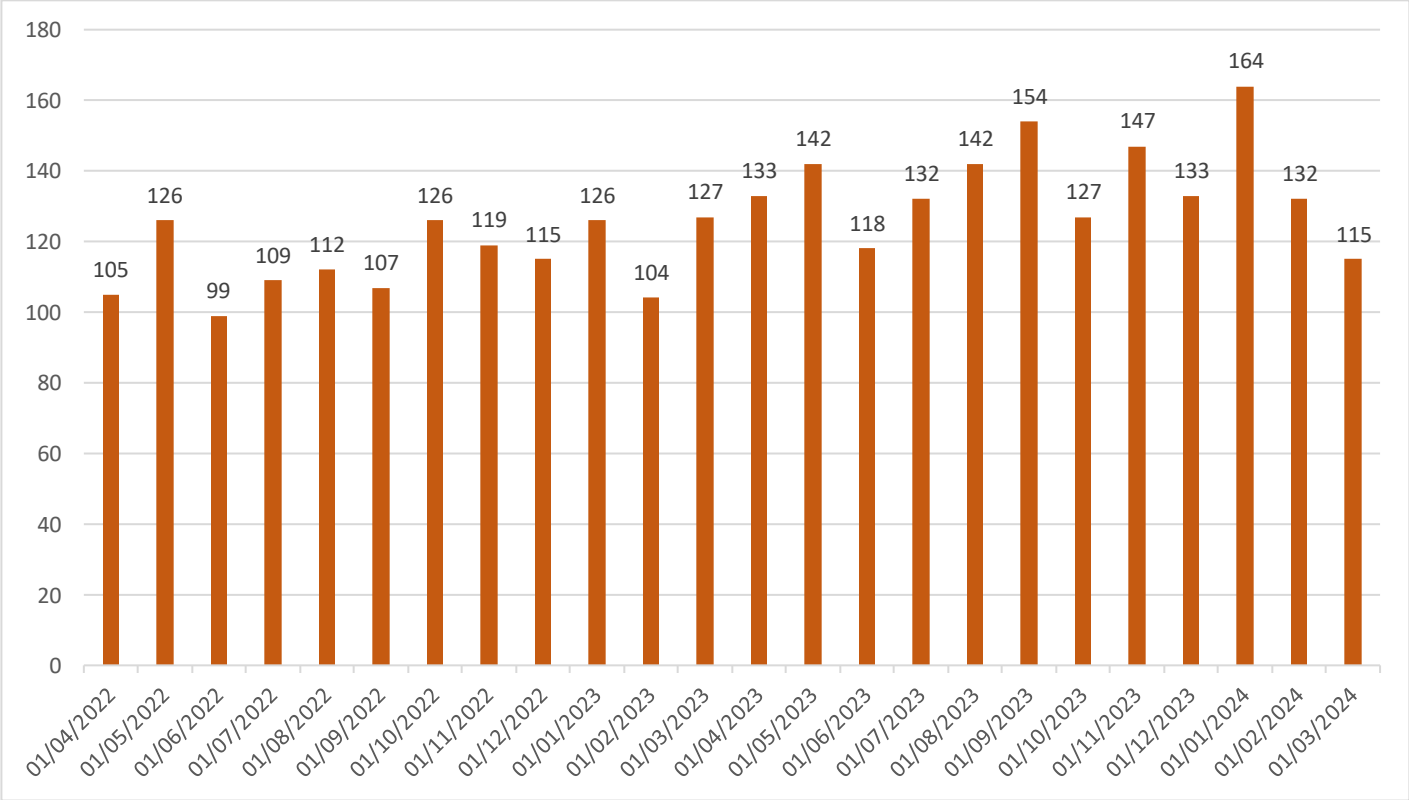


Figure 10 below shows the numbers of women admitted to LUHFT within four weeks of a gynaecology episode with LWFT.

Figure 10: Admissions at LUHFT Following Recent Gynaecology Activity 1/4/22 – 31/3/24

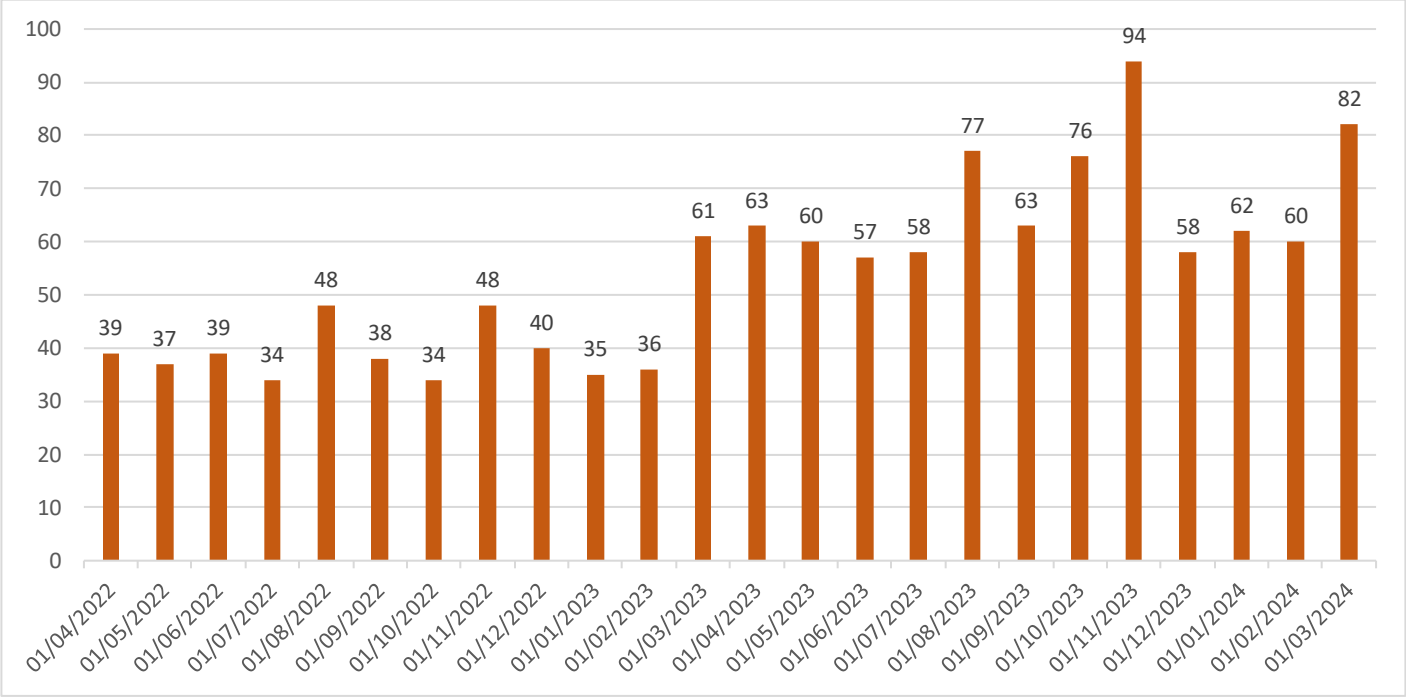
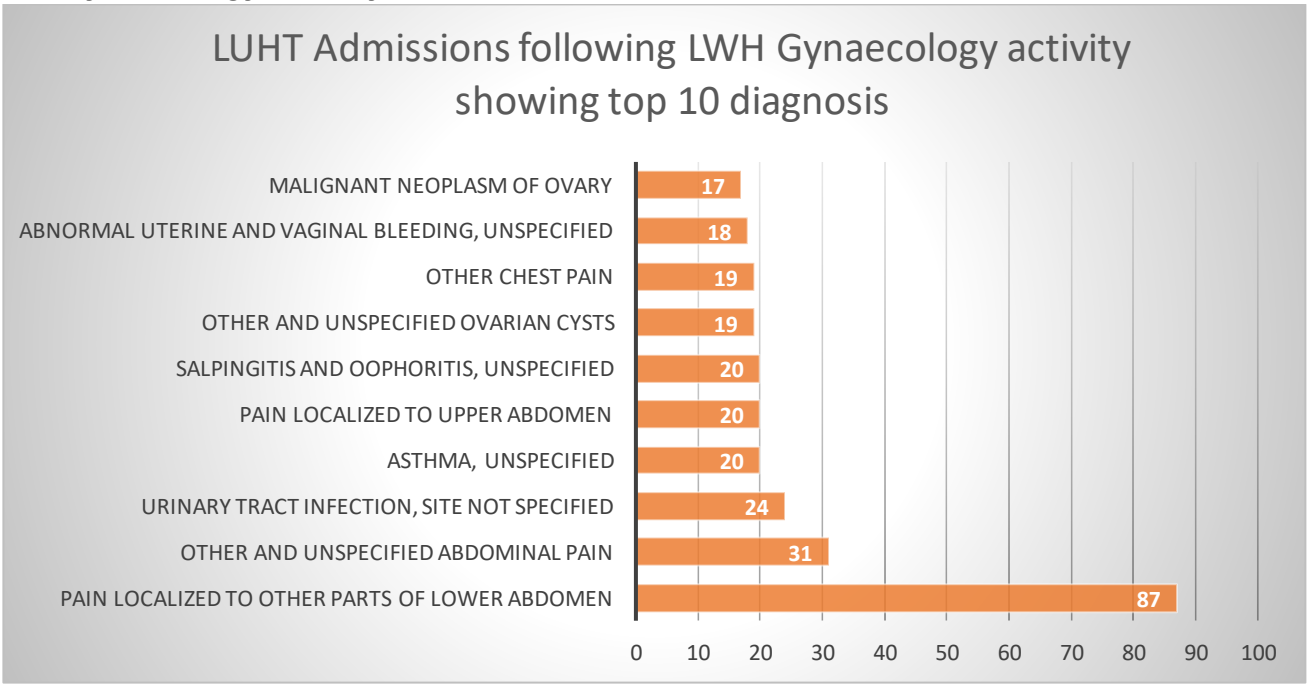


Figure 11 shows the top 10 diagnoses for admission to LUHFT within four weeks of a gynaecology episode with LWFT; many of these are, or could be, gynaecology-related.

Figure 11 Top 10 diagnoses for admission to LUHFT Following Recent Gynaecology Activity 1/4/22 – 31/3/24



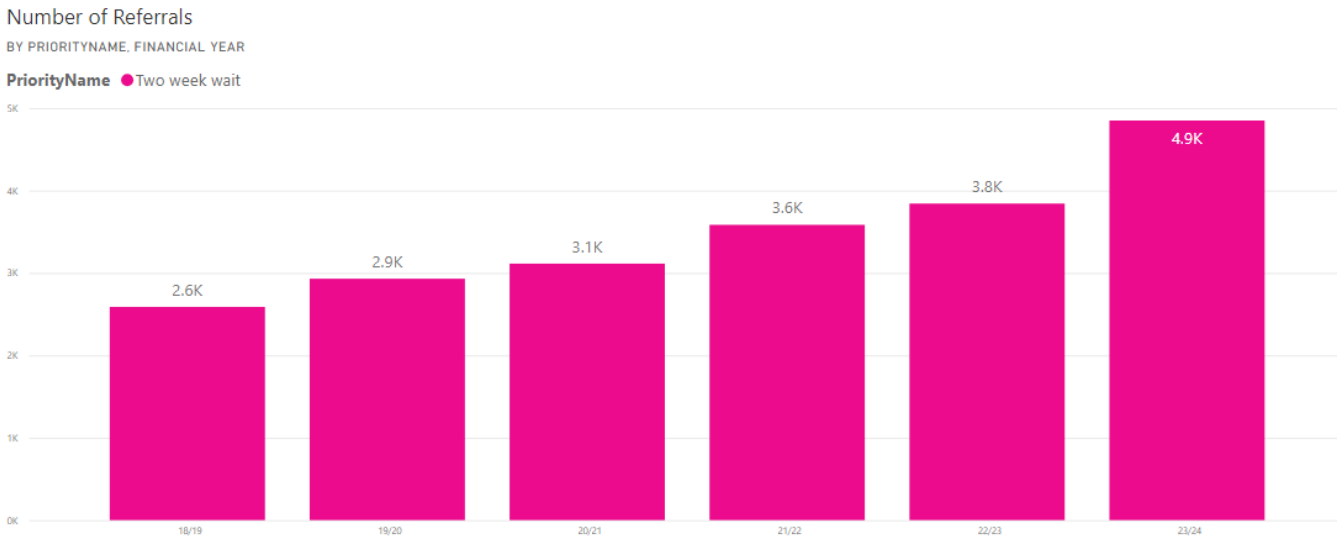
3.11.3 Demand for Gynaecology & Gynae-Oncology Services

LWH provides specialised complex gynaecology cancer (oncology) services across the Cheshire and Merseyside Cancer Alliance. Activity in gynaecology cancer has been rising over recent years.

- Cancer incidence in women is projected to increase by 36% by the year 2035.
- In 2015, gynaecological cancers accounted for 15% of diagnoses in the UK and from 1995-2015 there was a 55% increase in uterine cancer incidence which is believed to be linked to obesity[24].
- Mortality rates from cancer of the uterus have increased by around 21% over the last 20 years. This is expected to continue to increase over the coming years and is projected to be the 6th most common cause of cancer mortality in women by 2035.
- Cancer incidence and mortality rates are higher amongst more deprived communities and Liverpool and the wider North Mersey area have significant levels of deprivation.

There has been an 87% rise in urgent GP referrals to LWFT for gynaecology cancer from 2018/19 to 2023/24. Although most of these referrals will not result in a cancer diagnosis, many will result in other benign gynaecology treatments and interventions. Figure 12 shows the rise in gynaecology cancer referrals over the last six years.

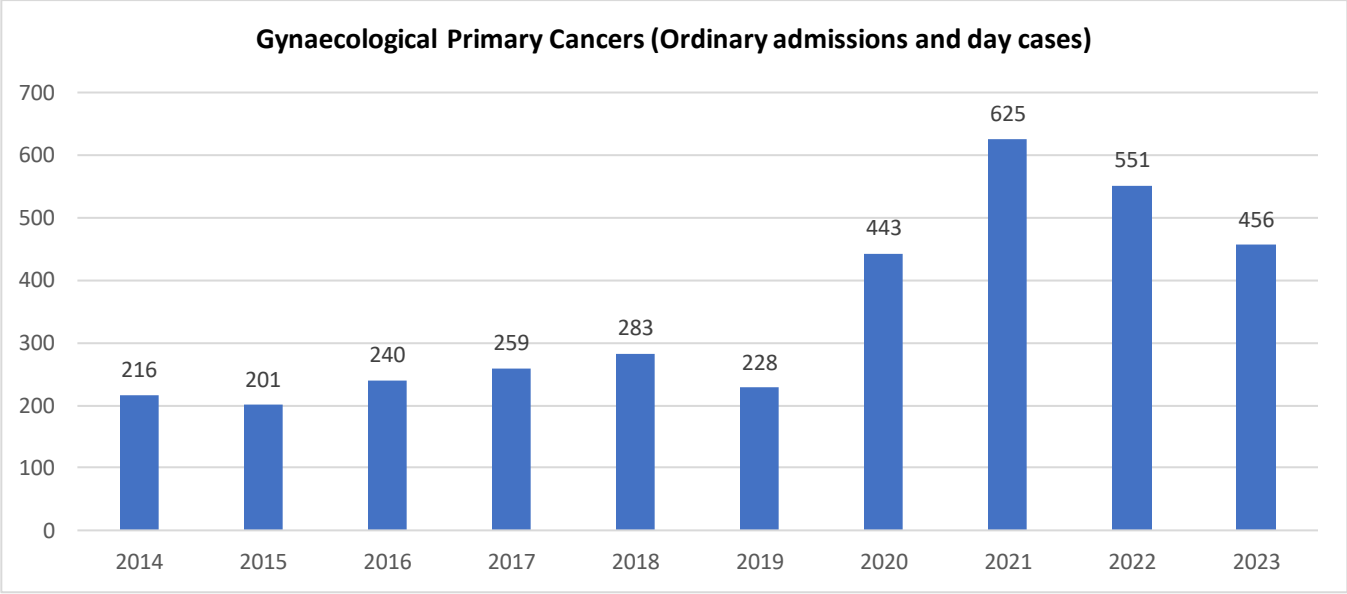
Figure 12: Urgent GP Referrals for Gynaecology – Suspected Cancer (LWFT data) – 2018/19 – 2023/24



[24] www.bma.org.uk/media/2112/bma-womens-health-cancer-in-women-aug-2018.pdf

Figure 13 shows the growth in inpatient admissions and day cases for gynaecology cancers over the last 10 years.

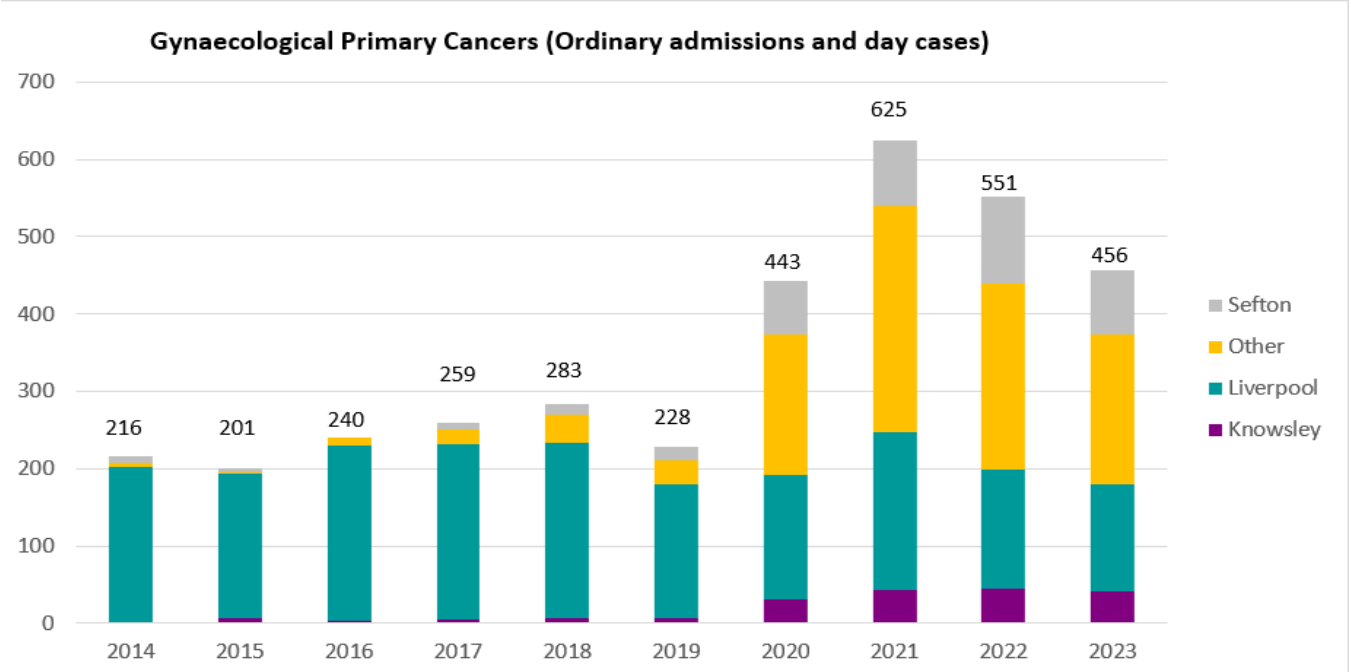
Figure 13: Gynaecology Cancer Activity – Inpatients & Day Cases 2014 – 2023 (LWFT data)



Source: 2014 – 2021 data from SUS & 2022 – 2023 data from LWFT.

Residents from outside the North Mersey area now account for around half of the patients admitted at LWH compared to just 6.5% in 2014 (see Figure 14 below).

Figure 14: Gynaecology Cancer Activity – Patient Area of Residence 2014 – 2023



Source: 2014 – 2021 data from SUS & 2022 – 2023 data from LWFT.

There are a number of reasons for the observed rise in activity:

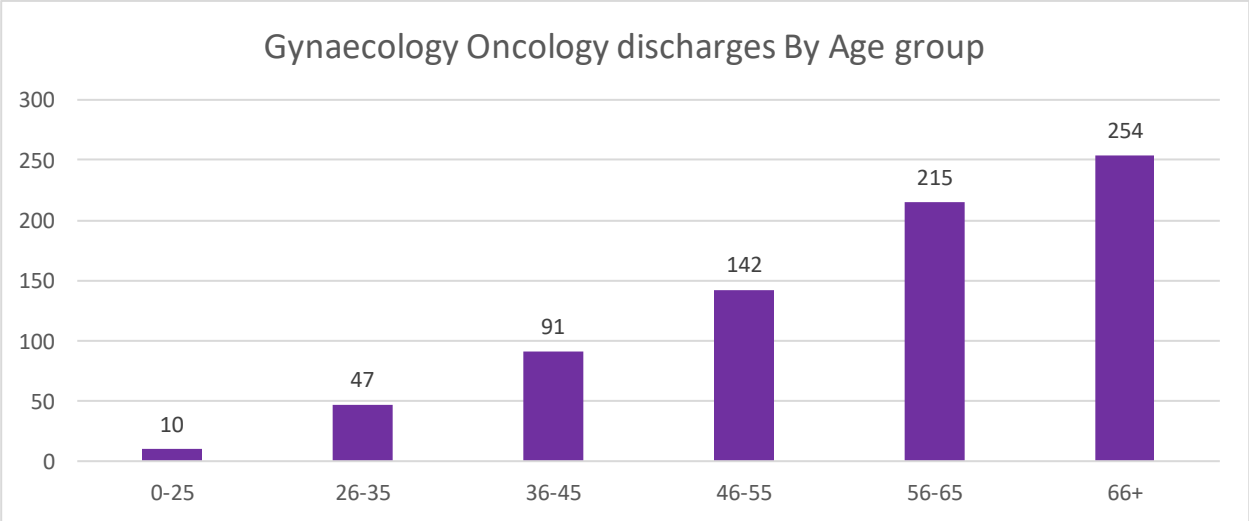
- The incidence of endometrial cancer is rising nationally as the population becomes more obese; this is the most common gynaecological cancer and forms a significant proportion of LWH activity.[25]
- There are more women now being referred to the specialist service at LWH as the indication for tertiary referral for endometrial cancer has broadened in recent years; now only lower-grade cancers are being operated on in more local secondary care units and all other patients are considered for pelvic nodal assessment which is only provided by the tertiary service.
- The capacity and capability of gynaecologists in some units has reduced. Senior experienced gynaecologists are retiring, and junior doctors are no longer trained to the same general level in gynaecological surgery. Therefore, patients who previously would have been operated on in local cancer units are more likely to be referred to specialist centres.
- Since the first wave of COVID-19, more patients have been presenting with advanced disease. Presentations may have been delayed by perceived or actual difficulty in accessing healthcare, and consequently some women have needed to be referred to the tertiary centre. If the disease had been detected earlier, it is possible that their care could have been managed locally.

3.11.4 Gynaecology Activity by Age

Gynaecological cancer incidence increases with age and the numbers of women over 65 are predicted to rise substantially by 2040 (ONS 2018).

Figure 15 below shows gynaecology oncology activity by age group in 2023/24.

Figure 15: Gynaecology Oncology Activity by Age 2023/24 (LWFT data)



[25] https://digital.nhs.uk/data-and-information/publications/statistical/cancer-registration-statistics/england-2021---summary-counts-only/cancer-incidence

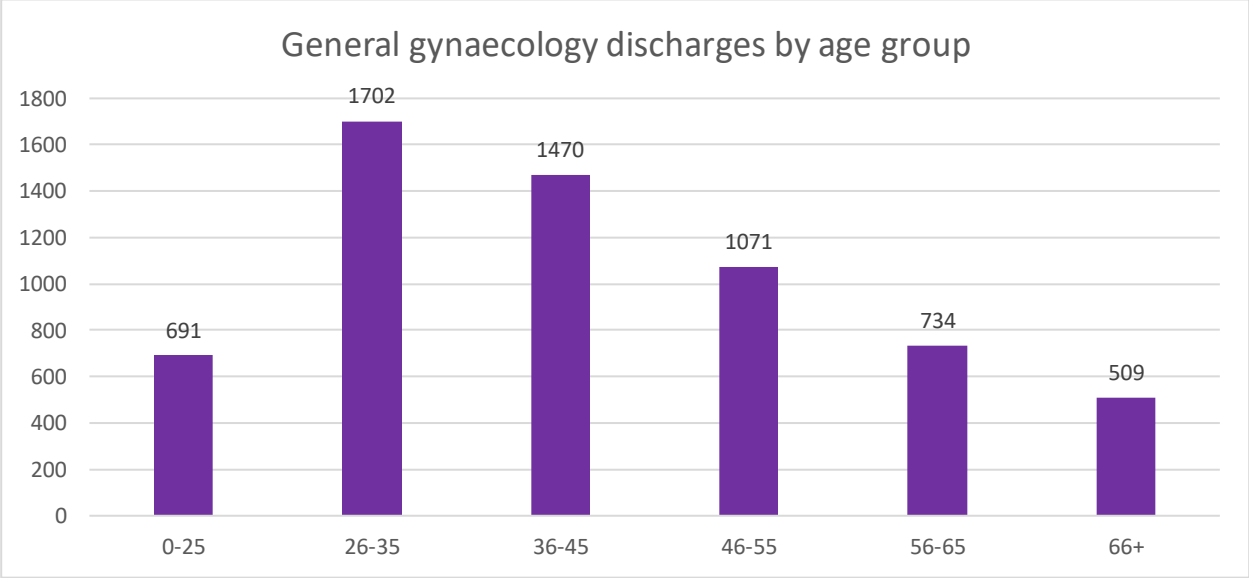
Approximately two thirds of all cancer activity at LWFT is for women who are 56 years or older. 50 women receiving treatment in this cohort were over 80 years old.

Older women are more likely to have co-morbidities and a greater anaesthetic risk and are therefore more likely to be complex to manage.

With increases in the population over 60 predicted to rise, the demand on gynaecology oncology services will increase even further.

By comparison, there are more patients from younger age groups using general gynaecology services (see Figure 16 below).

Figure 16: General Gynaecology Activity by Age 2023/24 (LWFT data)



In this cohort of patients one fifth were over 56 years old.

Over 50% of patients were between 26 and 45 years old.

3.11.5 The Organisation of Complex Gynaecology Surgery

In many cases of complex gynaecology (cancer and non-cancer), other services need to be involved as well as gynaecology, such as urology, colorectal surgery, general surgery, vascular services and post-operative critical care. The gynaecologists from LWH have worked in partnership with colleagues at the Royal Liverpool and Aintree Hospitals over recent years to proactively plan and manage complex gynaecology surgery and treatment.

As well as providing surgery at the Crown Street site, the LWH gynae-oncology team operate regularly on the Royal Liverpool site and very occasionally in other surrounding hospitals (for example Alder Hey, Whiston, Warrington). In addition, the team have a regular gynae-oncology surgical list every 4-6 weeks (about 10 per year) at Nobles on the Isle of Man.

Despite the partnership working that has been developed, there remain challenges within the oncology service.

Complex oncology patients receive care for a single diagnosis from up to four different trusts (the referring hospital, LWFT, LUHFT and the Clatterbridge Cancer Centre (CCCFT)). This is confusing for patients and involves multiple transfers of care; the potential for miscommunication is high. It can also involve a longer pathway as every transfer of care takes time.

Demonstrating the levels of complexity that are being managed by the gynaecology team, an audit (2021) of 51 elective gynaecological surgeries undertaken at the Royal Liverpool Hospital, found that:

- Over 60% of patients were over 60 years of age.
- 80% had malignant disease.
- 47% had two or more co-morbidities.
- Laparotomy (open surgery) accounted for 65% of all procedures; and
- Colorectal and Urology surgeons were involved in a third of cases.

3.12 Ambulance Transfers - 2023/24

In this section, the data has been sourced from North West Ambulance Service (NWAS) and analysed by the LWFT information team.

There are large numbers of ambulance transfers for women across Liverpool every year, which include transfers for critical care and to EDs.

The vast majority of these transfers are between LWH, the Royal Liverpool and Aintree Hospitals for accessing services not provided at the 'originator' site, for example critical care, cardiology, surgical specialties, maternity, gynaecology and emergency services.

In 2023/24 there were over 200 ambulance transfers between LWH and either the Royal Liverpool or Aintree Hospitals.

Category 1[26] (life-threatening) or Category 2 (emergency) transfers made up at least half of these ambulance journeys. Category 2 transfers were the most frequent, both to and from LWH from both LUHFT hospitals. Every year, there are more adult transfers ***from LWH*** to the Royal Liverpool Hospital than to any other adult acute service provider. There were 64 transfers to RLH in 2023/24 – 2 were category 1 and 43 were category 2.

There were more adult transfers ***to LWH*** from Aintree Hospital than any other acute service provider, with the Royal Liverpool Hospital second in volume of activity. There were 75 transfers from Aintree in 23/24 – 10 were category 1 and 41 were category 2. There were 59 transfers from the Royal Liverpool – 13 were category 1 and 33 were category 2.

Hospitals are considered a place of safety and, during periods of high demand or pressure on ambulance services, this can mean that sometimes women wait longer for ambulance transfers.

The numbers of transfers to and from LWH have been reducing over the last few years; this is most likely due to improved management of clinical risks on site, increased operating at LUHFT sites and improved access to diagnostic services at the LWH site.

The following tables provide further details.

[26] Definitions
Category 1 = Life threatening – time critical event needing immediate intervention and/or resuscitation.
Category 2 = Emergency – a serious condition, such as stroke or chest pain, which may require rapid assessment, urgent on-scene intervention and/or urgent transport.

Table 15: Ambulance Transfers from LWH 2018/19 – 2023/24

Destination	2018/19	2019/20	2020/21(1)	2021/22	2022/23	2023/24
RLH	139	148	122	140	118	64
Arrowe Park	28	36	12	6	3	1
Whiston	24	20	13	7	1	3
Aintree	8	5	2	8	5	5
Subtotal	**199**	**209**	**149**	**161**	**127**	**73**
Unknown care site (2)	137	5	8	3	1	3
All other destinations (3)	174	92	42	66	26	27
Grand Total	**510**	**306**	**199**	**230**	**154**	**103**

Table 16: Ambulance Transfers to LWH 2018/19 – 2023/24

Patient Origin	2018/19	2019/20	2020/21(1)	2021/22	2022/23	2023/24
RLH	93	77	84	85	55	59
Arrowe Park	12	9	0	0	0	0
Whiston	20	19	24	11	4	16
Aintree	141	135	95	93	58	75
Subtotal	**266**	**240**	**203**	**189**	**117**	**150**
Unknown care site (2)	957	797	725	611	522	546
All other origins (3)	427	415	129	81	49	69
Grand Total	**1650**	**1452**	**1057**	**881**	**688**	**765**

(1) Activity was reduced in 20/21 due to the effects of the COVID pandemic.

(2) Unknown care site – NWAS definition - these may be private addresses, clinics or any public or healthcare place that is not a hospital, including specialist wards within a hospital site.

(3) Includes all other hospitals e.g. Leighton, Countess of Chester, Wirral, Southport and destinations not categorised as 'unknown care site'.

The following two tables show the ambulance transfers between the LWH and the Royal Liverpool Hospital by ambulance category[27] over the last six years.

Table 17: Ambulance Transfers from LWH to the Royal Liverpool Hospital by Category

Category	18/19	19/20	20/21	21/22	22/23	23/24	Total
C1	10	12	5	3	7	2	39
C2	68	71	41	75	65	43	363
C3	31	19	0	1	0	0	51
C4	25	20	1	0	0	0	46
C4HCP	5	2	0	0	0	0	7
HCPIFT34	0	24	75	61	46	19	225
Total	**139**	**148**	**122**	**140**	**118**	**64**	**731**

Table 18: Ambulance Transfers to LWH from the Royal Liverpool Hospital by Category

Category	18/19	19/20	20/21	21/22	22/23	23/24	Total
C1	4	7	1	3	3	13	31
C2	44	27	23	43	25	33	195
C3	30	9	0	0	0	0	39
C4	15	13	0	0	0	0	28
C4HCP	0	1	0	0	0	0	1
HCPIFT34	0	20	60	39	27	13	159
Total	**93**	**77**	**84**	**85**	**55**	**59**	**453**

[27] Definitions
Category 1 = Life threatening – time critical event needing immediate intervention and/or resuscitation.
Category 2 = Emergency – a serious condition, such as stroke or chest pain, which may require rapid assessment, urgent on-scene intervention and/or urgent transport.
Category 3 = Urgent – an urgent problem (not immediately life-threatening) that needs treatment to relieve suffering.
Category 4 / 4HCP = Non-urgent – a non-urgent problem that needs assessment and transportation.
HCPIFT34 = Inter-facility transfer requested by a healthcare professional – category 3 or 4 with response time agreed between NWAS and the HCP.

Tables 19 and 20 show the ambulance transfers by category between LWH and Aintree over the last 6 years.

Table 19: Ambulance Transfers from LWH to Aintree Hospital by Category

Category	18/19	19/20	20/21	21/22	22/23	23/24	Total
C1	0	0	0	1	1	0	2
C2	5	2	1	5	4	1	18
C3	3	1	0	0	0	0	4
C4	0	1	1	0	0	0	2
C4HCP	0	0	0	0	0	0	0
HCPIFT34	0	1	1	2	0	4	8
Total	**8**	**5**	**3**	**8**	**5**	**5**	**34**

Table 20: Ambulance Transfers to LWH from Aintree Hospital by Category

Category	18/19	19/20	20/21	21/22	22/23	23/24	Total
C1	11	12	11	18	15	10	77
C2	70	40	37	42	21	41	251
C3	38	26	0	0	0	0	64
C4	18	16	0	0	0	0	34
C4HCP	4	4	0	0	0	0	8
HCPIFT34	0	37	47	33	22	24	163
Total	**141**	**135**	**95**	**93**	**58**	**75**	**597**

There will have been other ambulance transfers for pregnant women in Liverpool which are not accounted for in this data, for example, transfers from Aintree to Arrowe Park under the agreed Cheshire and Merseyside major trauma pathway.

This pathway means that pregnant women who have booked their maternity care with LWH and who subsequently experience a major trauma local to Liverpool (e.g., a road traffic accident), will initially be treated and stabilised at Aintree (as the major trauma centre). Then, due to a lack of obstetric support at Aintree, women will be transferred to Arrowe Park, which has both obstetric and trauma services present, for their ongoing inpatient care.

3.13 Outreach Midwifery

LWH provides an outreach midwife service to support patients who are pregnant and are at other trusts in the city; these women may be on a ward, in critical care, in ED or on a medical or assessment unit.

The majority of these women will have booked their ante-natal or post-natal care with LWH but some will be women who are receiving their maternity care from other trusts.

This service has developed because services are not co-located; it is a sub-optimal 'workaround'. If services were co-located, pregnant women would be admitted to medical and surgical wards where they could receive rapid onsite maternity care at any time it was required.

Table 21 below shows the activity provided by the dedicated outreach service over the last 3 calendar years. It does not include activity provided by other community midwives or cover for days off or annual leave, and it does not include any activity provided by other specialists such as obstetric consultants.

Table 21: Outreach Midwifery Activity 2021 – 2023 (LWFT data)

Year	2021	2022	2023
Total number of women supported	93*	27	35
Antenatal / postnatal / both	67 / 25 / 1	19 / 8 / 0	28 / 6 / 1
Number of face-to-face visits	161	36	61
Telephone consultations / follow up	157	41	33
LWH booking / Out of area booking	79 / 14	24 / 3	30 / 5
No. of women supported by site:			
Royal Liverpool	57	21	22
Aintree	31	3	11
Arrowe Park	0	0	1#
Liverpool Heart & Chest	1	3	1
Walton Centre	2	0	0
Whiston	2	0	0
Alder Hey	0	0	1

*Higher number of women in 2021 due to Covid admissions

Also inpatient at Aintree

3.14 Service Specifications, Clinical Standards and Clinical Co-Dependencies

3.14.1 Inability to Meet Specialist Service Specifications for Women's Services

The following service specifications for specialist women's services cannot currently be met in full at LWH:

- Termination of pregnancy for patients with complex co-morbidities – in particular co-location with intensive care and blood transfusion services.
- Specialist gynaecological cancers – in particular co-location with intensive care, colorectal surgical services, HPB / upper GI surgery, plastic surgery and urology oncology services.
- Specialised complex surgery for urinary incontinence and vaginal and uterine prolapse – in particular co-location with specialist urology and colorectal surgery.
- Networked Maternal Medicine Services – in particular co-location with intensive care, acute stroke, acute medicine, general surgery, cardiology, radiology and haematology services.
- Placenta accreta / abnormally invasive placenta – in particular co-location with intensive care, interventional radiology, vascular and blood transfusion services.

There are 460 service specification standards for specialised services that LWFT should be meeting. A review in 2022 found that LWFT was compliant with 394 of the standards and non-compliant with 46 (10%).

Of the 46 service specification standards with which LWH is not compliant, 22 (48%) are as a result of not being co-located with adult acute services with an additional four (9%) as a result of not being co-located with paediatric services.

LWH is currently working with specialised commissioners to become a designated specialist provider for complex TOP (termination of pregnancy), endometriosis, placenta accreta and fetal therapies (laser therapy and, with Alder Hey, fetal surgery).

There is a risk that specialised services may be lost from Liverpool and Cheshire and Merseyside if there is no long-term plan for achieving service quality standards and specifications. This is articulated more fully in the counterfactual case, referenced below, and this risk has been confirmed by specialised commissioners.

3.14.2 Clinical Standards and Service Specifications at Other Trusts

Similar to LWH not being able to meet clinical standards and specifications, other local trusts and acute sites cannot meet clinical standards and specifications either, because they do not have onsite gynaecology, maternity and neonatal services.

One illustration of this is major trauma as described earlier. The designated major trauma centre in Liverpool is based at Aintree Hospital, which does not have onsite obstetrics and gynaecology support as required by national standards. If a pregnant woman experiences major trauma in or near Liverpool, under current pathways, she may be treated and stabilised at Aintree Hospital and then transferred to Arrowe Park Hospital (which is a trauma unit rather than a specialist centre); there, she can receive ongoing care with both trauma and maternity services on site. Fortunately, pregnant women experiencing major trauma are very rare events.

3.14.3 National Standards Compliance – All Standards

LWFT has been reviewing compliance with all standards and specifications (specialised and non-specialised) since 2014. The latest full review was completed with clinicians in 2022.

In 2022, over two thirds (70%) of the standards not currently being met were due to being on an isolated site; of these 94% could be fully met by co-location with adult acute services.

Table 22: Standards Compliance

	Total non-compliant or only partially compliant	Total due to or partially due to isolated site	Fully met by colocation with Adult Acute & Emergency Care	Partially met by colocation with Adult Acute & Emergency Care	Not met by colocation with Adult Acute & Emergency Care*
CC, Theatre, Anaesthetics	18	15	14	0	1
Gynaecology	17	14	13	0	1
Maternity	68	43	41	0	2
	103	**72**	**68**	**0**	**4**

***would be met by co-location with paediatrics

3.14.4 South East Clinical Senate – Clinical Co-Dependencies

In 2014, South East Clinical Senate, published a document setting out the clinical co-dependencies of hospital services (i.e. which hospital services should be provided together).

This guidance was based on clinical evidence, national guidance, NICE guidelines, commissioning service specifications and national standards.

This work was updated in 2024.[28]

Figure 17 below sets out the clinical co-dependencies for obstetric-led (i.e. doctor-led) maternity services and the services that rely on gynaecology.

'Purple' services are those which should be provided alongside (on the same site) obstetric services.

'Red' services are those which should be able to 'attend the bedside' within a very short period, and without the need to transfer the woman.

In this recent work, the Senate has removed gynaecology as a co-dependency for obstetrics. They suggest that gynaecology would rarely be required unless there is an expectation that hysterectomies, in the case of massive postpartum haemorrhage, are required; in these circumstances the services become co-dependent.

As noted earlier, massive obstetric haemorrhage is not an uncommon occurrence at LWH and is a significant risk given the high-risk pregnancies that are being managed; therefore, gynaecologists who perform caesarean hysterectomies would be co-dependent for obstetrics at LWH.

[28] https://secsenate.nhs.uk/wp-content/uploads/2024/01/The-Clinical-Co-Dependencies-of-Acute-Hospital-Services-Final.pdf

Figure 17: Clinical Co-dependencies – Obstetrics and Gynaecology

RAG RATING DEFINITIONS The colour describes the dependency of the service in the row, on the support service in the column. Note that both the Purple and Red dependencies describe services that should not require the patient to move hospitals.		**Co-dependent services of obstetric-led maternity services (one of 12 major acute hospital services)** (NB in many hospitals the same doctors do both obstetrics and gynaecology) The services in bold text are not available at Crown Street.	**Services that rely on gynaecology (one of the clinical specialties that support the services of major acute hospitals)** (NB Gynaecology was not identified as one of the 12 major acute hospital services)
PURPLE **Services should be co-located (based) in same hospital.**		**ED / Emergency medicine** **Adult critical care** General Anaesthetics Neonatology X-ray and diagnostic ultrasound CT Scan MRI Scan **Urgent diagnostic haematology and biochemistry**	ED / Emergency medicine (acute take) Acute surgical take Major trauma / trauma unit
RED Services should come to patient (patient transfer not appropriate), but could be provided by visiting / in-reach from another site (either physically, or via telemedicine links) if not based in the same hospital.	Within 2 hours	**General surgery (upper and lower GI)** **Urology** **Vascular surgery (network**	Adult critical care
	Within 4 hours	**Acute and general medicine** **Diabetes and endocrinology** **Acute cardiology** **Nephrology (not incl dialysis)** **Neurology** **Clinical microbiology / infection**	Red but no time given: Renal services Acute paediatrics / paediatric surgery
	Within 24 hours	**Respiratory medicine** **Medical gastroenterology** **Physiotherapy**	
AMBER Ideally on same site but could alternatively be networked via robust emergency and elective referral and transfer protocols		**Urgent GI endoscopy** **Laboratory microbiology** **Dietetics** Gynaecology	
GREEN Does not need to be on same site. Appropriate arrangements are in place to obtain specialist opinion or care.		**Elderly medicine** **Rheumatology, Ophthalmology, Dermatology** **Trauma, Orthopaedics** **ENT, Maxillo-facial surgery** **Vascular surgery (arterial centre)** **Neurosurgery, Plastic surgery, Burns** **Paediatric critical care, Acute paediatrics,** **Thoracic surgery, Cardiac surgery,** **Stroke centre / acute stroke care,** **Inpatient dialysis,** **Acute oncology, Palliative care,** **Cardiac MRI, Nuclear medicine,** **Acute inpatient rehab, OT, SALT**	

3.15 Counterfactual Case 2022

A counterfactual case, developed in 2022 by LWFT, set out the likely consequences of women's hospital services remaining as they are in the long term.

It provided a realistic 'Business as Usual' or 'Do Nothing / Do Minimum' comparison to other options that will be explored later in the programme.

The case explored five scenarios and concluded that:

- A snowball effect may follow the loss of any obstetric services from LWH because of the loss of reputation and consequent difficulties with recruitment and retention of senior obstetricians.

- The loss of complex gynaecology from the LWH portfolio would have a negative effect upon obstetric services in Liverpool with some region-wide effects also seen.

- The loss of complex gynaecology from the city would have a rapid and catastrophic effect upon obstetric services in Liverpool and would necessitate major region-wide clinical reconfiguration.

- Following the loss of complex gynaecology and impact to obstetric services in Liverpool, there will be a higher residual level of risk for women experiencing acute emergencies.

An independent Clinical Senate review in February 2022 concluded that the scenarios described were realistic and, in some cases, the negative consequences are understated.

The counterfactual case will be revisited and updated later in the programme to ensure it reflects the broader system wide impacts of any diminution of gynaecology, maternity and neonatal services in Liverpool.

4. Workforce Issues

There are numerous workforce issues either caused by, or exacerbated by, the current configuration of services. They include the following:

4.1 Consultant posts and vacancies

Obstetric and gynaecology services cannot operate without anaesthetic doctors supporting them. As a stand-alone site, there are very specific pressures placed on consultant anaesthetists in emergency situations as LWH does not have Consultants in Intensive or Critical Care Medicine.

Anaesthetic doctors support women's services by providing pain relief (e.g. epidurals) and providing general anaesthesia in theatre (e.g. for gynaecology operations and caesarean sections). At LWH they also support acutely deteriorating patients, provide Level 2 HDU care and support the stabilisation and transfer of women to other critical care units. In addition, they are the on-site emergency responders in life-threatening situations.

There are significant challenges within the anaesthetic consultant workforce with an average of five long-standing consultant vacancies. At the time of writing, there are eight consultant anaesthetists in joint posts with LUHFT. LWFT has not recruited a stand-alone (dedicated only to LWFT) consultant anaesthetist since 2022. Of the 10 consultant anaesthetists employed directly by LWFT, four are over the age of 61, three of whom are over 65.

In anaesthetics, the funding for long-standing consultant vacancies at LWFT has been used to recruit to a mix of speciality and specialist doctors (specialist being the more senior, just below consultant level). Of the 9 clinical fellow and specialty doctor posts recently offered, only one applicant had completed their undergraduate training in the UK. Assessing safety to do on call has been more challenging than usual due to non-technical skills requirements (communication and team-working) and unfamiliarity with practices in the NHS. Most of the overseas doctors have since left to go to other trusts where they can obtain a CESR (Certificate of Eligibility for Specialist Registration[29]) and gain more generalist exposure; three of these doctors have left in the last 12 months. LWFT is currently working with other trusts in Liverpool to develop their own CESR to try to improve retention.

Recruitment in anaesthetics has proved to be onerous, with an insecure pipeline for senior doctors, resulting in a highly vulnerable workforce.

[29] An alternative route for doctors who have not followed an approved (UK/EU) training programme to demonstrate their eligibility for consultant level posts.

4.2 Doctors in Training

There are specific challenges within the medical workforce at postgraduate doctor level[30] which are affecting the future pipeline of consultants at LWFT. Demand for posts continues to exceed supply despite an increase in the numbers of doctors commencing training between 2017 and 2021 within obstetrics and gynaecology (O&G) (13%) and anaesthetics (9%). At LWFT, there are consistently ten vacancies on the O&G rota out of an establishment of 40 posts, reflecting national shortages, however, the Trust has invested in an extra 10 postgraduate doctor posts to ensure stability of the acute rota.

Retention in O&G is also an issue nationally; a fifth (20%) of obstetrics and gynaecology specialist doctors left in 2021 after gaining their CCT[31] (certificate of completion of training) in 2013.[32]

There is a shortage of postgraduate doctors within anaesthetics choosing to work in obstetric anaesthesia and a reduced number of trainees allocated to LWH.

LWFT now has a reduced number of senior doctor posts than in the past which impacts on the stage 1 trainees[33] who require additional supervision and are not able to undertake independent on-call. There was a reduction in the number of anaesthetic trainees five years ago and since that time LWFT has received fewer senior trainees.

The anaesthetic education and leadership team have raised to Health Education England the staffing risks due to change in the curriculum and the grades and inexperience of doctors rotated to LWFT. To counter the lack of experienced doctors, the LWFT Board approved the recruitment of additional middle-grade doctors to maintain safety out of hours (specialty doctors from overseas as described above).

Doctors and direct-entry midwives are becoming increasingly specialist due to changes in training. As staff retire, there will be fewer and fewer clinicians that have had a broader, more generalist training programme.

Consultants and specialty doctors trained more recently, may lack experience and confidence in performing open surgery; this limits the numbers of doctors who can participate in the tier 2 rota for gynaecology and therefore reduces the ability to respond

[30] A postgraduate doctor is a doctor in training, employed by the Lead Employer and undertaking training at Liverpool Women's Hospital. In order to meet service demand, an increasing number of 'Trust Grade' doctors are employed at LWH, on comparable terms and conditions.
[31] Certificate of completion of training (CCT) – means a doctor is a consultant and is on the consultant specialist register.
[32] The State of Medical Education Workforce Report (2022).
[33] Trainees spend 3 months in stage 1 (Core trainees), 3 months in stage 2 (ST 4 usually) and then there is an option to undertake over 20 special interest areas (SIA) at stage 3 for 6 months; LWFT can host trainees at stage 3 wanting an SIA in Obstetric Anaesthesia.

to emergencies both at Crown Street and LUHFT sites. Doctors on the tier 2 rota do one night in eight on call and one of these doctors is due to retire shortly.

4.3 Operational Issues

Outreach models e.g. outreach midwife service, remain a 'workaround' and can never be as effective and efficient as on-site services. They also result in time lost, both to planned activities and to travelling to and from other sites.

Doctors and nurses in the Royal Liverpool and Aintree Hospital A&Es are losing skills in women's health due to lack of exposure to clinical cases.

Caesarean section rates have increased dramatically over recent years. In 2023/34 43% of all deliveries were c-sections and 60% of these were unplanned emergencies. This has created additional workload for doctors and clinical teams, including theatre staff.

4.4 Psychological Trauma Experienced by Staff

Staff within the women's health, maternity and gynaecology workforce are commonly exposed to psychologically traumatic events at work. This can include a range of things including maternal death, neonatal death, stillbirth, major haemorrhage or cardiac arrest/resuscitation.

Unfortunately, in some instances, exposure to traumatic events can trigger the development of post-traumatic stress disorder (PTSD) symptoms. In these instances, healthcare professionals have reported flashbacks, intrusive thoughts, feeling 'on edge' and under threat, as well as anger or guilt. It can also lead to exhaustion and lower job satisfaction with 12% of Obstetrics and Gynaecology (O&G) doctors leaving the profession in the UK within 3 years of completing training, the highest level of any specialty[34].

Evidence from recent studies[35] suggests that:

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[34] General Medical Council. The state of medical education and practice in the UK. Reference tables: Reference tables about the register of medical practitioners [www.gmc-uk.org/about/what-we-do-and-why/data-and-research/the-state-of-medical-education-and-practice-in-the-uk]. Accessed 14 Mar 2024.

[35] Slade P, Sheen K, Spiby H., & Collinge S (2017). Programme for the prevention of Post Traumatic Stress Disorder (PTSD) in midwifery (POPPY): a feasibility study.
Slade P, Balling K, Sheen K, Goodfellow L, Rymer J, Spiby H, Weeks A. (2019) Work-related post-traumatic stress symptoms in obstetricians and gynaecologists: findings from INDIGO a mixed methods study with a cross-sectional survey and in-depth interviews. BJOG 2020; https://doi.org/10.1111/1471-0528.16076.

- 1 in 3 midwives experience clinically relevant symptoms of post-traumatic stress disorder (PTSD).
- 2 in 3 obstetricians and gynaecologists report work-related trauma.
- 1 in 10 obstetricians / gynaecologists are experiencing clinical levels of PTSD.
- PTSD is associated with elevated burnout, emotional exhaustion, de-personalisation towards recipients of care, and the potential to impact on quality of care.

Approximately 400 members of LWFT staff (circa 25% of all staff) have been referred to the trauma-based psychology service for staff since October 2022.

Comparative data from other Trusts about levels of referrals has not been possible to collect; service models vary across organisations and referrals are not collected routinely in the same way.

The types of events which LWFT staff have reported as traumatic include:

- Maternal death
- Neonatal death/stillbirth
- Major haemorrhage
- Cardiac arrest or resuscitation
- Difficult birth
- Intra or post-operative complications

Some of these events can be much more difficult to manage on an isolated site, without the full range of acute services, and therefore the risk to staff of experiencing work-related psychological trauma is likely to be greater due to the way services are organised in Liverpool.

4.5 Multi-Disciplinary Team (MDT) Working

Onsite MDT working is promoted in training as best practice and is increasingly included in more recent standards, service specifications and training requirements. There is a general lack of day-to-day opportunities for cross-specialty learning for all clinical specialisms. At LWH, MDT working has to be deliberately ‘designed in’ to services rather than being an automatic default mode due to co-location.

The isolated nature of the Crown Street site is a negative feature for potential applicants who want to work in a wider MDT; this has previously been highlighted in informal feedback from trainee doctors.

5. The Population Using Gynaecology and Maternity Services

The following section provides further information about the people who use gynaecology and maternity hospital services in Liverpool.

Most of this data comes from LWFT information systems; other sources are identified as appropriate. Women having their gynaecology operations at the Royal Liverpool Hospital are not included in these figures.

5.1 Where women / patients live (2023/24)

Most women using gynaecology and maternity hospital services at LWH come from Liverpool, Sefton and Knowsley.

Table 23: LWFT Deliveries 2023/24

Patient Residence	Number of deliveries	% of deliveries
Liverpool	4678	65.19
Sefton	1170	16.30
Knowsley	632	8.81
Other C&M addresses	451	6.28
Non-C&M addresses	245	3.41
Total	7176	99.99*

*Rounding error

Table 24: LWFT All Gynaecology Discharges (Inpatients and Day Cases) 2023/24

Patient Residence	Number of discharges	% of discharges
Liverpool	3640	52.48
Sefton	1316	18.97
Knowsley	657	9.47
Other C&M addresses	836	12.05
Non-C&M addresses	487	7.02
Total	6936	99.99*

*Rounding error

For future planning purposes, it is also important to understand what proportion of women living in a given area, use these services.

Table 25 shows the proportion of women having their babies at LWH by place in Cheshire and Merseyside.

Overall C&M births have reduced from nearly 38,000 to just under 35,000 over the three years. The proportion of births across C&M flowing to LWH remains steady at about a third of all births.

In 2023/24, 92% of all Liverpool births, 58% of all Sefton births and 35% of all Knowsley births took place at Crown Street.

Table 25: Proportion of Births taking place at LWH by C&M place per annum

Place	2021/22	2022/23	2023/24
Cheshire	0.9%	1.1%	1.6%
Halton	9.1%	12.2%	10.7%
Knowsley	37.1%	38.1%	35.2%
Liverpool	91.7%	91.9%	92.0%
Sefton	53.2%	53.8%	58.4%
St Helens	3.8%	5.0%	4.2%
Warrington	2.7%	2.4%	1.7%
Wirral	6.4%	7.3%	7.3%
C&M Total	**30.2%**	**29.9%**	**30.5%**

(Source: NHS Cheshire and Merseyside Information Team)

Overall C&M gynaecology inpatient and day case activity has increased by approximately 17% over three years. In 2023/24, a third of all inpatient and day case procedures in gynaecology in C&M happened at LWH. (See Table 26).

Table 26: Proportion of gynaecology inpatient and day case activity at LWH by C&M place per annum

Proportion @ LWH	2021/22	2022/23	2023/24
Cheshire	2.2%	2.3%	1.7%
Halton	16.4%	13.1%	7.7%
Knowsley	55.1%	43.7%	30.8%
Liverpool	95.7%	95.3%	92.8%
Sefton	57.9%	56.5%	53.0%
St Helens	11.5%	9.3%	5.6%
Warrington	8.0%	11.0%	10.1%
Wirral	8.6%	6.3%	4.9%
C&M Total	**39.0%**	**36.2%**	**30.4%**

(Source: NHS Cheshire and Merseyside Information Team)

5.2 Age of Mothers

The Royal College of Midwives' State of Maternity Services Report (2015) shows that, between 2001 and 2014, there was a 78% increase in births to mothers aged 40 and above, and these women are likely to require increased resources. Older women are more at risk of pre-eclampsia, miscarriage and complicated pregnancies which could result in the use of forceps or caesarean section, according to the Royal College of Midwives.

The age profile of women delivering their babies with LWFT in 2023/24 is shown in Table 27 below.

Table 27: Age of mothers at delivery 2023/24

Age at delivery	Number of deliveries	% of deliveries
0-18	58	0.81
19-24	791	11.02
25-30	2254	31.41
31-36	2875	40.06
37-42	1103	15.37
43+	95	1.32
Total	7176	99.99*

*Rounding error

5.3 Age of Women on Admission to Gynaecology Services

Increasing numbers of older people are undergoing elective and emergency surgery across all surgical specialties. This is related to changing demographics, advances in surgical and anaesthetic technique, changing patient expectations and changing healthcare professional attitudes and behaviours.

The overall impact is that, nationally, rates of surgical procedures in older people are now significantly higher than in any other age group.

In 2023/24, 294 (4.25%) inpatient and day case procedures in gynaecology (general and oncology combined) were for women 76 years or older. 40 of these women were over 86 years old and six were over 90 (see Table 28 below).

Whilst it is clear that older people have much to gain from surgery in terms of symptom control and life expectancy, they remain at higher-risk of adverse postoperative outcome (morbidity, mortality, delayed discharge and longer length of stay) in comparison to younger people. This adverse risk profile is due to factors that are associated with ageing; poor physiological status, multi-morbidity, and geriatric syndromes such as cognitive impairment and frailty. To manage the risks for this group of patients, some organisations are now creating, geriatrician-led MDTs to support the peri-operative care of older people.[36]

Liverpool, Sefton and Knowsley areas are all expecting to see large rises in women in older age groups over the next 2 decades (see Appendix 2).

Cancer risk also increases with age and therefore the predicted growth in the older population is likely to result in more women having gynaecology cancer surgery.

Table 28: Age on Admission – Gynaecology Discharges (inpatients and day cases) 2023/24

Age on Admission	Number of discharges	% of discharges
0-25	701	10.11
26-35	1749	25.22
36-45	1561	22.51
46-55	1213	17.49
56-65	949	13.68
66-75	469	6.76
76-85	254	3.67
86+	40	0.58
Total	6936	100.02*

*Rounding error

[36] https://secsenate.nhs.uk/wp-content/uploads/2024/01/The-Clinical-Co-Dependencies-of-Acute-Hospital-Services-Final.pdf

5.4 Social Deprivation

As noted earlier, Liverpool, and the wider North Mersey area have areas of significant deprivation and families from these areas can often have more complex medical needs and may be less likely to access services.

In order to understand deprivation, the population is broken down into deciles (or 10 lots of 10%) with decile 1 indicating the poorest 10% of addresses and decile 10 indicating the wealthiest 10% of addresses.

Figure 18 shows the proportion of deliveries by deprivation decile in 2023/24.

The chart shows that half the women giving birth at LWH come from the poorest 10% of addresses.

3 out of 4 women (76%) come from the poorest 40% of addresses.

Figure 18: Deprivation Deciles – Deliveries 2023/24

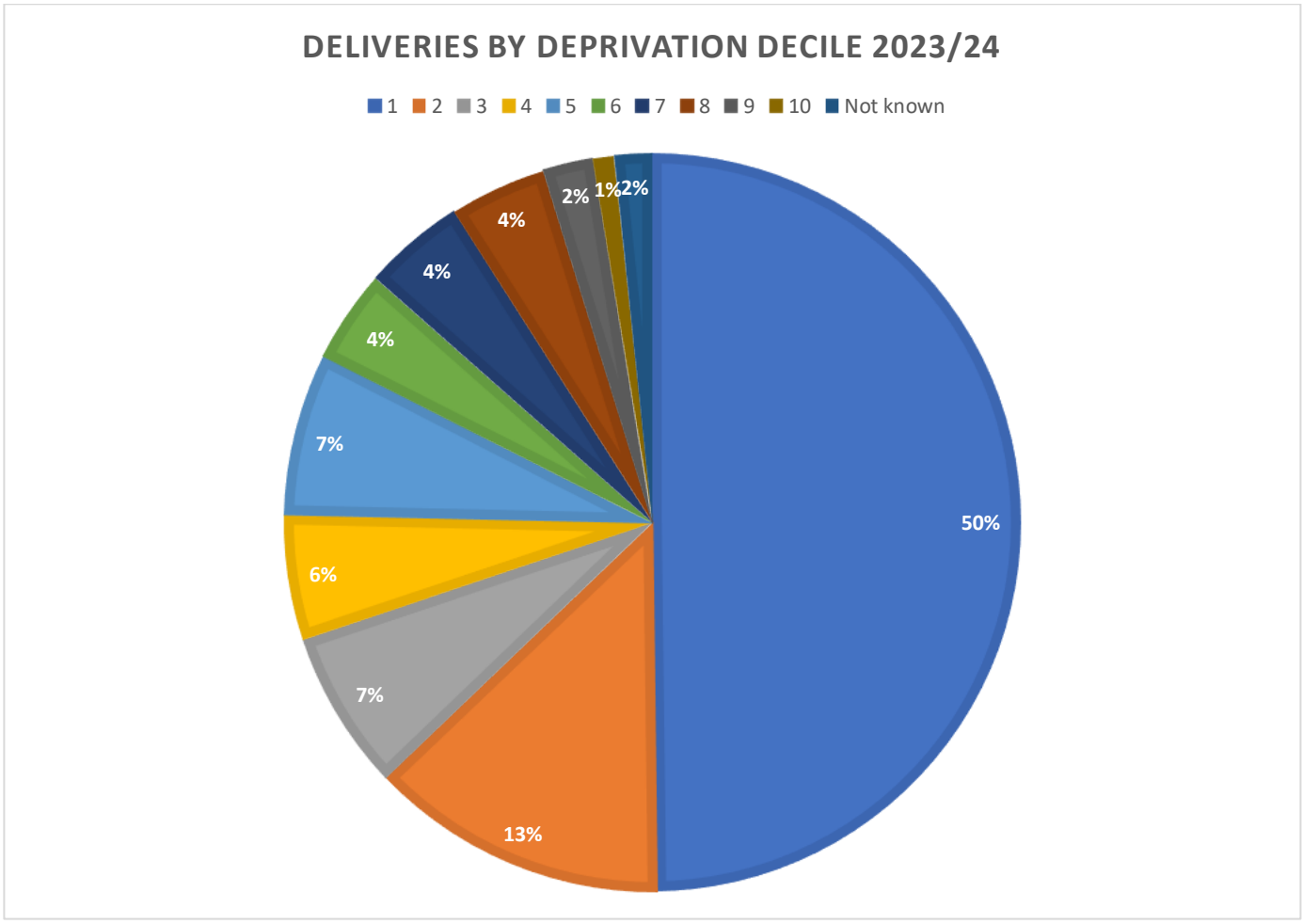
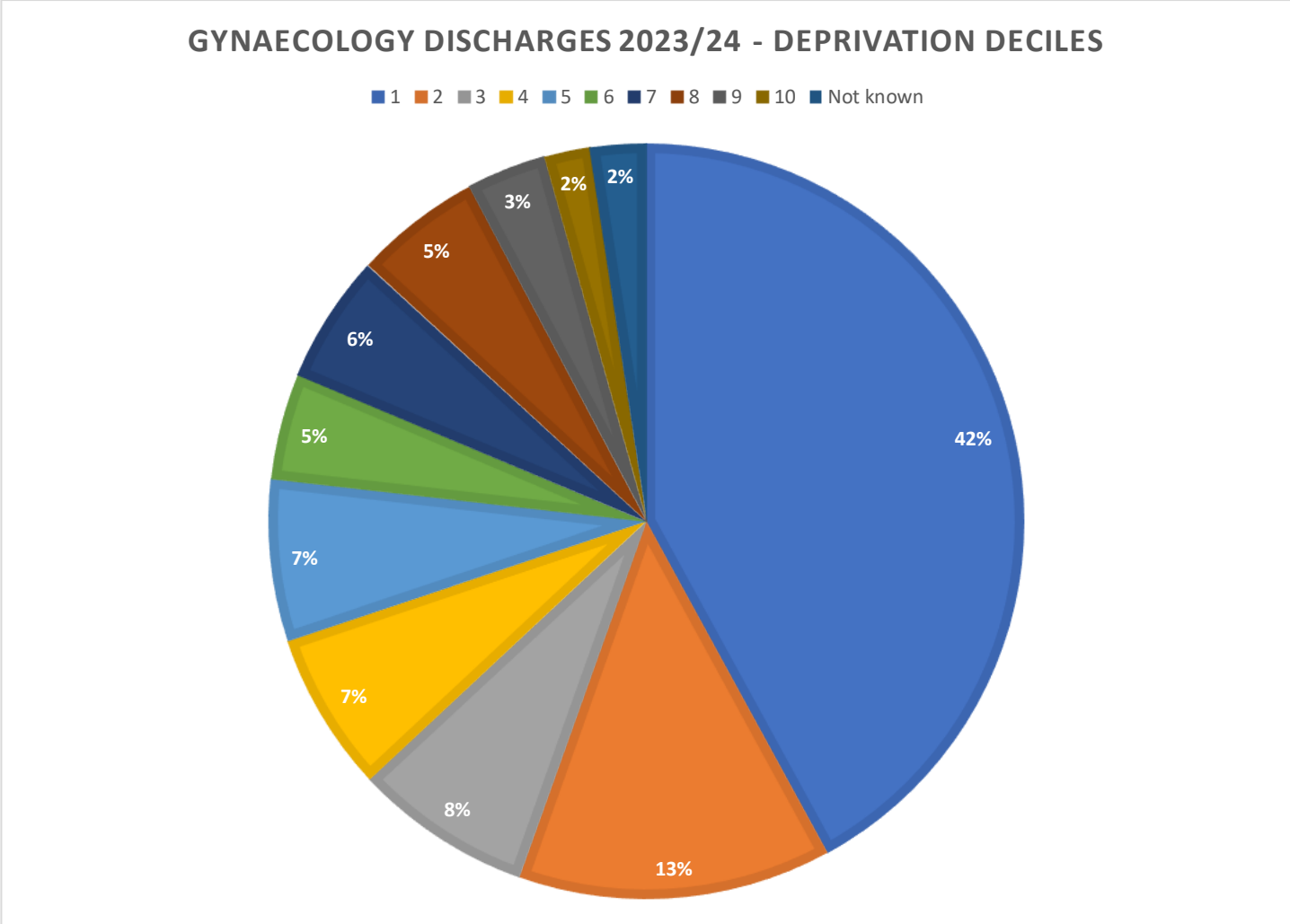


Figure 19 shows the percentage of women using hospital gynaecology inpatient and day case services by deprivation decile.

As Figure 19 demonstrates over three quarters of women using LWFT hospital-based gynaecology services come from the poorest half of addresses (deciles 1-5) with 55% coming from the poorest 20% (deciles 1 and 2).

Figure 19: Deprivation Deciles – Gynaecology Discharges (inpatients and day cases) 2023/24



5.5 Ethnicity, Language and Religion

5.5.1. Ethnicity

72% of women having their babies at LWH in 2023/24 describe themselves as white British.

About a fifth of women come from other ethnic backgrounds. There was no data about ethnicity for 9% of women; see Table 29 below for further details.

Table 29: Ethnicity of Women - Deliveries 2023/24

Ethnic Category Description	Number of deliveries	% of deliveries
White British	4696	65.44
Any other white background	418	5.82
African	261	3.64
Any other Asian background	203	2.83
Indian	137	1.91
Any other black background	90	1.25
Irish	78	1.09
Pakistani	78	1.09
Any other mixed background	68	0.95
Chinese	36	0.5
White and Asian	35	0.49
White and black African	34	0.48
Bangladeshi	30	0.42
White and black Caribbean	27	0.38
Caribbean	14	0.2
Any other ethnic group	328	4.57
Not stated	639	8.9
Description Not Found	4	0.06
Total	7176	100.02*

*Rounding error

Around 74% of women who received a gynaecology inpatient or day case procedure at LWH describe themselves as white British. 15% come from other ethnic backgrounds. There was no data about ethnic background for about 11% of women; see table 30 below.

Table 30: Ethnicity of Women – Gynaecology Discharges (inpatients and day cases) 2023/24

Ethnic Category Description	Number of discharges	% of discharges
White British	5144	74.16
Any other white background	348	5.02
Any other ethnic group	125	1.74
African	111	1.60
Any other Asian background	100	1.44
Indian	56	0.81
Any other black background	55	0.79
Chinese	48	0.69
Irish	47	0.68
Any other mixed background	43	0.62
White and black African	24	0.35
Pakistani	22	0.32
White and Asian	19	0.27
White and black Caribbean	12	0.17
Caribbean	9	0.13
Bangladeshi	5	0.07
Not stated	753	10.86
Description Not Found	15	0.22
Total	6936	100

5.5.2 Language

Up to 18% of women having their babies with LWH do not speak English as a first language compared with 9.6 % of the population of Liverpool and 3.6% in Sefton.

Up to 9% of patients discharged from hospital gynaecology services do not have English as their first language.

Tables 31 and 32 below provide further details.

Table 31: Primary Language – Deliveries 2023/24

Language name	Number of deliveries	% of deliveries
English	5865	81.73
Arabic	213	2.97
Romani	129	1.80
Kurdish	97	1.35
Portuguese	74	1.03
Polish	65	0.91
Urdu	48	0.67
Spanish	42	0.59
Other	461	6.42
Not Known	182	2.54
	7176	100.01*

*Rounding error

Table 32: Primary Language – Gynaecology Discharges (inpatients and day cases) 2023/24

Language name	Number of discharges	% of discharges
English	6306	90.92
Arabic	68	0.98
Polish	48	0.69
Romani	35	0.50
Kurdish	28	0.40
Spanish	21	0.30
Portuguese	17	0.25
Cantonese	16	0.23
Other	208	3.00
Not known	189	2.73
Total	6936	100

5.5.3 Religion

The following two tables show the religion of women who had babies at LWH or had a gynaecology admission with LWFT in 2023/24.

Over half of the women having babies described themselves as having no religion compared with just over a quarter of women accessing gynaecology services.

Table 33: Religion of Women – Deliveries 2023/24

Religion	Number of Deliveries	% of deliveries
None	4017	55.98
Roman Catholic	1194	16.64
Christian	669	9.32
Church of England	606	8.44
Muslim	317	4.42
Islamic	136	1.9
Hindu	61	0.85
Other Christian	54	0.75
Orthodox	45	0.63
Jewish	11	0.15
Other	50	0.7
Not Known	8	0.11
Patient does not wish to answer	8	0.11
Total	7176	100

Table 34: Religion of Women discharged from hospital gynaecology services (inpatients and day cases) 2023/24

Religion	Number of discharges	% of discharges
None	1976	28.49
Roman Catholic	1812	26.12
Church of England	1386	19.98
Christian	516	7.44
Muslim	159	2.29
Islamic	60	0.87
Other Christian	40	0.58
Hindu	35	0.51
Jewish	27	0.39
Buddhist	19	0.27
Orthodox	19	0.27
Other	45	0.65
Not Known	830	11.97
Patient does not wish to answer	12	0.17
Total	6936	100

5.5.4 Summary

There are large numbers of women from ethnic minority groups using women's hospital services in Liverpool.

Around one fifth come from non-white backgrounds and up to one fifth do not have English as a first language.

Significant numbers of women using gynaecology and maternity hospital services in Liverpool come from deprived backgrounds; approximately 50% come from the poorest 10% and 75% come from the poorest half of the population.

There is evidence that socially deprived, non-English speaking people from ethnic minority groups are more likely to suffer health inequalities and have poorer clinical outcomes.[37]

The organisation of gynaecology and maternity services in Liverpool has created a significant gender inequality.

It puts women using these services in Liverpool at a disadvantage when compared to:

- people using these services in other parts of the country; and
- men and women using services at other hospitals in Liverpool.

The demographic profile of women using these hospital services in Liverpool compounds and increases those disadvantages.

[37] MBRRACE-UK. (2022) Saving Lives, Improving Mothers' Care Core Report – Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2018-20

6. Conclusion and Next Steps

The evidence presented here demonstrates the strength of the clinical case for change.

Over the course of the programme, new data and evidence will continue to be collected and reviewed as it becomes available. This will be important to inform discussions about the future model of care and the options for delivering it.

The case for change illustrates the many examples of how hospital-based gynaecology and maternity services are not fit for purpose for the needs of women in Liverpool and beyond. In particular, the gender and health inequalities across the North Mersey area are being compounded by the current configuration of services and the isolated nature of Liverpool Women's Hospital.

Demand for gynaecology services is rising, co-morbidities are increasing and population growth is expected in women of child-bearing age and those over 60; this will all create additional demand on services that are already challenged and suboptimal.

However, if the issues described in this case for change can be resolved, the following benefits could be achieved:

- ✓ A reduction in gender inequalities in gynaecology and maternity hospital services in Liverpool.
- ✓ A reduction in health inequalities for women from lower socio-economic groups and those from ethnic minority groups accessing gynaecology and maternity services.
- ✓ Future-proofed gynaecology and maternity services with the right capacity, in the right place and at the right time to meet women's needs.
- ✓ Improved and more timely access to holistic care for women using gynaecology and maternity hospital services.
- ✓ Better clinical outcomes and experience for women and their families.
- ✓ Fewer clinical incidents and reduced episodes of actual and potential harm or death.
- ✓ Better management of women with complex pregnancies and gynaecology conditions.
- ✓ Fewer interactions with emergency care services.
- ✓ Reduced episodes of psychological trauma for women and staff.
- ✓ More availability of ambulances due to a reduction in transfers.
- ✓ Greater system-wide service and pathway integration.
- ✓ Liverpool hospitals are a more attractive place to train and work.
- ✓ Liverpool hospitals can sustain and develop more specialised services for the Cheshire and Merseyside population.
- ✓ Liverpool hospitals can increase their service offer for women and families.
- ✓ More opportunities for training, research and innovation.

These benefits will be explored more fully during the next phase of the work to design a new model of care.

This case for change does not seek to provide proposals or solutions; these will be explored with partners, stakeholders, patients, and the public later in the work and after engagement with people with lived experience of gynaecology and maternity services.

Nevertheless, it is important to stress that the hospital on the Crown Street site is a highly valued NHS asset and service developments are continuing to be implemented at this site.

There are no plans to close the hospital and, whatever proposals are developed for the future of gynaecology and maternity services, the site will continue to be used for the provision of NHS services.

The case for change will be recommended to NHS Cheshire and Merseyside, at the Board meeting currently planned for September 2024.

A six-week period of public engagement about the case for change will commence in the autumn.

The feedback from this engagement will be used to inform future proposals for women's hospital services.

Appendices

Appendix 1 – Equalities Analysis

The case for change has been reviewed by an independent equalities professional to provide an equalities analysis that will inform the work of the programme.

The equalities analysis is attached here:

high level ED report for Womens Hospit

Further work is required to ensure that all equalities groups are considered as the programme progresses.

Appendix 2 – Additional Population Health Information

Women from Liverpool, Sefton and Knowsley are the biggest users of gynaecology and maternity services in Liverpool.

Detailed population health information about the three areas can be found here:

Liverpool 2040 – https://liverpool.gov.uk/media/y45lmvvm/health-in-liverpool-2040.pdf

Sefton JSNA – https://www.sefton.gov.uk/your-council/plans-policies/business-intelligence-insight-performance/joint-strategic-needs-assessment-jsna/

Knowsley 2030 – https://knowsleyknowledge.org.uk/knowsley-2030/

The following pages provide a brief summary of population health issues for Liverpool, Sefton and Knowsley.

Liverpool Place – Population Health Summary

Liverpool has a relatively young population, particularly in the 20-29 age group, the Office for National Statistics projects a substantial increase in the number of children and older people in Liverpool over the coming decade.

The biggest change in population in Liverpool will be the increase in those aged 60 and over. It is estimated that the number of people in this age group will increase by **23.1%**, the equivalent of an additional **17,200** people by 2033. It is likely that the increasing numbers of older residents will impact greatly on NHS services and adult social care.

Healthy life expectancy in Liverpool is significantly below the national average at **58.3 years** in males and **57.9 years** in females while the gap with England is **5 years** and **6 years** respectively.

Deaths in 85+ year olds have been steadily increasing since 2014 and by **17%** overall between 2014 and 2022 in that age group.

In the 2021 Census some 22.7% of our residents class themselves as part of an ethnic minority group, equating to 110,300 residents, while 45,200 Liverpool residents report their main language is not English (9.6%).

One third (33%) of the Liverpool population have at least one morbidity, 14% have multimorbidity, and 6% have physical and mental health comorbidity.

At the age of 50 years, almost half of the population in Liverpool (47%) have at least one morbidity, and by age 65 years 41% were multimorbid. Moreover, 60% of people aged 15 and over with physical-mental health comorbidity in Liverpool are younger than 65 years.

There is a strong correlation between deprivation and poor health. According to the Index of Multiple Deprivation 2019, Liverpool was the **3rd** most deprived local authority in the country and around **62%** of areas in Liverpool fall into the most deprived national quintile *[most deprived fifth or 20% of the population].*

Around 6 in every 10 (**58.7%)** residents live in areas (LSOAs) which score in the poorest performing 20% on the healthy neighbourhoods (AHAH) index, the highest in the North West.

Smoking prevalence in Liverpool has reduced from **22.3%** in 2011 to **17.8%** in 2021 and is significantly worse than nationally (**13.0%**). Smoking rates for pregnant women at the time of birth is decreasing. 1 in 10 mothers in 2021/22 were known to be smokers at the time of delivery of their baby, compared with 1 in 11 nationally.

In 2020/21, **65.9%** of Liverpool adults were classified as either overweight or obese, which is significantly worse than the national average (**63.5%**). Within the Liverpool population, obesity rates in early pregnancy were 22.9% in 2018/19 compared with 22.1% for England overall. (Office for Health Improvement and Disparities. Public Health Profiles. 2022).

According to the most recent Office for National Statistics (ONS) projections (2018), the female population of Liverpool is expected to rise by 20,000 by 2040 and there are expected to be substantial increases in the numbers of women of childbearing age and those over 65 years old. These increases are likely to result in an increased demand for women's health services.

Sefton Place – Population Health Summary

Sefton borough consists of a coastal strip of land on the Irish Sea and extends from the primarily industrial area of Bootle in the south to the traditional seaside resort of Southport in the north. In the south east it extends inland to Maghull.

There are approximately 282,750 residents living in Sefton (according to the 2023 mid-year estimates). An increase of 2.8% compared to a decade ago. Females make up 51% of residents and males 49%. Sefton is a relatively older borough with nearly a quarter (23.6%) of the population aged over 65 and a further 21.6% aged between 50 and 64. There are differences in the age profile of residents across Sefton, however. South Sefton has a higher proportion of children and 'working age' residents whereas Southport and Formby has an older profile than Sefton as a whole.

According to the most recent Office for National Statistics (ONS) projections (2018), Sefton is predicted to see a 3.3% rise in population by 2043. Overall, the greatest increases will be amongst older age groups. It is estimated that by 2043 there will be 82,854 residents aged 65 and over, a 24% increase on 2023. The number of those aged 85 and over is estimated to see a 40% increase, which would equate to approximately 4,000 more residents. In contrast, the number of working-age residents is predicted to reduce by 5% and the number of children will see minimal change (-0.5%).

Looking at the female population specifically, Sefton is expected to experience a rise of 4.7% by 2043 – approximately 6,800 more females. Again, increases are mainly amongst older age groups. The number of women aged 65 and over is expected to rise by 28%, whereas the number of women of childbearing age is set to reduce by 5.7%.

In the 2021 Census, 96% of Sefton residents identified themselves as white and 92% of those people describe themselves as white English, Welsh, Scottish, Northern Irish or

British. 64% of the population stated they were Christians with a further 34% either having no religion or not stating a religion.

96.4 % of the population spoke English as their main language.

Sefton has a unique socio-economic geography. In its entirety, it is in the most deprived fifth of English Local Authorities. Twenty-seven of Sefton's 189 Lower Super Output Areas (LSOA) are in the top 5% most deprived nationally (17 of which are in South Sefton). Yet other parts of the Borough, particularly in the middle and North, are some of the least deprived areas. Seven LSOAs (six of which are in North Sefton) are in the least deprived 5% of areas nationally (Index of Multiple Deprivation, 2019).

Health inequalities are a defining feature of the Sefton population. Life expectancy from birth was 77.5 years for men and 81.4 years for women in 2020-22, lower than the England average of 78.9 and 82.8 years respectively. However, there is wide variation in life expectancy across the borough. The life expectancy at birth of a male born into Sefton's most affluent community is 14.1 years longer than for a male born into Sefton's most deprived community. The gap for females is 12.3 years. This is the widest gap in life expectancy at birth of any local authority in the North West.

In the 2021 Census, 7% of the borough's residents reported their health as bad or very bad, compared to 5% for England & Wales. A higher proportion also said day-to-day activities were limited a lot by disability, 10.7% for Sefton compared to 7.5% for England & Wales. Again, patterns of ill health and disability vary across the borough, with self-reported poor health more prevalent in Sefton's more deprived wards.

Sefton has a higher than average prevalence for most major long-term conditions and premature mortality rates for cancer, cardiovascular diseases and liver diseases are all significantly higher than England. The accumulation of long-term conditions (often referred to as multimorbidity) also makes supporting individuals more complex. It has been estimated that 10.4% of Sefton residents and 35.6% of people aged 65 and over have 2 or more long-term physical health conditions.

At 7.9%, Sefton's smoking prevalence is significantly lower than it was ten years ago and compared to the Liverpool City Region, North West and England. The number of Sefton mothers known to be smokers at time of delivery has also reduced over the last decade. In 2023/24, at the time of delivery 8.1% of mothers in South Sefton and 5.4% of mothers in Southport & Formby were known to smoke.

In 2022/23, 69.2% of Sefton adults were classified as either overweight or obese, which is significantly higher than the national average (64.0%). Estimates from 2018/19, suggest that over one fifth of Sefton mothers are obese at their midwife booking appointment (21.8%).

Live births to Sefton mothers have been highest among the 30-34 age group since 2016. In 2022, 36.9% of births were amongst the 30-34 age group, with the next highest age group 25-29 year olds at 25.9%. Sefton's annual under-18 conception rate was 15.7 per 1,000 in 2021, not significantly different to England, the North West and Liverpool City Region averages. Teenage conceptions are typically higher in south Sefton, with the Bootle wards of Linacre and Derby experiencing the highest rates.

Knowsley Place – Population Health Summary

The Office for National Statistics (ONS) mid-year 2023 population estimate for Knowsley is 159,243 people living in the borough. Based on this information:

- There are 10,020 residents aged 4 and under in Knowsley.
- 100,065 working age people (16-64 years).
- 27,570 people aged 65 years and older.

In broad terms, the current population is distributed across the Borough as follows: 39.0% in Huyton; 28.4% in Kirkby; 13.3% in Halewood; and the remaining 19.3% split between Prescot, Whiston, Cronton, and Knowsley Village. (ONS Mid-year population estimate 2022.)

In the ten years between 2011 and 2021, Knowsley saw 4.1% growth in the working age population (16-64 years), 6.7% growth in the under 5 year population and 14% growth in those aged 64 years and older.

At the time of the 2021 Census Knowsley had 66,073 households. No ONS population projections are currently available which are based on 2021 Census data, so no projections figures are available that are current and accurate.

Currently, the Knowsley population is consistently growing. International inward migration into Knowsley has grown over the last 10 years, however levels are low compared to most places.

Knowsley is much less ethnically diverse than England as a whole. Knowsley residents are predominantly White British (95%); almost 5% of the population self-defined as being from an Asian, Black, Mixed or Other ethnic background at the last Census (2021). This is an increase of 81% (3,249) in the ten years since the 2011 Census.

Knowsley is the 2nd most deprived upper tier local authority in England.

In Knowsley, women tend to have children slightly younger compared to national or regional figures, with more women in Knowsley having children in their twenties; 44% compared to 38% England average and 41% North West average (2022). The standardised mean age of mothers in Knowsley is 29.9 years compared to 30.5 years for the North West and 30.9 years for England as a whole.

Births in Knowsley have remained fairly consistent since 2013. There were 1,932 births in 2022; 65% of Mothers were aged between 25 and 34 years, compared to 60% in England.

Knowsley's General Fertility Rate (61.4) and Total Fertility (1.71) rates are higher than both the North West (52.8 & 1.53) and England (51.9 & 1.49).

In the latest 2022 data, Knowsley had the highest rate of legal abortions in England and Wales of Upper tier Local Authority areas. Abortion rates have been increasing in Knowsley in recent years and nationally but Knowsley has been increasing faster. In 2022, almost half of the abortions in Knowsley were women who had already had at least one previous abortion.

Knowsley has one of the highest rates of preventable deaths in England.

In the latest published data for 2022, Knowsley female life expectancy was 80.5 years, which is 1.9 years higher than in 2020 and 0.3 years higher than in 2019 (pre-pandemic). North West and England are still below pre-pandemic 2019 levels in 2022. Knowsley is significantly lower than North West (81.7) and England (83.2) in 2022.

Male life expectancy is significantly lower in Knowsley (76.6) than in the North West (77.7) and England (79.3) in 2022. Knowsley male life expectancy is 0.5 years lower than 2019 (pre-pandemic). The North West (0.8 years lower) and England (0.6 years lower) are still below pre-pandemic 2019 levels in 2022.

Improving life expectancy is achieved by adding years to life so that people live longer. It is important also to add years of quality to life. Healthy life expectancy (HLE) is an estimate of the number of years someone would expect to live in good health. Data on healthy life expectancy has not been updated in recent years due to the COVID-19 pandemic and not having enough robust Annual Population Survey (APS) data available at a local level.

Healthy Life expectancy has improved significantly for males in Knowsley from 2009-11 to 2018-20; this was an increase of 3.1 years of healthy life, much bigger than the North West (0.8 years) and England (0.1 years). Knowsley, the North West and England all saw a drop in HLE for males between 2017-19 and 2018-20; the decrease of 2 years in Knowsley is much bigger than that seen in both the North West (0.2 years) and England averages (0.1 years). Men in Knowsley on average live 2.8 years less in good health compared to men in the North West and 4.4 years compared to men in England.

Healthy Life expectancy has improved slowly for females in Knowsley from 2009-11 to 2017-19, an increase of 1 year. However, between 2017-19 and 2018-20, they gained another year. Despite this, women on average in Knowsley spend 2.4 years less in good health compared to women in the North West and 3.9 years compared to females in England.

For the majority of diseases, Knowsley has a higher prevalence than England (2022/23 QOF prevalence data):

- around 26,000 patients (all ages) were recorded as having hypertension, with 15.8% of the population suffering from this disease, higher than the England average of 14.4%
- around 26,400 patients (aged 18 and over) were suffering from depression, 20.4% of the population having this disease, significantly higher than the England average of 13.2%
- almost 11,000 patients (aged 17 and over) had diabetes with 8.3% of the population suffering from this disease, higher than the England average (7.5%)
- over 10,700 patients (aged 6+) had asthma with 7.0% of the population suffering from this disease, similar to the England average (6.5%).
- over 6,600 patients (aged 18+) had chronic kidney disease with 5.1% of the population suffering from this disease, higher than the England average of 4.2%.
- over 6,500 patients (all ages) had coronary heart disease with 4.0% of the population suffering from this disease, higher than the England average (3.0%).
- over 6,100 patients had cancer with 3.6% of the population suffering from this disease, similar to the England average of 3.5%
- over 6,000 patients had chronic obstructive pulmonary disease with 3.7% of the population suffering from this disease, over double that of the England average (1.8%).
- over 3,200 patients had a stroke or TIA (mini-stroke) with 2.0% of the population (all ages) suffering from this disease, similar to the England average (1.8%).
- around 1,000 patients (aged 65+) had dementia with 0.60% of the population suffering from this disease, lower than the England average (0.74%).