# Establishing the Cost and Impact of Xonvea for NVP. A Summary of Findings by Pregnancy Sickness Support

This survey was conducted in April 2025 and advertised via our social media platforms and email list.

## 1. Survey Design and Participation

This survey was conducted by Pregnancy Sickness Support in April 2025. It was open to anyone who had experienced NVP since 2018, when Xonvea became available in the UK. We received 749 responses within 10 days. Participants were asked about access to Xonvea, medication history, perceived effectiveness, and experiences of healthcare support. The survey was designed to understand real-world usage, outcomes, and barriers.

This was a self-selected survey, meaning participants chose to take part rather than being randomly selected. Aside from postcode and country data, no demographic information such as age, ethnicity, or sexuality was collected.

## 2. The History of Xonvea in the UK

The medication Xonvea (Doxylamine/Pyridoxine) was first licensed for use in the UK in 2018[1].

Xonvea is a medication that has been specifically designed for treating nausea and vomiting in pregnancy (NVP) and is the only licensed option for those being treated within the UK. Xonvea has been prescribed globally for decades and used to treat an estimated 30,000,000+ women worldwide.

[1] MHRA July 2018 (Medicines and Healthcare products Regulatory Agency)

Despite being formally added to the RCOG Greentop Guideline[2] for treating NVP as a first line treatment option in February 2024, it remains a postcode lottery drug (i.e. inconsistent availability based on local formulary decisions).

The **Pregnancy Sickness Support - Xonvea Feedback** survey was conducted via Pregnancy Sickness Support in April 2025 to gather feedback from service users who have suffered with NVP since Xonvea was introduced to the UK in 2018.

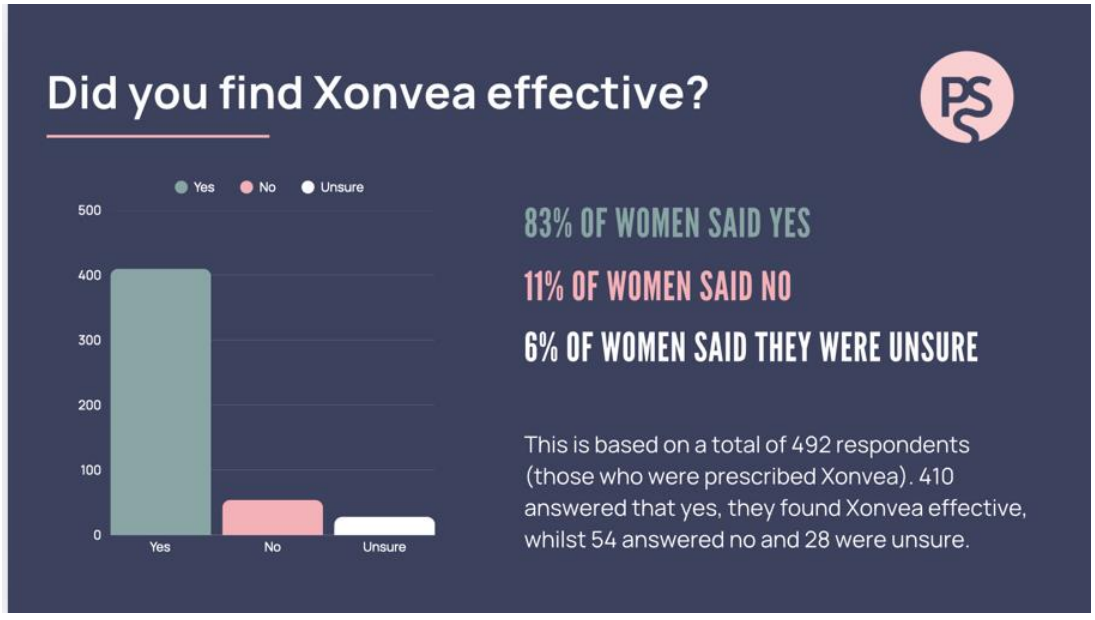
# 3. Survey questions and analysis

## 3.1 Were you given an opportunity to try Xonvea during your pregnancy?

Of the 749 respondents, 492 had been offered Xonvea and 257 had not. To strengthen the reliability of the findings and avoid a satisfaction bias, we actively encouraged participation from those who had not been offered the medication.

## 3.2 Did you find Xonvea effective

**Chart 1.**




[2] https://www.rcog.org.uk/guidance/browse-all-guidance/green-top-guidelines/the-management-of-nausea-and-vomiting-of-pregnancy-and-hyperemesis-gravidarum-green-top-guideline-no-69/

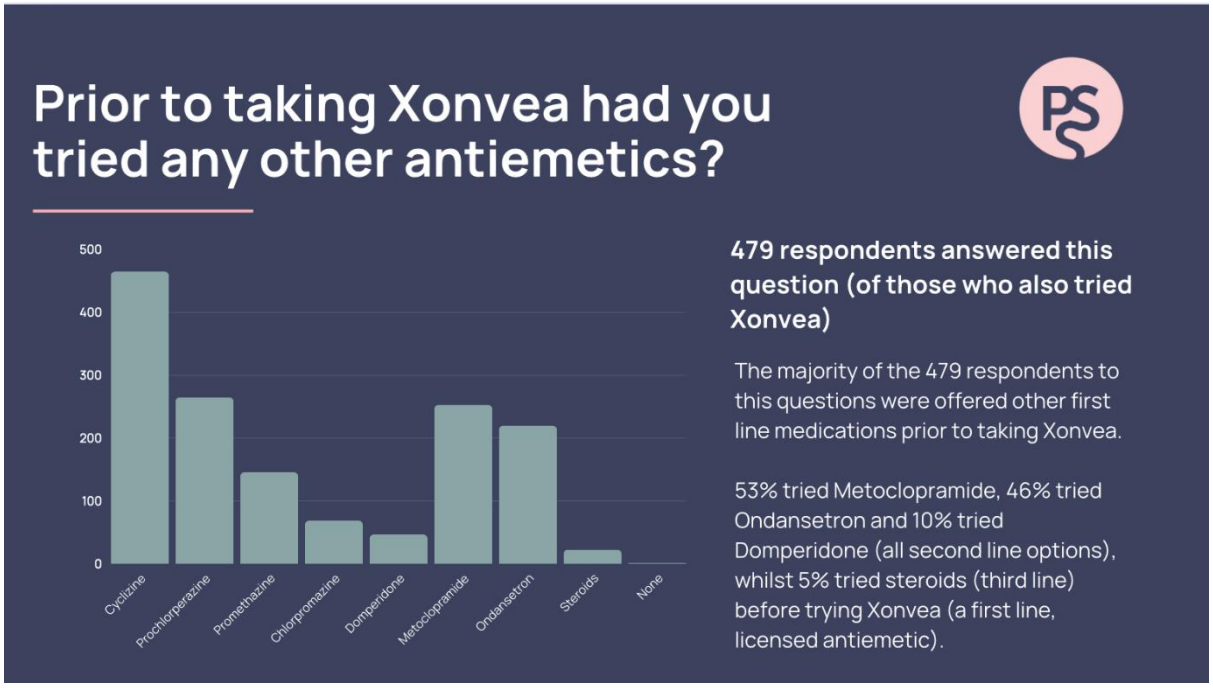
**High perceived effectiveness**: 83% effectiveness and supports an argument for earlier or more consistent access.

**Only 11% found it ineffective**: Relatively small proportion, suggesting the medication has a strong performance profile where used.

**6% who were unsure: Further research needed.** Where there mitigating factors—e.g. were they taking multiple medications at once or stopped too early?

## 3.3 Prior to taking Xonvea had you tried any other antiemetics?

### Chart 2.




**Xonvea is a first-line treatment**, yet many respondents were prescribed **second- or even third-line drugs first**.

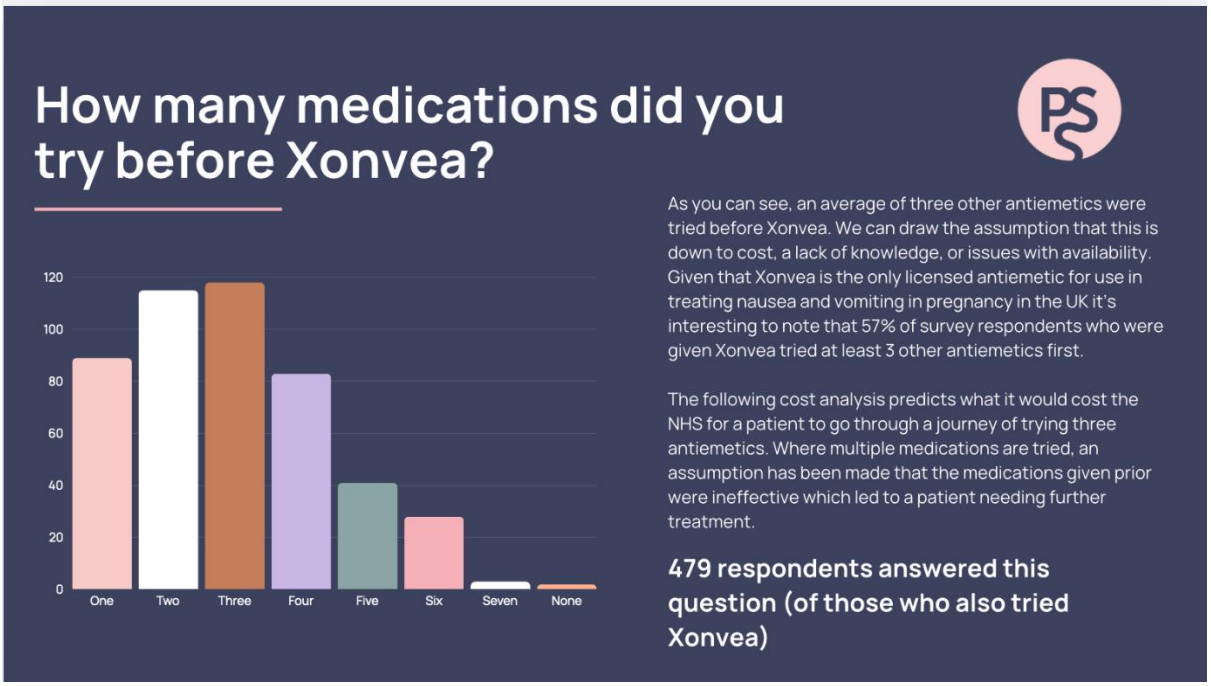
**Over half (53%)** were given Metoclopramide (a second line), just under **half (46% tried Ondansetron)** and **5% were prescribed steroids (third line)** *before* trying Xonvea.

This suggests a widespread lack of awareness, adherence, or access related to current RCOG guidelines and Xonvea's status as the *only licensed antiemetic* for pregnancy in the UK.

This builds a strong case for better GP education, clearer formulary guidance, and potentially a patient-facing resource so sufferers can advocate for appropriate treatment sooner.

## 3.4 How many medications did you try before Xonvea?

**Chart 3.**




**57% tried *three or more* antiemetics** before accessing Xonvea, which is meant to be a first-line treatment.
→ This reinforces the inefficiency of current prescribing practices.

**The average of three other medications** being tried *before* Xonvea paints a clear picture of:

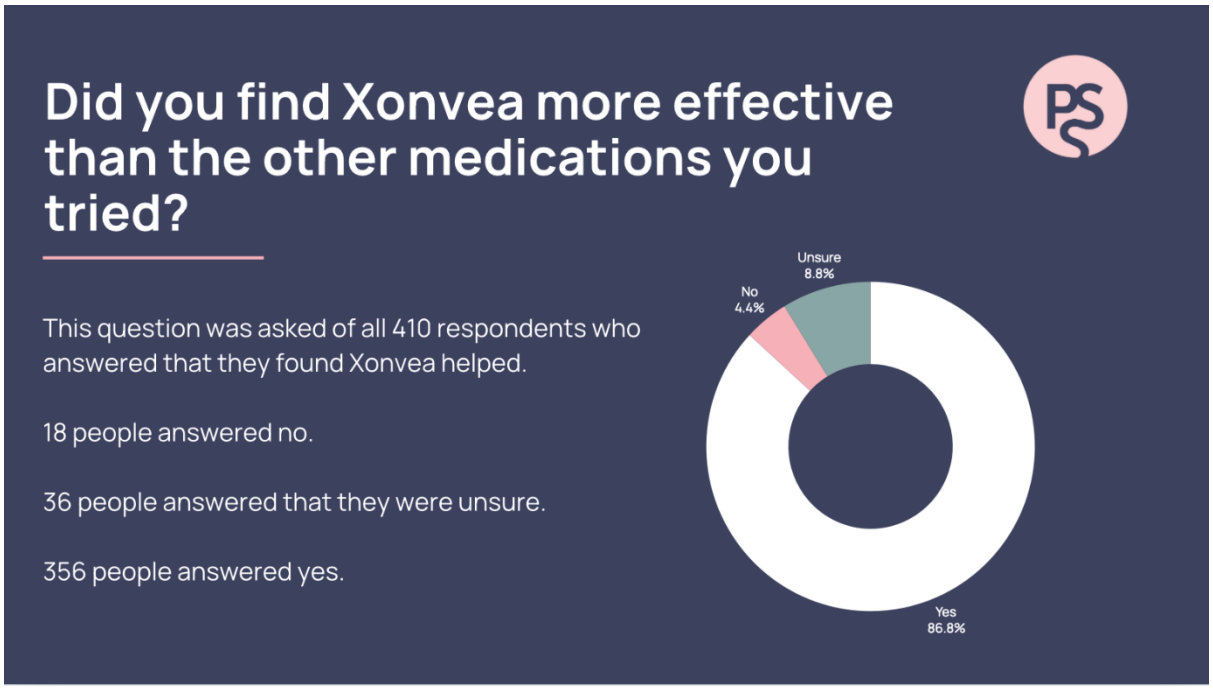
- Clinical uncertainty or lack of confidence in prescribing Xonvea.
- Possible cost-avoidance behaviour, which is short-sighted.
- Access issues (formulary, local policy, or stock).

**Cost assumption is logical:** If a patient is moving through multiple medications, it stands to reason the previous ones were ineffective leading to repeat consultations, prolonged illness, and potentially hospital care.

This directly supports the economic argument for prescribing Xonvea earlier—especially when paired with the high effectiveness already outlined.

## 3.5 Did you find Xonvea more effective than the other medications you tried?

**Chart 4.**




**87% (356/410)** of those who found Xonvea effective said it was *more* effective than other medications they had tried. That's a powerful message in favour of considering Xonvea earlier in treatment plans.

The small number who said **"no" or "unsure"** still suggests a favourable comparison to other antiemetics.

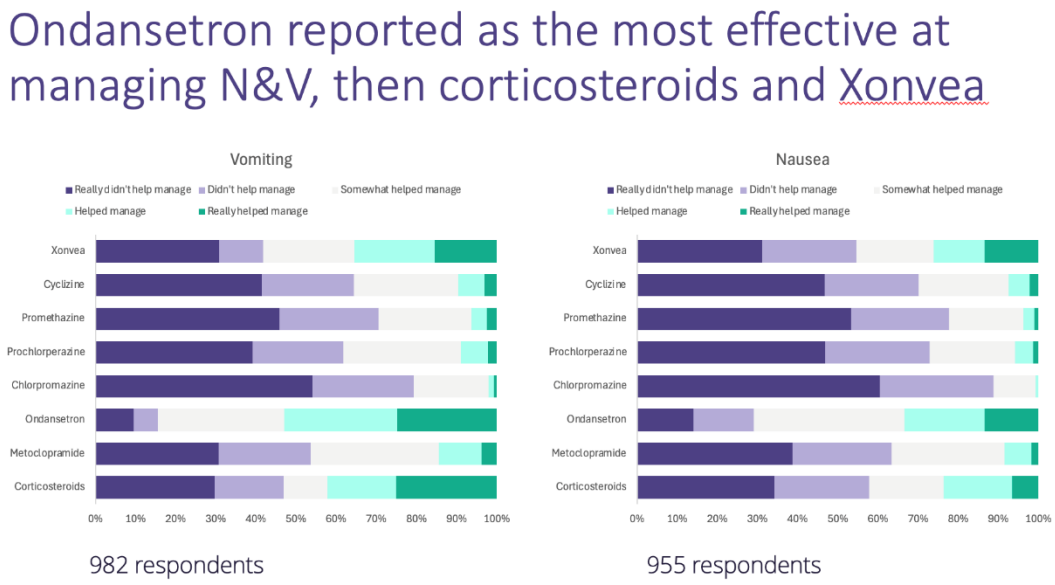
## 3.6 Efficacy of other medications – an analysis

**In 2024 Pregnancy Sickness Support launched their survey "Insights on the treatment and care of Hyperemesis Gravidarum (HG) in the UK - A Survey conducted by Pregnancy Sickness Support".**

It consisted of 45 questions and was advertised via a link to complete on SurveyMonkey and distributed via email list to subscribers and on main social media platforms: Instagram, Facebook, LinkedIn and Twitter.

1370 people responded.

## Chart 6.




**Respondents were asked:**

In this pregnancy, please rank the following medications based on their effectiveness in managing your VOMITING.

In this pregnancy, please rank the following medications based on their effectiveness in managing your NAUSEA.

We submit this data to demonstrate efficacy rates amongst all current medications prescribed for Hyperemesis Gravidarum (HG) and Nausea and Vomiting in Pregnancy (NVP).

As seen above the second-line medication, Ondansetron, was ranked the most effective across both symptoms, then third-line medications corticosteroids and then Xonvea, the only first-line antiemetic.

This corresponds with the 83% efficacy rate established from the **Pregnancy Sickness Support - Xonvea Feedback** survey.

**Other efficacy resources:**

**1. Ondansetron**

- **Efficacy:** A systematic review and meta-analysis indicated that ondansetron had higher efficacy in terminating nausea and vomiting than metoclopramide (89.6% vs. 77.4%, respectively; p=0.013). [3]

**2. Metoclopramide** [4]

- **Efficacy:** Metoclopramide is considered safe and effective for NVP but is generally recommended as a second-line therapy due to the risk of extrapyramidal side effects.

**3. Other First line antiemetics**

- **Efficacy:** The NICE guideline NG201 (August 2021)[5] provides a comprehensive comparison of pharmacological treatments for nausea and vomiting in pregnancy (NVP). Notably, it highlights that several commonly prescribed first-line medications lack robust evidence supporting their efficacy:

**Cyclizine**: No randomized controlled trial (RCT) evidence exists for its use in NVP. Older, low-quality studies have assessed a combination of cyclizine with pyridoxine, but this combination is not available in the UK.

**Prochlorperazine**: There is no RCT evidence supporting its efficacy in treating NVP.

[3] https://pmc.ncbi.nlm.nih.gov/articles/PMC9249360

[4] https://pmc.ncbi.nlm.nih.gov/articles/PMC7037589/#:~:text=Also%2C%20metoclopramide%20with%20pyridoxine%20was,2007).

[5] https://www.nice.org.uk/guidance/ng201/resources/table-1-advantages-and-disadvantages-of-different-pharmacological-treatments-for-nausea-and-vomiting-in-pregnancy-pdf-9204302125

**Chlorpromazine**: Similarly, no RCT evidence is available for its use in NVP.

**Promethazine**: Limited, moderate-quality evidence suggests benefits on vomiting frequency when combined with pyridoxine, a combination not available in the UK.

In contrast, **doxylamine/pyridoxine** (Xonvea) is the only medication specifically licensed in the UK for NVP. While the evidence in this guideline is of low to very low quality, it does show symptom relief compared with placebo and this guideline was produced before the findings from Pregnancy Sickness Support from both surveys detailed in this report.

This discrepancy is particularly noteworthy given that some Integrated Care Boards (ICBs) express reservations about prescribing Xonvea due to perceived insufficient efficacy data yet continue to prescribe other medications with even less supporting evidence.

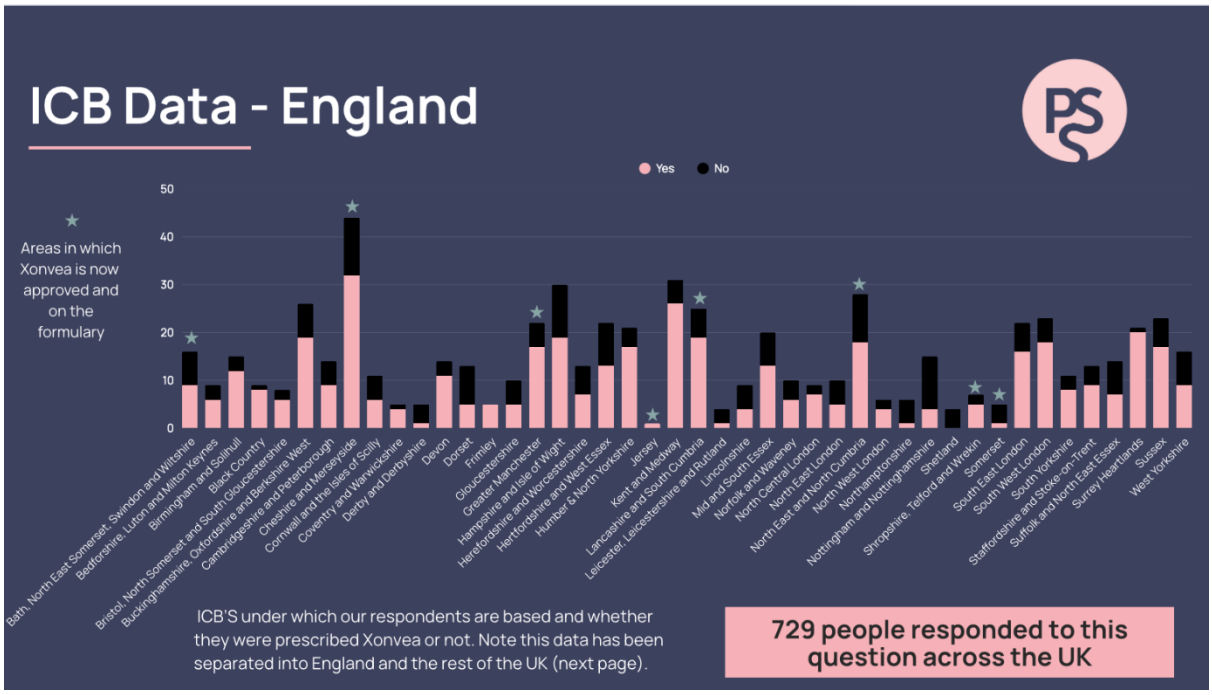
For a detailed comparison, refer to footnote 5.

## 3.7 ICB Data –Were you given an opportunity to try Xonvea during your pregnancy?

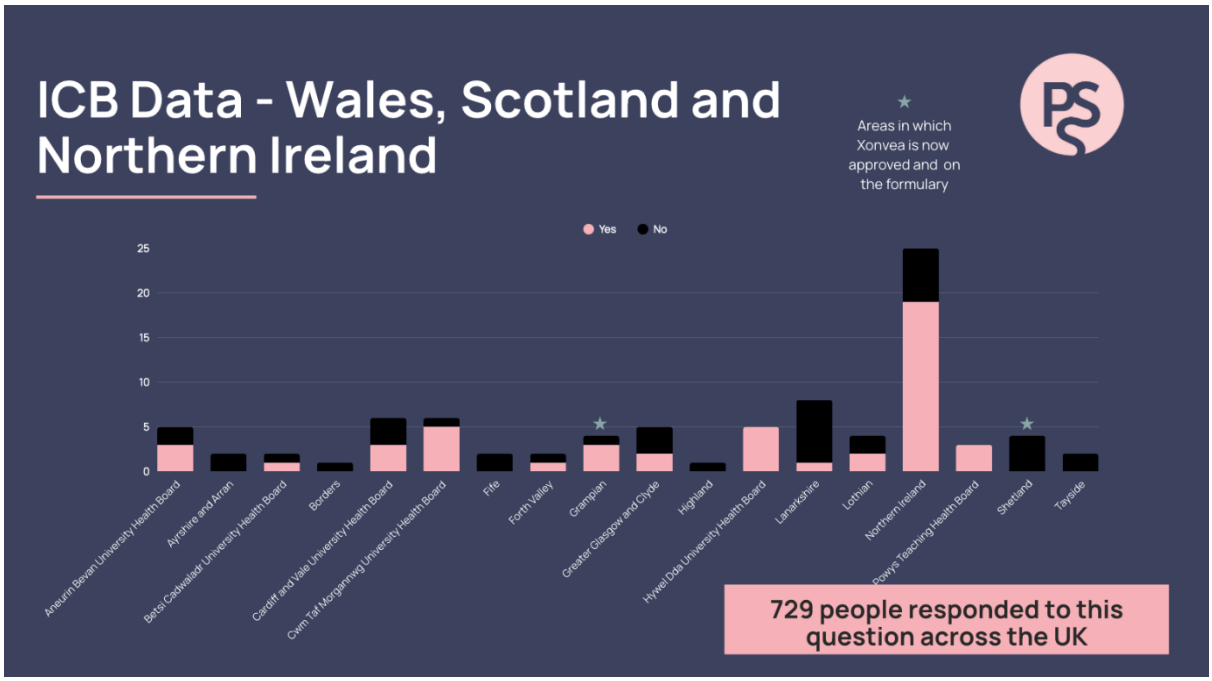
Post code data collected from the Survey corresponding to ICB's and respondents' location.

**NB:** Respondents were asked to provide their current county and postcode, but the survey did not specify that this should relate to where they lived during the pregnancy or pregnancies they were reflecting on. As a result, some location data may reflect where respondents live now, rather than where they were living at the time of their experience. While this may affect the geographical accuracy of some responses, it does not impact the overall findings or themes of the survey.

## Chart 6.




## Chart 7.



In many of the ICB's mentioned in the charts 6&7, we know that Xonvea is not available on the formulary - therefore we can conclude that Xonvea is being prescribed 'off-formulary'. Whilst this is positive, it can also be difficult for NVP sufferers who are perhaps prescribed it by one healthcare professional, only to then have it withdrawn by another. This is an incredibly common situation that we hear about on the helpline at PSS.

Equally there are areas, such as Greater Manchester, in which we know that Xonvea is on the formulary, but not all sufferers were given the opportunity to try it. Further analysis is needed to understand why they didn't try it (e.g. it may have been available if they asked for it - but it just wasn't offered)

**NB:** This survey did not ask respondents in what year they were pregnant. Further research will need to be conducted to ascertain when they were pregnant to compare with the introduction of Xonvea into the RCOG Greentop Guidelines on Nausea & Vomiting in Pregnancy (NVP) and Hyperemesis Gravidarum (HG) No.69. This data would also enable us to compare with when Xonvea was added to specific ICB's formulary.

The areas in which we know Xonvea to be readily available are as follows: Bath and Northeast Somerset, Cheshire and Merseyside, Greater Manchester, Lancashire and South Cumbria, Northeast and North Cumbria, Shropshire, Telford and Wrekin, Somerset, Shetland, Grampian and Jersey - so further analysis could be done with these locations.

**Quick Analysis - Inconsistency of access and prescribing**:

- Even in areas *with* formulary approval, Xonvea isn't always offered.
- In areas *without* formulary approval, it's sometimes prescribed off-formulary—but not consistently or sustainably (e.g. it's later withdrawn).

**Real-world impact on patients**:

- The issue of it being prescribed and then withdrawn is emotionally and physically damaging.

**Potential area for further research**:

- Encouraging more location-specific, time-specific research could be a recommendation going forward.

## 3.8 Cost analysis

Based on drug cost information[6], estimations regarding NHS costs are detailed in the next two tables.

The average number of medications that sufferers were asked to try was three, and therefore combination scenarios have been created based on three of the most prescribed first line medications **(Cyclizine, Promethazine and Prochlorperazine)** along with two of the most prescribed second line medications **(Metoclopramide and Ondansetron).**

Figures are based on one week's supply of each medication at the maximum dose. For Xonvea the cost is related to its suggested dose as documented in the BNF.

An estimation is made that for each new prescription a GP appointment would be needed (these medications need to be prescribed by a doctor), and the cost for that has been taken from the Kings Fund.[7]

Further costs for consideration are A&E/UTC or EPU visits, hospital admissions and the cost of calling out an ambulance - all of which are scenarios we hear of regularly via the helpline at Pregnancy Sickness Support.

[6] https://www.nhsbsa.nhs.uk/nhs-prescription-services

[7] https://www.kingsfund.org.uk/insight-and-analysis/data-and-charts/key-facts-figures-nhs

**Table 1.**

| Medication | Cost of one box of medication to the NHS | Cost of 1 week's supply (on max suggested dosage) |
|---|---|---|
| Cyclizine | £3.91 | £0.74 |
| Promethazine | £13.44 | £5.04 |
| Prochlorperazine 5mg | £1.81 | £1.36 |
| Prochlorperazine Buccal | £23.33 | £8.53 |
| Metoclopramide | £0.91 | £0.68 |
| Ondansetron (4mg) | £4.95 | £10.40 |
| Ondansetron (8mg) | £4.19 | £5.87 |
| Xonvea | £28.50 | £31.35 |

# Data from The Kings Fund

GP Visit - £56 per appointment

Lowest level of investigation and treatment (I&T) at an Urgent Treatment Centre - £91 per I&T

A&E department with more complex I&T - £137 - £445.

## 3.9 Cost Analysis – Medication scenarios

### Table 2.

| | | | | |
|---|---|---|---|---|
| Cyclizine, Promethazine and Prochlorperazine (5mg)<br><br>3 GP appointments<br><br>Total = £175.14 | Cyclizine, Promethazine and Ondansetron (4mg)<br><br>3 GP appointments<br><br>Total = £184.18 | Promethazine, Prochlorperazine (5mg) and Ondansetron (4mg)<br><br>3 GP appointments<br><br>Total = £184.80 | Cyclizine, Prochlorperazine (buccal) and Ondansetron (4mg)<br><br>3 GP appointments<br><br>Total = £187.67 | Cyclizine, Metoclopramide and Ondansetron (4mg)<br><br>3 GP appointments<br><br>Total = £179.82 |
| Cyclizine, Promethazine and Metoclopramide<br><br>3 GP appointments<br><br>Total = £174.46 | Cyclizine, Prochlorperazine (5mg) and Ondansetron (4mg)<br><br>3 GP appointments<br><br>Total = £179.76 | Promethazine, Prochlorperazine (buccal) and Ondansetron (4mg)<br><br>3 GP appointments<br><br>Total = £191.97 | Cyclizine, Prochlorperazine (buccal) and Ondansetron (8mg)<br><br>3 GP appointments<br><br>Total = £183.14 | Promethazine, Prochlorperazine (5mg) and Ondansetron (8mg)<br><br>3 GP appointments<br><br>Total = £180.27 |
| Cyclizine, Prochlorperazine (5mg) and Metoclopramide<br><br>3 GP appointments<br><br>Total = £170.78 | Promethazine and Prochlorperazine (5mg) and Metoclopramide<br><br>3 GP appointments<br><br>Total = £174.40 | Cyclizine, Prochlorperazine (5mg) and Ondansetron (8mg)<br><br>3 GP appointments<br><br>Total = 175.97 | Cyclizine, Promethazine and Ondansetron (8mg)<br><br>3 GP appointments<br><br>Total = £184.18 | Promethazine, Prochlorperazine (buccal) and Ondansetron (8mg)<br><br>3 GP appointments<br><br>Total = £187.44 |
| Cyclizine, Prochlorperazine (buccal) and Metoclopramide<br><br>3 GP appointments<br><br>Total = £177.95 | Promethazine and Prochlorperazine (buccal) and Metoclopramide<br><br>3 GP appointments<br><br>Total = £182.25 | Cyclizine, Promethazine and Prochlorperazine (buccal)<br><br>3 GP appointments<br><br>Total = £182.31 | Cyclizine, Metoclopramide and Ondansetron (8mg)<br><br>3 GP appointments<br><br>Total = £175.29 | Promethazine, Ondansetron (4mg) and Metoclopramide<br><br>3 GP appointments<br><br>Total = £184.12 |

**NB: This is not an exhaustive list of all options, but illustrates a cost of usual and potential combinations**

The average cost of 3 antiemetic medications at one week's supply, along with 3 GP appointments is £180.80 per sufferer.

**NB:** This figure does not factor in A&E visits, possible hospital admissions, IV fluid treatment and mental health support.

Average cost of a three-week supply of Xonvea, with 1 GP appointment is £138.65.

**NB:** Based on the recommended dose as found in the BNF[8] of a starting dose of 2 tablets at night for the first 2 days, then an extra tablet in the morning for 2 days and an extra tablet in the afternoon for 2 days. Continuing with the maximum dose of 4 tablets a day.

**Analysis -** While Xonvea may appear more expensive than some other medications used to treat nausea and vomiting in pregnancy, this comparison ignores the broader picture. When factoring in real-world outcomes and the overall patient journey, the value of Xonvea becomes much clearer.

**For example, one respondent shared:**
*"It stopped the vomiting, although not the nausea, and kept me out of hospital. I didn't have Xonvea for my 2015 pregnancy and was hospitalised 7 times with dehydration."*
Seven hospital admissions for fluids far outweigh the cost of a few months of Xonvea.

**Another wrote:**
*"I was able to function effectively throughout my pregnancy—unlike my first pregnancy, where I was off work for 10 weeks and unable to function at all."*
Ten weeks of absence, distress, and impaired daily life carries both societal and personal costs—financially, emotionally, and in terms of mental health.

**And another:**
*"In my first pregnancy, I didn't have Xonvea. I was being sick up to 50 times a day, off work, in and out of hospital for fluids. I had no quality of life. Second pregnancy, I've had*

[8] https://bnf.nice.org.uk/drugs/doxylamine-with-pyridoxine/

*Xonvea—I'm still nauseous and struggling, but no hospital admissions and it's so much better."*

These comments are not isolated. They reflect the kind of feedback we hear daily at Pregnancy Sickness Support. When prescribed appropriately, we believe Xonvea has the potential not only to improve patient outcomes but to save the NHS money—by reducing hospital admissions, repeat appointments, and prolonged suffering.

Further health economics research would be hugely beneficial to complete the picture of the cost to society.

In total **we had 354 positive responses of how Xonvea** helped respondents and 53 responses from respondents who did not find Xonvea effective.

For balance here are three comments from those who did not find Xonvea effective.

*"HG was too severe".*

*"It was only effective when combined with metoclopramide and ondansetron and then steroids. Last pregnancy it was effective on its own. This one had other ideas!"*

*"Only worked for a small window then felt and was sick again".*

## 4.0 How did they request Xonvea?

### Chart 8.


**Over 40% of respondents had to advocate for themselves** to access Xonvea. That's a major indicator of:

- Gaps in healthcare professional awareness or confidence in prescribing it.
- A system where access is skewed towards those who are informed, assertive, and able to self-advocate—raising **equity concerns**.

**Most people are being prescribed Xonvea by a GP or hospital doctor**, which shows that it is being accessed *within both primary and secondary care*—but not necessarily in a timely or preventive way.

**If prescribed by a hospital doctor**, it likely followed a crisis point—**hospital admission**—rather than proactive management.

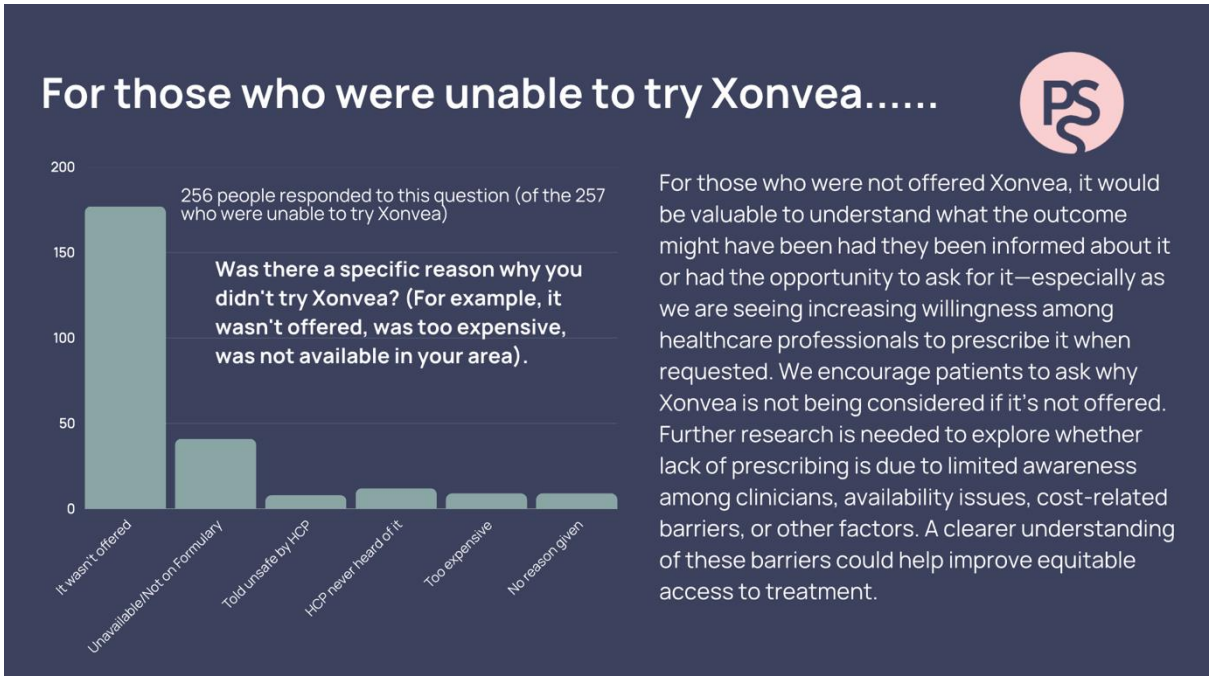
This strongly supports a call for:

- **Improved clinician education** on the RCOG guidelines and Xonvea's status.

- **Clearer prescribing guidance** across regions
- Possibly **patient-facing materials** to help sufferers know what to ask for if they're not being offered licensed, first-line treatment.
- **Earlier intervention in primary care** could prevent escalation to hospital care.
- **Standardising GP knowledge and prescribing confidence** is critical—especially as they're often the first point of contact.

## 4.1 Those who responded 'No' to being offered Xonvea

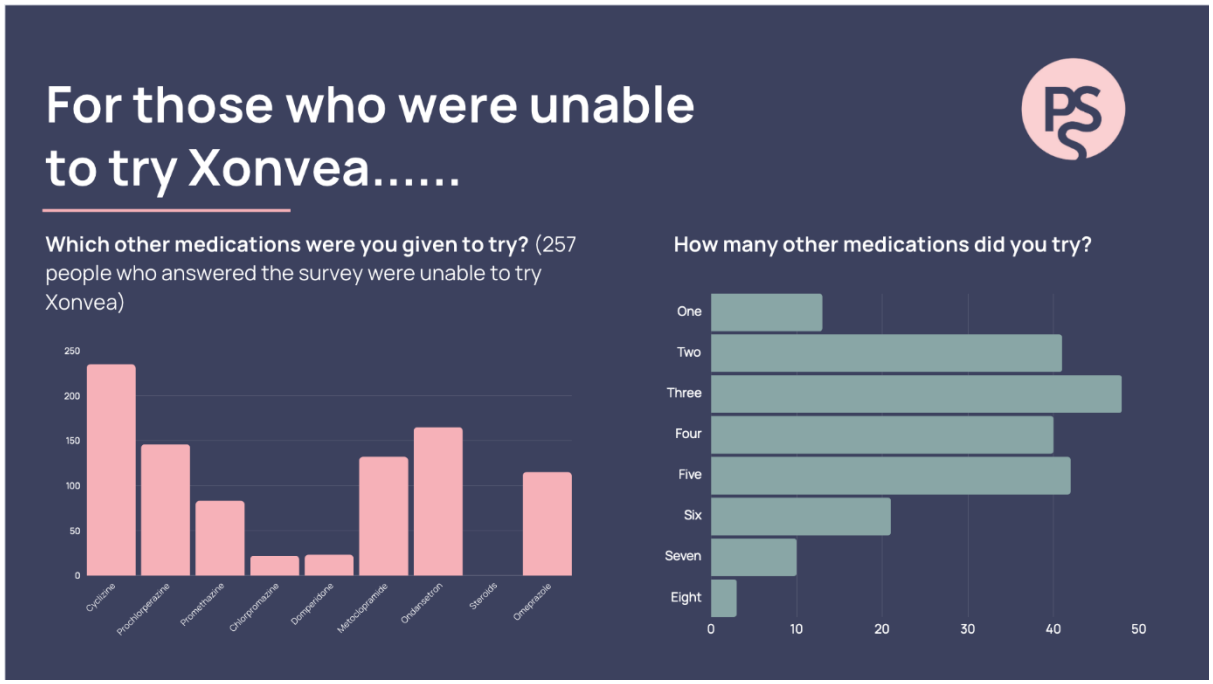
### Chart 9.




This reinforces our earlier call for:

- **Further research into prescribing behaviour and system-level barriers**
- **Consistent messaging to patients** so they can advocate for themselves if necessary
- **Clear accountability in commissioning decisions** around formularies.

## 4.2 What and how many other medications where you offered?




This data reflects that of the 257 people who weren't given Xonvea (a first line, licensed antiemetic) to try, 165 were given Ondansetron, 132 Metoclopramide and 23 Domperidone (all second line antiemetics).

It also shows that 64% of respondents in this category were given three or more antiemetics to try - we can conclude from this that the medications they tried were ineffective. This is likely to have resulted in multiple trips to their GP, possible hospital admissions, and long periods of suffering - all of which is detrimental to the physical and mental health of the sufferer, and of cost implication to the NHS.

**64% of patients denied Xonvea tried three or more other medications**

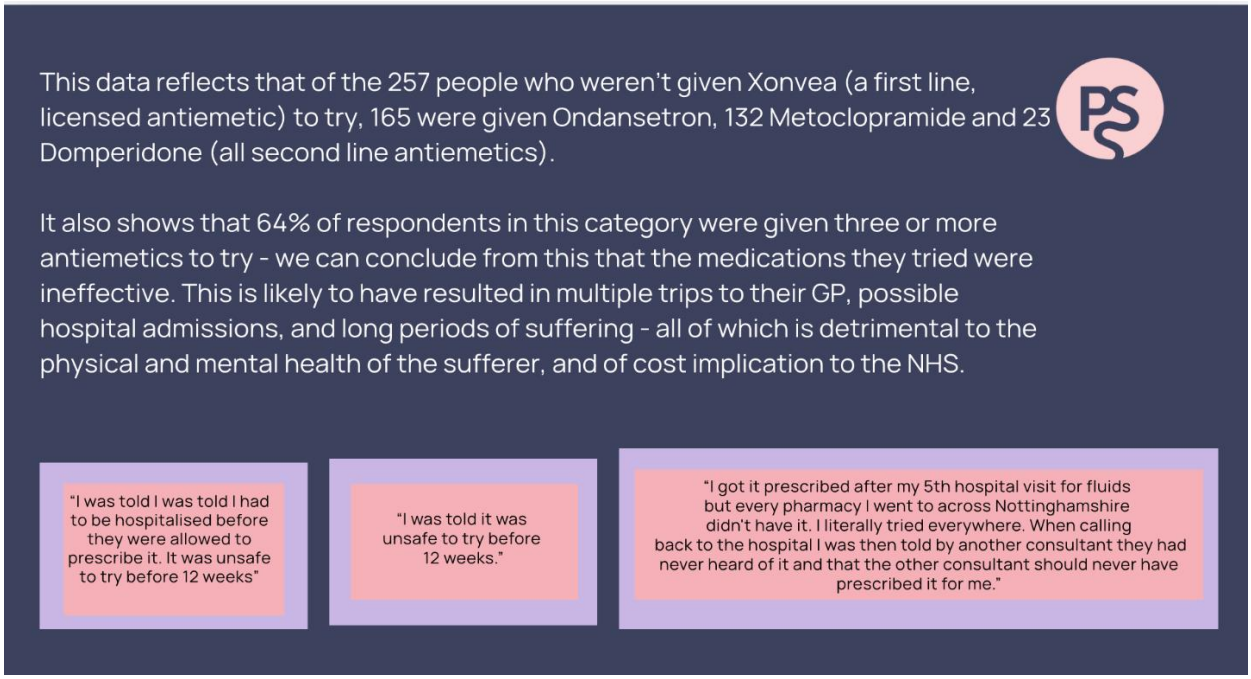
→ These were primarily *second-line* drugs, indicating a disregard for Xonvea's first-line, licensed status. This makes a strong case that **many patients are going through ineffective treatment cycles** while a recommended option is withheld.

**Implied suffering and NHS cost**

→ The logical consequence of these ineffective treatment cycles:

- Multiple GP visits
- Emergency care and admissions
- Increased risk of physical and mental health deterioration
- **Inefficient use of NHS resources**

**Crucially, these were preventable**: These individuals *never even had the chance* to try the one medication designed specifically for NVP.




# 5. Conclusions

Most respondents (84%) who were able to try Xonvea reported that it was effective in treating their symptoms. Of those, 83% said it was more effective than other antiemetics they had previously tried. This suggests that, where appropriate, Xonvea can be a highly effective treatment option.

From a cost perspective, prescribing Xonvea earlier may offer better value for the NHS than cycling through multiple less effective medications. The knock-on effects of delayed treatment—such as repeat GP appointments, emergency care, and hospital admissions—represent not only increased costs but also avoidable suffering. While Xonvea is not effective for everyone, the financial risk of trialling it is low: a single box costs £28.50 and can be stopped quickly if ineffective.

Despite being the only medication licensed in the UK specifically for NVP and formally listed in the 2024 RCOG guidelines as a first-line treatment, 57% of respondents who accessed Xonvea had already tried at least three other medications first. Many were even prescribed second- or third-line drugs such as Ondansetron, Metoclopramide, and steroids before being offered Xonvea. These findings raise questions about whether cost concerns, lack of clinician awareness, or formulary restrictions are driving inappropriate sequencing of treatment.

Notably, 33% of respondents who accessed Xonvea did so only after seeing a hospital doctor—suggesting that some had to reach a point of hospital admission before being offered the drug. This reactive approach increases the burden on both patients and NHS services.

Xonvea is also being prescribed in some areas where it is not included on local formularies, demonstrating that some clinicians are willing to prescribe it off-formulary when necessary. However, this leads to inconsistent access and reports of prescriptions being withdrawn once reviewed by another healthcare professional. These inconsistencies cause confusion and distress for sufferers, many of whom turn to the Pregnancy Sickness Support helpline for advice after being told they can no longer access a treatment that helped them.

## 6. What Pregnancy Sickness Support are calling for

1. **Equitable access to Xonvea across all UK regions**
Every Integrated Care Board (ICB) should add Xonvea to its formulary. Women should not be denied access to the only licensed antiemetic for NVP based on postcode.

2. **Earlier prescribing of Xonvea in line with national guidelines**
Xonvea should be considered as a first-line treatment, as outlined in the 2024 RCOG Green-top Guideline. Prescribing it only after other medications have failed contradicts best practice and causes avoidable harm.

3. **Improved GP and hospital clinician awareness and confidence**
Over 40% of those who accessed Xonvea had to request it themselves. Clinicians need support and training to prescribe appropriately, understand the dosing, and know when it is indicated.

4. **Clearer local prescribing protocols and formulary alignment**

Patients should not face the distress of being prescribed a medication, finding it effective, then having it withdrawn. Trust in care is undermined when policies are inconsistent.

5. **Further research into prescribing barriers and inequalities**

There is a need to understand why women are not being offered Xonvea—is it cost? Lack of awareness? Commissioning restrictions? Data is needed to close this gap once on all formularies.

**Recognition of the wider cost of untreated NVP and HG**

Decisions about prescribing must account for the physical, mental, social, and financial costs of delayed or ineffective treatment—not just the price of a single box of medication.

# 7. Contacts

For more information and to receive the charts and slides used in this report, please contact:

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