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# PHPU Newsletter

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## Welcome

Welcome to the Summer 2024 edition of the PHPU newsletter. The holiday period is a great time for many of us to relax, recharge and spend time with friends and family.

It is also a time where we see an increase in infectious disease notifications – whether from overseas travel or the undercooked BBQ meats. In this issue we share some detailed updates on key infectious disease pressures, what is happening in vaccinations, and a spotlight on the role of Public Health Specialist Pharmacy Technicians and Senior Pharmacy Support Worker.

Feedback is welcome – please email us at [phpu@ggc.scot.nhs.uk](mailto:phpu@ggc.scot.nhs.uk)

## Measles is a notifiable disease under the Public Health (Scotland) Act 2008

Measles should be considered if the patient has both clinical picture and relevant epidemiological links:

- Fever  $\geq 38^{\circ}\text{C}$  **AND**
- Generalised maculopapular rash **AND**
- Either cough, coryza **OR** conjunctivitis

AND

Epi link such as contact with a confirmed case, overseas travel, member of an under vaccinated community, or attendance at a mass gathering with international participants.

### **Laboratory testing:**

A **throat swab** should be taken as soon as possible when measles is clinically suspected. The swab should be expressed into the Viral PCR Sample Solution vial (MSS) and sent to the West of Scotland Specialist Virology Centre at the GRI.

**If a swab has been taken, GP practices should email virology labs ([west.ssvc2@nhs.scot](mailto:west.ssvc2@nhs.scot)) to advise them that this has been taken and when it has been sent to the labs. This will enable the labs to look out for the sample arriving and expedite testing and reporting.**

If Viral PCR Sample Solution vial is not available, swabs can be cut off and sent dry in a sterile container. This should be avoided whenever possible as the virus remains infectious and sensitivity is reduced. VPSS inactivates and preserves the pathogen genome for PCR testing. **Please do not send swabs in charcoal.**

### **Viral PCR solution supplies- updated process:**

From 1st July, GGC Virology no longer supply MSS tubes to users. MSS swab collection kits can be ordered from PECOS using the following details: collection kits SW0004 1 x 100 (NP866/21).

- SKU code/Item number - 279326 (reference SW0004)
- Manufacturer – E + O Laboratories Limited
- Pack Size – box of 100

If any issues with ordering, contact procurement customer services.

### **Test ordering:**

TrakCare item: **Adult maculopapular rash - virus PCR - Set** (See WoSSVC under Rash testing - maculopapular)

TrakCare item: **Paediatric maculopapular rash - virus PCR - Set**  
GP electronic request (ICE / EMIS / Vision) item: **Maculopapular rash PCR-current infection**

### **Notification**

GPs should notify PHPU by calling 0141 201 4917 option 3 Mon-Fri 9-5 or 0141 211 3600 out of hours.

On notification, the HPNS will assess the individual epidemiological features of the case:

- Immunisation history – any known vaccination history or history of measles? The vaccine effectiveness of a single dose of MMR is around 90% and approximately 95% for two doses. Although vaccine failure is rare, it can occur, particularly after a single dose.
- Travel – any travel within and outside the UK during the incubation period, with an assessment of whether travel was in an area where measles is known to be circulating
- Ethnic and cultural/religious background – are there details on the patient's ethnicity, and importantly, whether the patient is a member of an under-vaccinated population group (e.g. Charedi Orthodox Jewish community, Steiner community)?
- Epidemiological link – is there a known epidemiological link with another laboratory or epidemiologically confirmed case?

### **Exclusion of a confirmed or suspected case**

People with confirmed or suspected measles should be excluded from their usual place of work or study or from shared childcare facilities or any other shared space until at least four days after the rash has developed. The case should be advised to self-isolate and to avoid contact with vulnerable groups during this time.

### **WHO Measles Surveillance**

If the PHPU clinician agrees that the case meets the definition of a possible measles, an oral fluid kit (MR salivary kit) for IgM testing will be sent out - previously sent to GP surgeries, these are now being posted from the PHPU directly to patients/parents/guardians who are requested to post the sample directly to the UKHSA laboratory at Colindale using the labelled packaging supplied. MR kits, which meet the WHO requirements of measles investigation to satisfy elimination criteria, are sent out even if local PCR testing is negative.

### **Measles - MMR vaccination eligibility**

The most effective way to control measles is by achieving a high uptake of two doses of measles, mumps, rubella (MMR) vaccine. Sporadic cases and clusters continue to occur when infection is imported.

To maintain the control of measles, eligible individuals with no history or incomplete history of 2 doses of MMR, should be offered vaccination on request.

Because of measles outbreaks in Europe and the UK, all travellers are advised to check that they are up to date with MMR vaccination before they travel. If travelling with a baby, the MMR vaccine can be given from six months of age before travelling to a country where measles is a risk or where an outbreak is taking place. In this situation, this dose should then be ignored, and two further doses given at the recommended routine times between 12 and 13 months of age and at three years four months.

After two doses of MMR vaccine, about 99 of people out of 100 will be protected against measles, about 88 out of 100 will be protected against mumps, and almost everyone will be protected against rubella. Reference: Green book chapter 21: Measles.

### **Update on Pertussis**

NHS GGC continues to see a high number of whooping cough (pertussis) cases, with approximately 2500 cases notified to PHPU in 2024 as of mid-July. This is in the context of a surge in cases across the UK over recent months, with the number of cases significantly higher than the previous surge in 2011-12. Within GGC, notified cases are from all areas of the board geography, and across all age groups.

The [UKHSA Public Health Guidance on Pertussis](#) was updated in June 2024. For some, but not all cases, the revised guidance includes updates to the recommended period for exclusion, amendments to the timeline for antibiotic therapy, and amendments to the time period for active follow-up of contacts. The guidance also contains updates to the recommendations on macrolide prescribing in pregnancy.

PHPU continue to contact all clinically notified and laboratory confirmed pertussis cases via a standard SMS message linking to information and public health advice. This includes a request to contact us if there are priority group contacts in their household. Owing to the high volume of cases, since late May 2024 we have updated our workflow to focus our resources primarily on those cases where there are contacts in priority groups for public health action (due to vulnerability to complications or higher risk of transmission to vulnerable groups) based on information received at notification. We therefore ask notifying clinicians to ensure they include any known information on priority group contacts on the case notification, along with the case's onset date, current phone numbers and information on treatment given.

Please note that the updated process for ordering MSS tubes for pertussis testing is the same as for measles testing (outlined above).

## Testing Information for Shiga-Toxin Producing E.Coli Infection (STEC) in GGC

Shiga toxin-producing E. coli (STEC) is a group of bacteria which can cause gastrointestinal illness in humans. Asymptomatic infection can also occur and cases tend to peak in the summer months. The term STEC refers to all strains of E coli which produce shiga toxin (ST) or possess ST genes.

Local diagnostic laboratories investigate all diarrhoeal faeces for the presence of E. coli O157 and refer isolates to the SERL (Scottish E coli Reference Laboratory) in Edinburgh for confirmation and further typing using specialist techniques. *STEC of serogroup O157 are the only STEC for which routine standard tests are performed in the local diagnostic laboratories.*

Faeces from patients suspected to have STEC which test negative at the local laboratory are sent to SERL where more sensitive methods are used for detection and isolation of STEC. These testing methods can take up to 7-10 days.

***This means a sample result may be reported as negative from the local labs but subsequently reported as positive by SERL for either O157 or one of the non-O157 serotypes associated with human disease such as O26:H11, O103:H2, O111:NM, and O113:H21.***

This has understandably caused some confusion in the past with clinicians reporting negative results to patients only to be informed some days later by the PHPU that the result is positive.

**The below example show what these results may look like:**

*“Negative for O157 but sent to the Scottish E.coli reference lab for further testing where another serotype may be identified which is managed the same clinically as a case of E.coli O157”*

**Local lab testing report visible to requesting clinician:**

Cryptosporidium: OOCYSTS OF CRYPTOSPORIDIUM NOT SEEN

Salmonella: NEGATIVE

Shigella: NEGATIVE

Campylobacter: NEGATIVE

E.coli O157: NEGATIVE

Forwarded to the Scottish E.coli O157 Ref.Lab

Microbiology guidance/contact/eReferral details here:

<https://rightdecisions.scot.nhs.uk/ggc-microbiology/>

Tests included in UKAS Accreditation (8078) Scope

Ref Lab report received on 02.02.24. Viewable on portal

**Subsequent SERL (Scottish E.coli Reference lab) reporting of the same sample**

Reference laboratory ID

PCR result for rfbO157 gene: Positive

PCR result for stx1 gene: negative

PCR result for stx2 gene: negative

This should be interpreted as a positive result

## **Clearance sampling**

Clearance samples are required from patients in risk groups for transmitting gastrointestinal illnesses who may be excluded from work/nursery/school (or restricted from undertaking certain duties) under the Public Health Act, and from any household contacts, *even if asymptomatic*, who are in a risk group. The following situations illustrate how clearance samples undergo testing:

### **Scenario 1:**

Diagnostic stool sample for the case tests negative at local diagnostic lab, but because of clinical symptoms of bloody diarrhoea, sample is forwarded to the reference lab, where a non-O157 STEC is detected. Any clearance samples for the case and their contacts will need to be tested at SERL. Results from such samples will take several days to be reported.

### **Scenario 2:**

Diagnostic stool sample for case tests negative at local lab, but because of clinical symptoms of bloody diarrhoea, sample is forwarded to the reference lab, where a STEC O157 is detected:

For such strains of E coli O157, clearance samples will be processed at the local diagnostic laboratory initially, even though the Reference Lab first detected the organism. Results from such samples will take several days to be reported.

### **Scenario 3:**

Stool sample tests positive at diagnostic lab for E.coli O157 and sent to Edinburgh for confirmation and typing:

Clearance samples will be processed at the local laboratory. Results normally available within 2-3 days

## **Adult Immunisation team**

During the months of May to August we will be delivering a further 14,000 Shingles 2<sup>nd</sup> doses as well as 50,000 Pneumococcal at Risk Cohort immunisations.

Three new venues have been introduced in the South of Glasgow City to support delivery of this programme:

- Gorbals Health Centre
- Elderspark Clinic
- Govan Health Centre
- Pollok Health Centre

JCVI Guidance for the delivery of Shingles changed in Sept 2023. Zostovax is no longer used within the programme and is replaced with two doses of the Shingrix vaccine. The eligible cohort's for Shingles Vaccine are:

- Those aged 50 years and over who are immunosuppressed
- Those turning age 65 years
- Those turning aged 70 years
- Those aged 71-79 years who have not previously responded to an invitation



From August 2024 we will deliver a Respiratory Syncytial Vaccine (RSV) to those turning age 75 years and a once off catch up cohort of those aged 75-79 years. This is around 40,000 people.

The programme continues to expand at pace and work is underway to source new venues to replace some of our existing venues for our Winter Programme.

## Changes to the Pertussis Vaccine in Pregnancy

On 1<sup>st</sup> July 2024, the ADACEL® Vaccine was introduced for pregnant women to provide protection against Pertussis. This replaces the Boostrix® Vaccine which was previously used in the maternal programme and the recommendation is based on JCVI Guidance. Boostrix® is also a polio containing vaccine and remains in use for other aspects of the vaccination programme.

The Joint Committee on Vaccination and Immunisation (JCVI) previously reviewed the latest evidence in relation to pregnancy and infant immune responses. Studies observing antibody levels of infants of mothers who had received Pertussis-containing vaccines in pregnancy, exhibited lower antibody responses (described as 'blunting') to polio compared to infants born to unvaccinated mothers. It is important to note however that all antibody levels remained above the protective threshold.

The JCVI advised a preference for a non-IPV containing Pertussis vaccine (Tdap) in the maternal programme, to address this potential immunity gap caused by the blunting of the polio immune response in infants born to dTaP/IPV vaccinated women, when they receive their own primary vaccines.

The inclusion of ADACEL® as the preferred product for vaccination against pertussis in pregnant women commenced on 1<sup>st</sup> July 2024, as per JCVI and CMO communications.

The JCVI recognised the importance of vaccinating pregnant women to protect their babies from Pertussis and they have advised that a dTaP/IPV vaccine should be administered if Tdap (ADACEL®) is not available or is clinically contraindicated.

All Pregnant women will be offered a Pertussis containing vaccine from 16/40 weeks of pregnancy. All vaccines administered in Pregnancy are recorded on the Vaccine Management Tool (VMT) and Badgernet.

## Public Health Specialist Pharmacy Technicians and Senior Pharmacy Support Worker

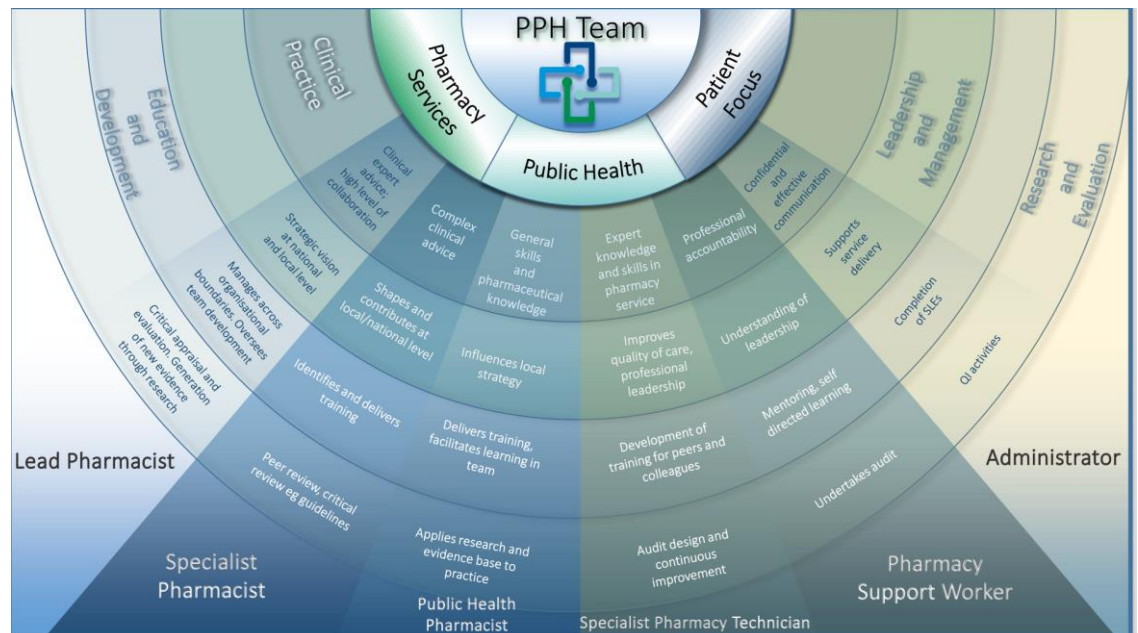
Specialist pharmacy technicians working in Health Protection support strategic planning for mass vaccination clinics delivering Covid-19, Flu, and ad-hoc vaccines. Using their expert knowledge and experience to guarantee appropriate governance processes are in place ensuring safe and effective storage and administration of these prescribed medicines being delivered in a community setting.

Pharmacy technicians are part of the wider Pharmacy Public Health team and provide expert advice and pharmaceutical support to both Public Health Protection Unit (PHPU) and Health Improvement teams within the Public Health directorate. Two specialist pharmacy technicians, supported by a senior pharmacy support

worker and office administrator, collaborate with a variety of healthcare professionals including the public health business manager for vaccinations, lead nurse for immunisations, team and clinic leads, Pharmacy Services Vaccine Holding Centre and NHSGGC Transport department, and with local authority and other non-NHS services. Close collaboration with these services ensures we provide the level of support necessary to ensure vaccination clinics have sufficient fridge capacity to store a range of vaccines required to accommodate patient appointments for 12 hours a day, for up to 3 days at a time including public holiday weekends.

This work is complex, often fast paced and time sensitive requiring the team to have robust internal processes in place. Possessing good communication and negotiation skills means we have the ability to quickly develop relationships with NHS and external services, who have competing challenges within their own services, to ensure vaccination clinics are validated and ready to open in-line with Scottish Government and NHSGGC expectations. In addition to ensuring required governance checks of clinic venues and fridges, health protection specialist pharmacy technicians further contribute to quality assurance by writing standard operating procedures for vaccine handling and storage in clinics. Supported by the senior pharmacy support worker we deliver in-person and on-line training to vaccinators and clinic lead staff working in mass population clinics, NHSGGC travel clinics, childhood vaccination services, Sandyford clinics and other healthcare staff involved in medicines cold chain maintenance.

Whilst much of our work is focused on vaccines, we are progressing other key areas of interest such as liaising with pharmacy colleagues in Primary Care to support antimicrobial stewardship, and developing a joint initiative with the pharmacy health improvement team to contribute to the wider NHSGGC public health diabetes agenda. The culture and ethos of the team is to develop ourselves and the services we provide within a multi-disciplinary team supporting activities to reduce health inequalities and achieve healthier communities within NHSGGC.



Pharmacy Public Health Service – Model of Four Pillars of Practice November 2023

Our senior pharmacy support worker is undertaking a quality improvement project to review effectiveness of the delivered cold chain management training recently added to our training catalogue. In particular, carrying out an audit on staff engagement, including the effectiveness of short videos we produced to demonstrate how to record fridge temperatures, complete paper based temperature records accurately, read and record expiry dates on vaccines that

have a manufacturer's expiry date and a product thawed expiry dates. Absence of practical experience to complement classroom style training was identified as a gap through feedback from staff who attended in-person training sessions. The senior pharmacy support worker is progressing their personal and professional development by undertaking SVQ Pharmacy Services SQAF Level 6 group award, mentored and supported by the specialist pharmacy technicians who will undertake work based assessments required to demonstrate their competence.

To expand current research activities within the team specialist pharmacy technicians have undertaken training in addressing health inequalities, exploring fundamentals of public health data, Improving Health: Developing Effective Practice (IHDEP), and benefit from continuing professional development/case discussion as part of the PHPU monthly meeting. Nationally, the specialist pharmacy technicians are members of the pharmacy public health network and attended the Scottish Health Protection Network conference in December 2023.

Additionally, we contribute to the NHSGGC Pharmacy Services strategy through involvement in a number of groups including Person Centred Care, Advanced Practice, Pharmacy Technical Professional Leadership, Health and Safety, Staff Partnership and Health Care Support Workers Peer Support.