Directorate of Chief Medical Officer and Public Health
Directorate of Chief Nursing Officer, Patients Public and Health Professionals
Directorate of Finance, eHealth and Pharmaceuticals

The Scottish Government

T: 0131-244 5542 F: 0131-244 2157

Dear Colleague

MEASLES IMMUNISATION IN SCOTLAND – REVISED ARRANGEMENTS FROM 2014

1. The purpose of this letter is to provide an update to the CMO letter of 15 May 2013 in relation to a short catch-up measles immunisation campaign for children aged between 10 and 17 from June 2013 onwards, and to revise those arrangements. The previous letter can be found at:

http://www.sehd.scot.nhs.uk/cmo/CMO(2013)07.pdf

2. You will recall that NHS Boards were asked to undertake a catch-up MMR vaccination programme, with vaccine to be offered to partially immunised or unimmunised children aged 10-17 either in school or via local GP practices (depending upon NHS Board preferences for implementation). The programme has been running in parallel with the work already being undertaken by NHS Boards to ensure that MMR vaccination status is checked when children attend for their S3 booster appointment at school, and vaccination offered where appropriate. We have now revised those arrangements further to an assessment carried out by Health Protection Scotland (HPS).

3. HPS has undertaken regular assessments of recorded measles cases across Scotland, the UK and Europe since 2003. Following an increase in measles cases across Wales and England, HPS conducted further analysis on data provided by NHS Boards. In May last year, HPS concluded that:

- The likelihood of the measles virus entering the Scottish population had increased given the situation at that time in England and Wales;
- Levels of susceptibility to the virus were not high enough to facilitate sustained spread of disease. The overall risk of measles infection in Scotland was considered to be significantly lower than in Wales and England;

From the Chief Medical Officer
Chief Nursing Officer
Chief Pharmaceutical Officer
Sir Harry Burns MPH FRCS(Glas) FRCP(Ed) FFPH
Ros Moore RGN, RNT, BSc (Hons) Nursing, MA
Professor Bill Scott BSc MSc FRPharmS

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For action
Chief Executives, NHS Boards
Medical Directors, NHS Boards
Directors of Nursing & Midwifery, NHS Boards
Directors of Pharmacy
Directors of Public Health
General Practitioners
Practice Nurses
Immunisation Co-ordinators
CPHMs
Scottish Prison Service
Scottish Ambulance Service

For information
Chairs, NHS Boards
Infectious Disease Consultants
Consultant Paediatricians
Consultant Physicians
Consultants in Dental Public Health
Dental Lead Officers
Health Protection Scotland
Chief Executive, NHS Health Scotland
NHS 24

Further Enquiries

Policy Issues

Rona Watters
3EN, St Andrew's House
Rona.watters@scotland.gsi.gov.uk

Medical Issues

Dr Nicola Steedman
3E:05, St Andrew's House
Nicola.steedman@scotland.gsi.gov.uk

Pharmaceutical and Vaccine Supply

William Malcolm
Health Protection Scotland
W.malcolm@nhs.net

- The highest risk of transmission at that time was in those aged 10-17 years, with some urban areas across Scotland where levels of susceptibility in 10-17 year olds were more than 40% (against the WHO recommended level for this age group of 5%); and

- Small outbreaks were likely to occur.

4. In response to the HPS assessment, a short measles vaccination catch-up campaign commenced in June 2013. The purpose of the campaign was to target unimmunised or partially immunised children aged 10-17 years old via schools or local GP practices. This provided a further opportunity for children in this age group to be vaccinated if they had not already been immunised, or were only partially immunised.

Current Situation

5. There have been 51 laboratory confirmed measles cases in Scotland during 2013; 42 cases (82%) were unimmunised and 6 cases (12%) were partially immunised. Three cases (all aged 18-24 years) were recorded as having been fully immunised.

6. During 2013, 3 measles outbreaks were recorded across Scotland. There were no recorded deaths in Scotland from measles during 2013. Fifteen confirmed cases (29%) were recorded as being hospitalised. Recorded hospitalisation rates were highest in those under one year of age (75%), 1-4 years (50%) and those aged over 25 years (46%). In cases affecting people aged 10-24 years, no-one required hospitalisation.

Public Health Interventions

Management of Clusters and Outbreaks

7. The Health Protection Network has revised its guidance on the handling of measles cases, particularly with regard to protecting pregnant women exposed to the virus. Over the last few months, HPS has received requests for updated expert advice on screening Health Care Workers (HCWs) for evidence of immunity to measles to aid decision-making on excluding HCWs when measles enters healthcare settings. Interim advice has been provided, and can be accessed at the link below:

http://www.documents.hps.scot.nhs.uk/about-hps/hpn/measles-quick-reference.pdf

Routine Childhood Immunisation Programme

8. As you will be aware, MMR is routinely offered in the childhood schedule at age 12-13 months for MMR1, and at pre-school booster age 3.5-4 years for MMR2. The S3 booster should be used as the opportunity to offer MMR vaccination to under or non-immunised individuals – no additional catch-up is required. WHO targets for MMR vaccine uptake are 95% for both MMR1 and MMR2. As at September 2013, MMR1 quarterly uptake for Scotland at age 24 months was 95.6% which increased to 97.3% at age 5 years. MMR2 uptake at age 5 years was 92.4%, which increased to 94.5% at age 6 years.

Recommended Future Activities

9. Experience during 2013 has confirmed the previous conclusions that levels of susceptibility to measles in Scotland are not high enough for sustained spread of the infection when the virus is introduced into the population. The most likely predicted scenario

of sporadic cases and small scale outbreaks which rapidly "burn out" is backed up by observed data gathered by NHS Boards and HPS. The Travelling Community continues to be particularly at risk, and the risk of transmission in healthcare settings should not be underestimated.

Actions

10. Having considered all of the above, we now recommend the following action is taken forward:

a) Continuing Initiatives Aimed at the Travelling Community

In the last 5 years, significant outbreaks of measles and pertussis have affected this traditionally under-immunised population in Scotland. The recent Health Inequalities Impact Assessment has prioritised increasing vaccination coverage in this group and an action plan will be developed. Boards are asked to consider the specific needs of this group.

b) Continuing School-Based Supplementary MMR Immunisation Activities

Assessment of the likely impact of recent supplementary immunisation activities targeted at 10-17 year olds on the overall risk of measles transmission in the population has indicated that these have probably decreased susceptibility significantly but not to the levels recommended by WHO for measles elimination. An on-going effort is therefore required to reduce further the public health consequences of the relatively low MMR1 and 2 uptake rates in infants between 2001 and 2005. However, no further catch up is recommended. Boards should revert to offering MMR to those identified as being susceptible at the time of the S3 'teenage booster' vaccination.

c) Continuing to Reinforce the Need for MMR Immunisation in Healthcare workers (HCWs)

Measles is still a relatively rare infection and is often not diagnosed until relatively late in its clinical course. It is not uncommon for cases to be severely ill and hospitalised before measles is suspected. Unfortunately this has led to HCWs being potentially exposed to the virus, or actually becoming infected and therefore presenting risks to those under their care. Managing such situations often involves excluding health professionals from work until they can demonstrate that they are free from infection. This can take 2-3 weeks.

Protection of healthcare workers is especially important in the context of their ability to transmit measles or rubella infections to vulnerable groups. While they may need MMR vaccination for their own benefit, on the grounds outlined above, they also should be immune to measles and rubella for the protection of their patients. Satisfactory evidence of protection would include documentation of:

- Having received 2 doses of MMR, or
- Positive antibody tests for measles and rubella.

Further information on measles vaccination can be found at chapter 21 of the Green Book at the link below:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/147968/Green-Book-Chapter-21-v2_0.pdf

In addition, HPS will take forward the following:

d) Validating Data on the Uptake of MMR Immunisation

As a result of work by NHS Boards to update their population registers, it is apparent that the MMR1 and MMR2 uptake rates derived from national systems (SIRS/CHSP) underestimate the overall uptake. HPS will undertake a data validation exercise to estimate this. Once completed, the levels of population susceptibility to measles will be re-estimated.

e) Estimating Levels of Immunity to Measles in Adults

Estimates of immunity/susceptibility are derived from SIRS/CHPS records. These only cover those aged up to 19 years in 2013. HPS has received a number of enquiries on levels of immunity in adults to help inform the screening of health care workers and adults involved in outbreaks, and the offer of occupational MMR vaccination by the NHS. Work is planned to estimate seroprevalence in those aged 18 years and above in Scotland.

SUMMARY

11. NHS Boards are asked to note that the MMR catch-up vaccination programme for 10-17 year olds should now cease. The revised arrangements are those set out below:

- **Continuing initiatives should be aimed at the Travelling Community; and**
- **The S3 booster should be used as the opportunity to offer MMR vaccination to under or non-immunised individuals. No additional catch-up is required.**
- **Continuing to reinforce the need for MMR immunisation in healthcare workers (HCWs).**

12. We would once again like to thank you all for your continued efforts.

Yours sincerely

Harry Burns *Ros Moore* *Bill Scott*

HARRY BURNS **ROS MOORE** **PROFESSOR BILL SCOTT**