BC Centre for Disease Control
An agency of the Provincial Health Services Authority

June 30, 2011

ATTN: Medical Health Officers and Branch Offices
Public Health Nursing Administrators and Assistant Administrators
Holders of Communicable Disease Control Manuals

Re: Revisions to Communicable Disease Control Manual, Chapter I – Communicable Disease Control: Interim Guidelines for the Control of Measles

The purpose of this Administrative Circular is to draw attention to the actions that are most relevant when managing a case of measles. The guideline is being posted on an **interim** basis as the BC Communicable Disease Policy Committee is embarking on a new process for the development of communicable disease control guidelines.

BCCDC began revising the measles control guideline in 2004 and there has been substantive input from Regional Health Authorities and the BCCDC Public Health Microbiology & Reference Laboratory.

Please note the following changes to the guideline:

- The formatting of the guidelines has been revised. The ordering of information in the document has changed to ensure that information needed for actions related to case and contact management is at the front and background information is at the back of the document.
- Due to the BCCDC reorganization, the term “Epidemiology Services” has been replaced with “BCCDC Immunization Programs and Vaccine Preventable Diseases Service (IP-VPD Service).”

Administrative Circular 2011:09

COMMUNICABLE DISEASE PREVENTION AND CONTROL SERVICES
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Page 1, Section 2.0 "Goal:"

- The previous goal was "to eliminate indigenous measles in B.C. by the year 2005." This has been achieved and the goal has been updated to "maintain the elimination of indigenous measles in B.C. and prevent transmission from imported cases."
- Updated the methods of achieving the stated goal.
- Deleted the target that stated "to maintain the national target of an annual incidence of measles less than 1 case per 100,000 population until measles elimination is achieved."

Page 2, Section 4.0 "Measles Flow Chart:"

- New section that summarizes the actions to be taken by Public Health when notified of a case of measles.

Page 3, Subsection 5.1 "Confirm the Diagnosis:"

- Case definitions have been updated and are consistent with the 2009 "Case definitions for diseases under national surveillance" from the Public Health Agency of Canada.

Page 4, Subsection 6.1 "Laboratory Testing:"

- Statement added for clarity: "clinical and suspect cases of measles should be tested by both serology and virus detection (by RT-PCR testing and/or isolation in cell culture)."
- Information and recommendations have been updated and are consistent with the BCCDC Public Health and Microbiology Reference Laboratory Guide to Programs and Services.

Page 4, Subsection 6.1.1 "Serology:"

- Recommendation for timing of first (acute) serum collection has been changed to "at the time of presentation and no later than 7 days after rash onset."
- Added a diagram depicting the recommended timeline for serum collection for measles.
- Added a figure depicting the antibody response to measles virus infection.
- Added background information regarding IgM and IgG serology.

Page 6, Subsection 6.1.2 "Virus Identification:"

- It is recommended that a nasopharyngeal swab and urine sample be collected for virus isolation and RT-PCR testing, preferably at the time of presentation.
- Timing for collection of nasopharyngeal swabs has been extended to up to 8 days after rash onset.
- Urine samples may be collected up to 14 days after rash onset.

Page 9, Subsection 6.6 "Future Immunization of the Case:"

- New subsection.
- New recommendation to defer all immunizations with live and inactivated vaccines until at least four weeks after onset of measles illness. This is because measles infection is accompanied by marked and prolonged abnormalities of cell-mediated immunity (CMI). CMI is measurably suppressed for several weeks after infection, during which time new immune responses are impaired.

Page 9, Subsection 6.7 "Case Travel:"

- New subsection.

Page 10, Subsection 7.1 "Contact Identification:"

- Definition of contact changed for increased clarity and expanded to include individuals who spent time in a room/enclosed space while the case was present or for up to 2 hours after the case left the room/enclosed space. This recommendation is based on documented transmission events related to such exposures in medical waiting rooms after the index case has left the room. It is recognized that transmission of this type may be a relatively uncommon event; however, a risk assessment should be undertaken that considers the respiratory symptoms, speed of isolation of the case after arrival in that setting, and the contacts' susceptibility. The references for this recommendation are cited.
- Added a diagram depicting incubation period and period of communicability.

Page 11, Subsection 7.2 "Assess susceptibility of contacts:"

- Points to consider when determining whether contacts are immune or susceptible to measles have been re-worded for clarity.
- Deleted recommendation to "consider as susceptible those persons who are immunologically compromised (e.g., have leukemia, lymphoma or generalized malignancy: are receiving therapy with corticosteroids, alkylating agents, antimetabolites or radiation)." The immunity of an immune-compromised contact should be assessed using the same criteria as for immune-competent contacts. If an immune-compromised client is found to be susceptible and MMR vaccine is contraindicated, Ig is recommended. The exception is HIV positive clients: Ig is recommended for all HIV positive contacts, regardless of immunization status (unless they are receiving IGIV at regular intervals).

Page 12, Subsection 7.3 "Immunoprophylaxis of Susceptible Contacts:"

- In the column "Time Since First Exposure to Case," ≤ 72 hours has been changed to ≤ 3 days.
- Re-named column "< 12 months of age" to "6 - 11 months of age," and revised the recommendations for this age group as follows:
    - footnote❶: "Ig may be offered to infants younger than 6 months of age if maternal immunity to measles is lacking, uncertain, or measles-vaccine acquired and the exposure occurred in a household-like setting".
    - footnote ❷: MMR vaccine may be given to 6 – 11 month old contacts of measles when it is ≤ 3 days since the first exposure to the case. "Infants that receive a dose of MMR vaccine at less than 12 months of age should receive two additional doses of MMR vaccine according to the routine schedule".
    - When clinical measles does not develop in a contact given one dose of Ig, MMR vaccine should be given 5 or 6 months later, depending on the Ig dose used, provided the individual is ≥ 12 months of age and there are no contraindications to the vaccine.
- Last column is now titled "≥ 6 months of age with a contraindication to MMR vaccine (e.g., immunocompromised, HIV+, pregnant)". The column had previously referred to all susceptible contacts with no indicated age limit.
- Footnote❹ has been added: on a case-by-case basis, consideration should be given to doing serological testing for immunity for immunocompromised individuals who are likely to have pre-existing immunity from prior vaccination or measles disease as well as for pregnant women (as prenatal sera may be stored at the BCCDC Public Health Microbiology & Reference Laboratory for two years).
- Added the recommendation to provide a written record of Ig administration to all clients who receive immune globulin. This is a requirement of the Canadian Standards Association for Blood and Blood Products.
- Added information about the efficacy of Ig prophylaxis. Available efficacy data on the use of Ig for post exposure measles prophylaxis is from studies dating as far back as the 1940s, indicating levels of efficacy around 70-80%. References are cited. The allowable minimum for anti-measles antibody in immunoglobulin preparations is 25.2 IU/ml based on a potency ratio of 0.6 set by the US Food and Drug Administration's Center for Biologics Evaluation and Research Ref#176. Currently available immunoglobulin preparations for the Canadian Blood Services are well above the allowable minimum.

Page 13, Subsection 7.4.1 "Exclusion of Susceptible Contacts - Health care settings:"

- When a susceptible HCW is exposed to the case of measles, it is recommended that a risk assessment be made to determine whether the HCW may return to work. Best practice is to exclude the HCW from any work in the health care setting from 5 days after the first exposure until 21 days after the last exposure regardless of whether the HCW received measles vaccine or immune globulin after the exposure, because neither of these confers a guarantee of protection and infectiousness can precede symptom onset.

Page 14, Subsection 7.4.2 "Exclusion of Susceptible Contacts - Workplace, school, or child care settings:"

- At the discretion of the MHO, susceptible contacts from the above settings that refuse or cannot receive MMR vaccine or immune globulin may be excluded from that setting.

Page 15, Subsections 7.5 "Contact Education" and 7.6 "Transient airborne contacts:"

- New subsections.

Page 15, Section 8.0 "Reporting:"

- Changed timeline for completing the case report information in iPHIS or PARIS from 7 days to "within 24 hours following identification of a suspect, probable, or confirmed case of measles."
- Changed the title of the "Enhanced Measles Surveillance Form" to "Measles, Mumps, and Rubella Enhanced Surveillance Case Report Form."

Page 16, Subsection 9.2 "Mass Gatherings:"

- New subsection.

Page 18, Section 10.0 "Clinical Description:"

- New section.

Page 18, Section 11.0 "Epidemiology:"

- New section.

Page 19, Subsection 11.1 "Measles Immunization in BC:"

- New subsection.

Page 20, Section 12.0 "Measles, Mumps, and Rubella Enhanced Surveillance Case Report Form:"

- The form was previously found in "Appendix 1 – Fever/Rash Follow-Up Form."
- Form has been revised to reflect current information in revised measles, mumps, and rubella guidelines.

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Also,
Communicable Disease Control Manual, Chapter 2 – Immunization Program: Section VII "Measles/Mumps/Rubella Vaccine (Live Attenuated Viral) MMRII™ & Priorix™:"

- Page 35 has been revised to include the following indication, in accordance with the revision to the measles control guideline:
  - Infants 6 – 11 months of age who are identified as contacts of a case of measles are to receive a dose of MMR vaccine with two subsequent doses of MMR vaccine at the routine schedule.

- Page 36 now includes the recommendation that one dose of MMR vaccine for rubella protection is recommended for all Health Care Workers regardless of age.

Please remove and destroy the following pages from the Communicable Disease Control Manual, Chapter 1 – Communicable Disease Control: Measles

Pages 1-9 and Appendix 1 Dated March 2000

Please remove and destroy the following page from the Communicable Disease Control Manual, Chapter 2 – Immunization Program:

Section VII:

Pages 35 and 36 Dated November 2010

Please insert the following pages in the Communicable Disease Control Manual, Chapter 1 – Communicable Disease Control: Measles

Table of Contents, and
Pages 1-22 Dated June 30, 2011

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Please insert the following page in the Communicable Disease Control Manual, Chapter 2 – Immunization Program:

Pages 35 and 36 Dated June 2011

If you have any questions or concerns, please contact Karen Pielak, Clinical Nurse Specialist, or Cheryl McIntyre, Public Health Resource Nurse, at telephone (604) 707-2510, fax (604) 707-2516 or by email at karen.pielak@bccdc.ca or cheryl.mcintyre@bccdc.ca

Sincerely,

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