

# Phalloplasty Masculinising Surgery

Process involved and after care



# Masculinising Genital Surgery

Masculinising genital surgery aims to reduce gender dysphoria by aligning your anatomy with your gender identity and identity expression goals.

Some transmasculine individuals decide that they want to have surgery to permanently alter their anatomy, however not all choose to have surgery.

It is important to be aware that masculinising genital surgery is irreversible and requires considerable commitment from you throughout the process. You should aim to be as well informed as possible about this journey and consider all the options available before you make this decision.

Phalloplasty surgery may involve several surgeries. As a result, it is important to allow plenty of time between stages to allow any reconstructed tissue to mature. This will also give you the opportunity to rest in between surgeries which is an essential part of the healing process. It is imperative to acknowledge that this journey may take at least 18 months to complete.

The surgical technique used will depend on the size and shape of your body, your personal preference, and your goals.

## Referral for surgery

Masculinising genital surgery is provided as a core component of the NHS gender identity care pathway for transmasculine individuals.

You will require two recommendations for surgery to be undertaken by two responsible clinicians from a specialist Gender Identity Clinic (GIC) that is commissioned by NHS England.

**The two recommendations for genital surgery must confirm that you have had the relevant assessments and meet the criteria for surgery, including:**

- A documented persistent diagnosis of gender dysphoria
- The ability to make a fully informed decision and to consent for treatment
- Be at the legal age of majority; the referral can be made at the age of 17 but for a surgery to take place in the UK you must be 18 or above
- If you have significant medical or mental health concerns, they must be well controlled
- 12 continuous months of living in a gender role that is in-keeping with your gender identity
- 12 continuous months of hormone therapy as appropriate to your gender goals (unless you have a medical contraindication or are otherwise unable or have concerns in relation to taking the hormones)

The NHS funded masculinising genital surgery is available for people aged 18 and above. The following surgeries may be offered as component parts of this surgical pathway:

- **Phalloplasty (various types):** This is the surgical creation of an artificial penis (phallus), scrotal sac and testes. It involves using a flap of tissue, including arteries, veins, and nerves.
- **Metoidioplasty (with/without urethroplasty, with/without scrotoplasty):** This is the surgical creation of a mini phallus by using the enlarged clitoris. (Please refer to the Metoidioplasty leaflet).
- **Hysterectomy:** A total hysterectomy involves removing the uterus and cervix, whereas a sub-total hysterectomy involves removing the uterus but leaves the cervix in place. This means that you would remain on the cervical screening programme.
- **Bilateral salpingo-oophorectomy (BSO):** This involves removing the fallopian tubes and the ovaries.
- **Vaginectomy:** Removal of all or part of the vagina (colpectomy) and/or closure of vaginal opening (colpocleisis).
- **Urethroplasty:** Creation of a urethra that travels through the neophallus (urinary passage through the penis). The urethral tissue can be made from skin, vaginal or oral mucosa.
- **Glansplasty:** Creation of the glans penis (circumcised appearance) – by sculpting head of neophallus.
- **Scrotoplasty:** Creation of a scrotum using the labia majora. The surgeon then inserts testicular prostheses later.
- **Erectile prosthesis (various types):** Insertion of a penile prosthesis.
- **Testicular prosthesis (various types):** Insertion of testicular prosthesis.

It is, however, important to acknowledge that whilst hysterectomy and bilateral salpingo-oophorectomy (BSO) may be performed along with one or other stages of this surgery, they are not available on the NHS as stand-alone procedures through this surgical pathway. You can discuss this further with your GP, who may refer you for these procedures separately if required.

## Pre-Surgery discussions

Based on the recommendations of doctors at the GIC, you will be referred to a surgeon outside of the clinic who is an expert in this type of surgery.

Your lead clinician at your GIC will discuss pre-surgical considerations such as fertility and hair removal.

### Fertility

Before you have your surgery, you should think carefully about whether you may wish to have children in the future.

This is because your reproductive system will change during medical and surgical treatments, such as with hormonal therapy and surgery which can cause permanent infertility.

You should discuss whether you wish to preserve your fertility with your lead clinician at your GIC before you are referred to a surgeon.

The clinical team at your GIC can talk to you about available options

## Hair removal

Some people having genital surgery will require hair removal from a donor site. This will depend on the type of surgery planned and will be assessed on an individual basis.

Your surgical team will assess your skin and discuss what is required with you.

**Both laser and electrolysis are methods of hair reduction for surgical sites:**

- **Electrolysis** involves insertion of a small needle into the hair follicles which are treated with an electrical current to prevent the hair from growing back.
- **Laser hair removal:** Laser hair removal involves using a laser light energy which is absorbed by the hair follicle, which is then destroyed. This technique is dependent on the colour of your hair and skin.

You will be referred by your surgical team to an approved hair removal clinic.

You will require several treatments to effectively treat the site in preparation for surgery, which may take up to a year or more.

Your surgical team will see you to assess the site, following treatment, to assess whether you can be given a date for surgery. It is possible that further treatments may be required.

## Healthy lifestyle

Your clinical team will additionally discuss pre-surgical requirements such as weight loss, smoking cessation (stopping smoking) and your general health. Important to note that you may not be referred for surgery until target weight / BMI is reached. This is to ensure you are fit for surgery to proceed.

We advise that you tell your surgeon of any specific physical work you regularly undertake so that they can give you the best advice possible about recovery times.

**If you have a healthy lifestyle you are likely to recover better from surgery and are more likely to have fewer complications. You should aim to be as healthy as you can be by doing the following:**

- **Stop smoking:** Smoking reduces blood supply and can reduce your ability to heal, it can also lead to chest infections.
- **Cannabis use:** Should also be avoided due to its estrogenic effect.
- **Weight loss:** Most surgeons will require your BMI to be less than 30, but this may vary according to which surgeon is performing the surgery. If you are overweight this can make the surgery more complicated and may lead to a higher risk of complications like delayed wound healing. You can speak to your GP about a weight loss programme that is safe for you.
- **Medications:** Follow the advice given to you about what medications you should take or stop. Most surgeons will ask you to stop your oestradiol for six weeks before surgery and three weeks after surgery, however you will continue taking your testosterone blocker.
- **Alcohol:** Be honest with your doctor about how much you drink, as alcohol can affect your liver and have an impact on bleeding and wound healing. It is also an important factor for Anaesthetists to consider when deciding on which General Anaesthesia (GA) medications to use.
- **Over the counter medication (OTC):** Tell your surgeon if you are taking any additional over the counter tablets, vitamins or supplements as these may influence your ability to heal and may affect bleeding.

# Pre-Surgery Assessment

Once you have decided where you would like your surgery to take place, you will meet with the surgical and nursing team.

You will be given information about what to take with you for both your assessment appointments and hospital admission.

The surgeon will carry out a physical examination of your genital area and will also discuss:

- Various types of surgical options available
- Advantages and disadvantages of each surgery
- Potential risks or complications related to the surgery
- Follow up care you may require after your surgery

As part of your assessment, you may be required to undergo some or all the following investigations:

- Chest X-ray (CXR)
- Blood tests
- ECG (a tracing of your heart rhythm)
- Urine sample
- Routine observations such as: blood pressure (BP), heart rate (pulse) and your temperature recording
- COVID-19 screening may be required
- MRSA screening (nose and groin) may be required: This will involve taking some swabs from your nose and skin to see if you need to have any treatment before you have your operation. MRSA is a type of bacteria that is resistant to many antibiotics and lives on your skin. It is normally harmless, but it can affect your ability to heal if you have an operation
- Pregnancy test may be required prior to surgery if you still have a uterus (womb)



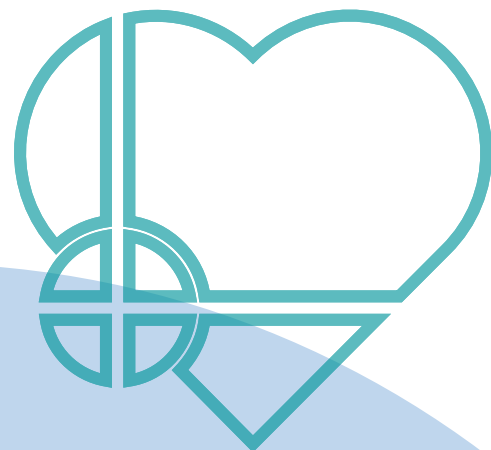
# Preparing for surgery

Once you have the date for your surgery, you may want to start thinking about the following :

- If you are employed, you should speak to your employer to arrange the time you will need to be off work.
- You will need time to recover, and this will vary depending on the type of operation you have; you may want to arrange to have someone with you for a period after you are discharged from hospital.
- Stock up your fridge, freezer, and cupboards.
- Organise for someone to be available to help (e.g., with shopping and cooking) for at least the first two weeks you are home after your operation.
- It is advisable to discuss in advance with your GP or pharmacist regarding pain relief medication options, in preparation for when you return home after your surgery.
- If you have pets, ask someone to take care of them while you are in hospital and once you are at home.
- Make sure you have enough toiletries and clean underwear at home.
- You will also need to arrange for someone to collect you from the hospital after your surgery or arrange transport home.
- Make sure you have some loose-fitting clothing to take to hospital with you as tight clothing will be uncomfortable in the first few weeks after your surgery.

After your surgery, you will be advised about activities that you should avoid such as certain types of exercises, driving and intimacy. It is generally advised that you avoid these activities for about 6-8 weeks after the first stage phalloplasty.

It is important to follow the specific advice your surgeon has given you to avoid complications and maximise recovery and healing.



# Phalloplasty Surgery

Phalloplasty is the surgical creation of an artificial penis (phallus) to achieve the resemblance to a normal adult size penis.

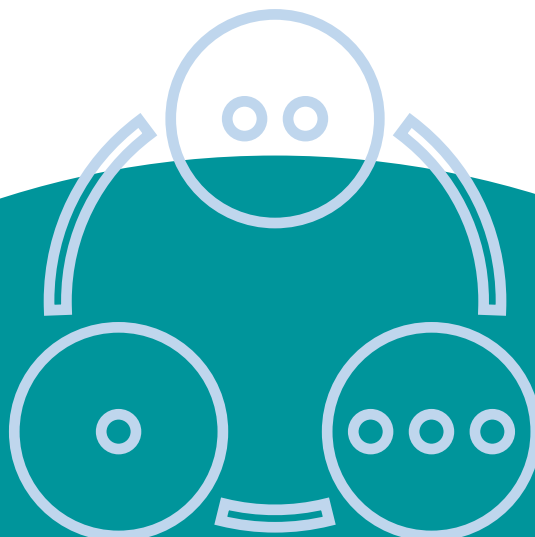
The surgery will be done whilst you are asleep under general anaesthetic and this surgery is irreversible. Phalloplasty normally involves several surgeries which can be thought of as falling into three stages, each requiring one or more operations, depending on the exact requirements of the patient. It is important to allow plenty of time between surgeries for any reconstructed tissue to mature. This will allow you to rest in between, which is important for the healing process.

## Intended results and benefits of Phalloplasty

- To reduce gender dysphoria by aligning your anatomy with your gender identity
- Ability to achieve sexual sensation, however this will depend on the technique used. There is no guarantee of sensation. UK surgeons report 10% of patients have no sensation after two years with radial artery phalloplasty.
- Ability to achieve an erection
- To allow penetrative sex (depending on the type of procedure)
- To allow standing urination (depending on the type of procedure)

## Phalloplasty surgery is usually divided into three surgical stages:

- **Stage 1:** Formation of the phallus and/or neo-urethra in phallus
- **Stage 2:** Glans sculpting, scrotoplasty and connect neo-urethra to bladder
- **Stage 3:** Erectile and testicular prosthesis



# Stage 1: Phalloplasty Surgery Formation of the Phallus (penis) and/or Neo-urethra through the Phallus (new urinary passage through the penis)

Depending on multiple factors and after discussion with your surgeon, the following types of phalloplasty may be offered to you.

## Types of Phalloplasty:

### 1. Radial Artery Phalloplasty (RAP):

- This is the procedure of choice if urinating whilst standing, aesthetics and sensation are the prime requirements.
- RAP uses a free flap from the forearm, the harvested forearm flap will form a skin-lined tube that is rolled up which will eventually form the neo-urethra (the tube you urinate from)
- This skin lined tube will be encased by a larger flap with the skin on the outside.
- This tube within a tube will be moved to the pubic area, whereby connections are made between the veins, artery, and nerves.
- The radial artery from the forearm will provide the blood supply to the phallus.
- The neo urethral opening (the opening of the tube you urinate from) is placed to the side of the clitoris ready to be connected to the original urethral opening in a later surgery.

### 2. Pubic Phalloplasty

- Uses a local flap from the lower belly and crotch area. This may not be possible if you have had surgeries on your abdomen such as a caesarean section or hysterectomy, however your surgeon will discuss this with you.
- This is the surgery of choice if no urethra is required but phallus size and penetrative sex is important with minimal visible donor site scarring.
- The harvested rectangular skin from the lower abdomen will still have its original blood supply and nerve connection to the clitoris and pubic area.
- The rectangular skin flap is folded in a tubular fashion to form the phallus.
- The abdominal skin is moved down to cover the area that was used to create the skin flap.
- Further surgeries maybe required to close the abdominal skin graft area and ensure the phallus is placed in the correct location.



### 3. Antero-Lateral Thigh (ALT) Phalloplasty:

- Using either a free or pedicled flap (skin flap that remains connected to its original the blood vessels) from the outer thigh.
- The skin and fat on the front and side of the thigh are used to create the phallus.
- Very few patients are suitable for this surgery as the skin itself is much thicker/coarser than that of the forearm.
- ALT can be performed with/without a urethra formation.

### ALT Phalloplasty with Urethra (urinary passage through the neophallus):

- The flap design and procedure are the same as for the forearm technique: a tube within a tube.
- Usually, the feeding artery and veins are very long and arise from near the hip joint and it is therefore possible to tunnel the whole flap under the quadriceps muscle to the groin without disconnecting and reconnecting the blood vessels (pedicled flap).

### ALT Phalloplasty without Urethra:

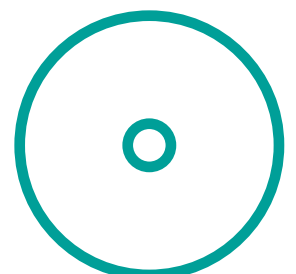
- A smaller width flap is taken, and the hairiness does not matter as that can be dealt with later.
- This option is sometimes chosen if a patient wants to potentially have sensation in the phallus but has little abdominal fat, and for some reason cannot use the forearm and is happy to urinate sitting down.

The donor area receives skin grafts to replace the removed skin, normally from the buttocks or legs. However, there will be significant scarring to the donor area. and it should not be exposed to strong sunlight as it will burn easily.

During your surgery, you may have a tube inserted into your bladder called a catheter. This will drain the urine from your bladder into a small bag. This will be in place for a few days to allow your body to heal.

You will have dressings and wound covering in place to prevent the risk of bleeding and infection, these will be checked regularly while you are in hospital and you will be advised on what care is required after your discharge. A support dressing for the phallus will be needed for 3 weeks.

If you have a Radial Artery Phalloplasty, it is important not to move the elbow from which the flap was taken for the first week, and the wrist for 2 weeks post-surgery. Keep the arm elevated in the sling provided as much as possible to reduce swelling.



## Stage 2: Glans sculpting, Scrotoplasty and connect Neo-urethra to bladder

If a patient wants a neo-urethra (urinary passage through the phallus) then this must be completed before the penile prosthesis is implanted.

Urethroplasty techniques can be broadly split in two main groups: as part of a tube-within-a-tube skin flap or as an independent other-than-skin graft.

### Types of Neo-urethra formation (urinary passage through the penis): Join-Up Urethroplasty

- Where a neo-urethra has been formed within the neo-phallus
- A join-up urethroplasty is needed before urine can flow through the new opening.
- This involves taking a strip of vaginal skin and the other non-hairy inner labial skin and using them to connect the native urethra (existing urine tube) to the previous opening next to the clitoris.

### Radial Artery Urethroplasty

- Is a variant of the Radial Artery Phalloplasty, in which a much smaller flap is used to just form the urethral section rather than the full phallus.
- This technique allows the surgeons to bring the neourethra to the tip of the phallus.
- It does however result in scarring on the arm, but this is a much smaller scar than for a full Radial Artery Phalloplasty.
- A potential side effect of the surgery is that because there is a nerve supply to the neourethra, in 50% of cases, there may be some sensation to the tip of the phallus after this surgery.

### Scrotoplasty:

- If there is insufficient labia majora skin to insert a testicular prosthesis or if the patient's thighs are large, then a formal scrotoplasty will be needed to bring the neo-scrotum in front of the thigh
- The best aesthetic appearance is obtained by forming the scrotum at the time of vaginectomy and join-up urethroplasty with burying of the clitoris
- If the clitoris is not buried or a vaginectomy not performed, then the scrotum will appear split in two
- A single scrotal sac is made by asking you to stretch the new scrotum as much as possible before the stage 3 operation

### Burying of the clitoris:

- The clitoris is buried near the base of the phallus, if desired, to improve the aesthetic outcome.

### Glans Sculpting:

- Before the penile prosthesis is implanted, glans sculpting is performed in addition to any final shaping that is necessary, excising skin tags and tidying up of scars.



## Stage 3: Erectile and Testicular prosthesis

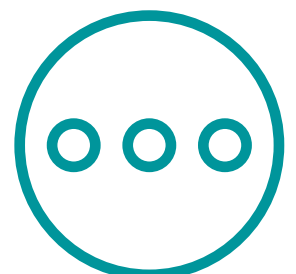
After the phalloplasty and once the urinary tract has been completed patients move on to implantation of prostheses if required.

### Testicular Prosthesis:

- Patients with erectile devices normally have a single large/medium testis prosthesis on one side and an erectile pump on the other as there is no space for two testes and a pump.
- The size of testicular prosthesis used will depend on the looseness of the hairy outer labial skin and the amount of space between the thighs.
- The surgeon will discuss the options of sizes with you directly.
- Solid silicone gel prostheses are normally used, which tend to be rupture-proof and should last a lifetime.
- The shape is oval in keeping with a real testicle.

### Erectile Prosthesis Options:

- Inflatable prostheses: This is an implant inside the penis. This is inflated by a pump, usually hidden inside one half of the scrotum, which you squeeze to inflate the penis implant. This is the usual approach to provide the ability to get erections. It is important to note that if an inflatable erectile implant is used, it will likely need replacement later in life, so you will need to be prepared for further surgeries in the future. A reservoir is usually inserted near your groin to hold the fluid that runs the device.
- Malleable rods: These are implanted into the penis. These are not usually used in the UK as the implant exerts constant pressure on the skin, causing damage over time.
- External aids: These are devices worn around the penis. They can either provide support to hold it straight and stiff, constrict around the base of the penis to hold blood in to stiffen the penis, or provide additional length and girth by providing a sleeve around the penis.



# Follow up care

Following your surgery, you will be regularly reviewed by your surgical team.

You can expect to be in hospital between 1 and 7 days after your surgery depending on your surgeon's advice and the type of surgery.

Your usual stay in hospital after surgery would be approximately:

- 5 and 7 days after Stage 1
- 2 nights after Stage 2
- 1 night after Stage 3

These Regular reviews will give your surgeon the opportunity to assess how well your wounds are healing and check for any post-surgical complications.

Regardless of where you elect to have your surgery, your surgical team will provide you with or advice on the following:

- A discharge plan
- What you should or should not do following surgery
- Wound care
- Pain management
- Expected recovery times
- Clear instructions on what to do should you have any concerns

You may be referred to your local district nursing team or your GP if you require wound care or treatment in the first few days after your discharge.

You will remain under your surgical team post last surgery, after which you will be discharged back to the care of your GP for continuing care.



# Risks from Surgery

As with all surgery that involves general anaesthetic there is risk of complications including deep vein thrombosis (DVT), infection, nerve damage, acute or chronic pain and the need for surgical revision. Covid-19 infection around the time of surgery can also lead to a higher risk of complications or death.

## Common General Surgical Complications:

- Pain
- Infection
- Blood clots
- Bleeding
- Wound dehiscence (breakdown)
- Urinary tract infections (UTIs)
- Urinary retention (unable to pass urine)
- Poor scarring

## Common Phalloplasty Surgery Related Complications:

- Post-operative bleeding requiring return to the operating theatre
- Loss of sensation
- Forearm donor site complications: failure of the skin graft, large permanent scar, chronic pain, loss of feeling, hand weakness, numbness, stiffness and swelling
- Loss of sexual function
- Dissatisfaction with visual appearance of the penis, size of the penis, function of the penis, scrotum
- Inability to orgasm
- Urinary incontinence (unable to control the need to urinate)
- Urinary Post-urination dribbling, spraying of the stream
- Skin changes from urine moisture to the end of neophallus are common
- Necrosis to skin of the penis (tissue dying resulting in blackening of the skin)
- Loss of neophallus (penis): This can occur in 3% of cases, though this risk can be reduced by avoiding smoking and not being overweight
- Wound breakdown (common at base of phallus)
- Fistula: An unwanted connection between urethra, vaginal space and/or the skin
- Urethral strictures: Narrowing of the urethra or complete blockage, making it difficult to urinate, may require catheterisation until corrected
- Testicular implant complications: infection, extrusion, poor/uncomfortable positioning
- Erectile device complications: infection, skin-erosion, technical failure, poor positioning

# Sexual Practice

If you have had a phalloplasty you may be able to have penetrative vaginal sexual intercourse.

It is worthwhile taking the time to explore your new anatomy and to locate areas which are erogenous and pleasurable, before becoming intimate with a partner.

You should follow your surgeon's advice to ensure you are fully recovered from your surgery before you are sexually intimate with someone.

Usually, patients prefer to wait 8-12 weeks post-surgery prior to engaging in penetrative intercourse to allow time for the healing process. However, there is no "right" time to commence sexual intercourse. If you feel comfortable to be intimate with someone, it's almost certainly safe to start. If in doubt, ask your surgeon or specialist nurse.

We would encourage you to practice safe sex, especially with, a new partner. Bear in mind that condoms are broken down by oil-based lubricants. Silicone or dimethicone based lubricants are to be preferred.

## Health Screening after Surgery

The NHS offers health screening if you have registered with your GP as your identified gender, the NHS will not know your previously assigned gender and you may miss screening that would benefit you and identify health risks associated with your assigned gender at birth.

You should discuss the benefits of health screening with your GP and which health screening would be best to request.

The NHS has produced a leaflet on screening for trans and non-binary people which can be found here:

<https://www.gov.uk/government/publications/nhs-population-screening-information-for-transgender-people/nhs-population-screening-information-for-trans-people>

<https://www.jostrust.org.uk/information/cervical-screening/trans-non-binary>

# Who can I contact if I have a question?

## If you have any queries or require advice you can contact your:

- Surgical team
- GP
- GIC


The NHS Gender Dysphoria National Referral Support Service (GDNRSS) have a support line available for questions and queries regarding specialist gender surgery in England, Wales, Scotland and Northern Ireland.

## We can answer questions relating to:

- General enquiries
- Clinical or non-clinical information
- Your referral
- The status of your chosen hospital
- Information relating to travel and any other practicalities



Book a consultation (video, telephone or email) with one of our trained Specialist Nurse Advisors who are available to discuss a wide variety of issues relating to gender surgery. Specialities include **top surgery, feminising surgery and masculinising surgery.**

For more information contact:  [agem.gdnrss@nhs.net](mailto:agem.gdnrss@nhs.net)

Telephone: **01522 58799** Email: **agem.gdnrss@nhs.net**

**NHS**

The service is open to anyone aged 17 or over who has been referred for or is considering gender surgery.



## Contacting you

- Your GIC will ask you if you prefer to be contacted by the GDNRSS team via email or letter and this will be recorded on your file.
- We will email or write to you to let you know your referral has been received and how this has been processed using your preferred contact method.
- We will not be aware of any changes in your personal circumstances, therefore any correspondence from us will be sent to the address or email provided by you to your GIC.
- Please ensure that your contact details are up to date with us and your GIC and contact us if you have a different way you would prefer us to make contact.
- We value your views to help improve services and we may on occasion contact you to gather information about your experience and outcomes after surgery, this is known as patient reported outcome measures (PROMS).

**Please let us know if you do not want us to contact you to complete patient surveys.**

# How we use your information

- Referrals are sent to us using a confidential electronic referral system
- Once received, referrals are securely stored, and our referral system is governed by the General Data Protection Regulation (GDPR)
- We take our responsibility to protect your data and confidentiality extremely seriously and the information we receive can only be used by trained staff who work under close supervision

**We do not share your information with anyone other than those involved in your care and treatment.**



We are available from:  
Monday – Friday  
9am – 4:30pm



You can contact us via telephone:  
Telephone Number –  
01522 857799

## Feedback



If you would like to provide feedback, please email us at: [agem.gdnrss@nhs.net](mailto:agem.gdnrss@nhs.net)

If you require information in another language or format, please contact the team at: [agem.gdnrss@nhs.net](mailto:agem.gdnrss@nhs.net)

