

For more information or to provide feedback on this or any other decision support tool, email [certifiedpractice@bccnp.ca](mailto:certifiedpractice@bccnp.ca)

---

## PEDIATRIC IMPETIGO

---

### DEFINITION

A highly contagious, superficial bacterial infection of the skin, it primarily affects children during the summer. Beginning with vesicles, it progresses to honey crusted lesions and is commonly seen on the face, arms, legs and buttocks.

Nurses with Remote Practice Certified Practice designation (RN(C)s<sup>1</sup>) are able to treat children with impetigo who are **6 months of age and older**.

### POTENTIAL CAUSES

- *S. aureus* is the principal pathogen.
- *Group A Beta-hemolytic strep* presents alone or in conjunction with *S aureus* in a minority of cases.

### PREDISPOSING RISK FACTORS

- Local skin trauma such as insect bites, wounds
- Skin lesions from other disorders such as eczema, scabies, pediculosis
- Age – more common in pre-school and young children (2-5 years)
- Crowded living conditions
- Poor hygiene
- Warm, moist climate
- Children in close contact, e.g. daycare, school
- Known carrier of *S. aureus* and/or GAS

### TYPICAL FINDINGS OF IMPETIGO

#### History

- More common on face, scalp and hands, but may occur anywhere

---

<sup>1</sup> RN(C) is an [authorized title](#) recommended by BCCNP that refers to BCCNP-certified RNs, and is used throughout this Decision Support Tool (DST).

BCCNP monitors and revises the BCCNP certified practice decision support tools (DSTs) every two years and as necessary based on best practices. The information provided in the DSTs is considered current as of the date of publication. BCCNP-certified nurses (RN(C)s) are responsible for ensuring they refer to the most current DSTs.

The DSTs are not intended to replace the RN(C)'s professional responsibility to exercise independent clinical judgment and use evidence to support competent, ethical care. The RN(C) must consult with or refer to a physician or nurse practitioner as appropriate, or whenever a course of action deviates from the DST.

- Involved area is usually exposed
- Usually occurs during summer
- New lesions usually due to auto-inoculation
- Rash begins as tiny red lesions, which may be itchy
- Lesions rapidly become small vesicles, progressing to pustules, which rupture and drain to form yellow crusts
- Lesions painless
- Fever and systemic symptoms rare - mild fever may be present in more generalized infections
- Known MRSA positive (client or household member)

### **Physical Assessment**

- Weigh until 12 years of age for medication calculations
- Thick, golden yellow, crusted lesion on a red base
- Numerous skin lesions at various stages present (vesicles, pustules, crusts, serous or pustular drainage, ulcers, healing lesions)
- In infants and young children, the bullous form of impetigo may occur. In this case the vesicles continue to enlarge and form flaccid bullae (blisters) with a clear yellow fluid that slowly darkens. When these rupture they leave a thin brown to golden yellow coloured crusts.
- Lesions and surrounding skin may feel warm to touch
- Regional lymph nodes may be enlarged and/or tender

### **Diagnostic Tests**

#### **Identification of impetigo may be made upon consideration of clinical features and presentation.**

- Culture and Sensitivity of lesion exudate if widespread or not responding to treatment.
- Determine blood glucose level if infection is recurrent or if symptoms suggestive of diabetes mellitus are present.

## **MANAGEMENT AND INTERVENTIONS**

### **Goals of Treatment**

- Resolve infection
- Prevent auto-inoculation
- Prevent spread to other household members

### **Non-pharmacologic Interventions**

- Apply warm saline compresses to soften and soak away crusts qid for 15 minutes and prn

## Pharmacologic Interventions

**All drugs must be calculated by weight. Do not use more than an adult dose.**

Apply topical antibiotic preparation after each soaking:

- mupirocin ointment to affected lesions tid for 7 days

If non-responsive:

- fusidic acid ointment or cream tid or qid for 7 days

Topical agents are sufficient when there are only a small number of non-bullous lesions.

Oral antibiotics may be necessary if there are multiple lesions making topical treatment impractical, the client is febrile and has systemic symptoms including lymphadenopathy, or if bullous impetigo is present:

- cephalexin 30-40mg/kg po per day divided qid for 7 days, maximum 2 grams daily

OR

- cloxacillin 40-50mg/kg po per day divided qid for 7 days (tastes unpleasant so use cephalexin first)

For clients with allergy to penicillin:

- erythromycin 40mg/kg po per day divided qid for 7 days
- **If known MRSA positive or MRSA positive swab:**
  - Trimethoprim / sulfamethoxazole 8-12 mg / kg per day po bid for 7 days (dosing is based on trimethoprim.)

## Pregnant or Breastfeeding Women (dosing as above)

- Mupirocin, cephalexin, cloxacillin and erythromycin may be used.
- Avoid fusidic acid ointment.
- DO NOT USE trimethoprim /sulfamethoxazole.

## POTENTIAL COMPLICATIONS

- Localised or widespread cellulitis
- Post-streptococcal glomerulonephritis (rare)
- Sepsis
- Acute rheumatic fever

## CLIENT/CAREGIVER EDUCATION AND DISCHARGE INFORMATION

- Advise on condition, timeline of treatment and expected course of disease process.
- Counsel parent or caregiver about appropriate use of medications (dose, frequency, compliance).
- Remain home from school/day care for 24 hours after treatment started.
- Recommend proper hygiene (i.e., daily washing).

- Cut fingernails to prevent scratching.
- Counsel client about prevention of future episodes
- Submit strategies to prevent spread to other household members (i.e., proper hand-washing of all household members, use of separate towels).

## MONITORING AND FOLLOW-UP

- Follow-up in 2-3 days to assess response to treatment.
- Instruct client to return for reassessment if fever develops or infection spreads despite therapy.

## CONSULTATION AND/OR REFERRAL

- Consult a physician or nurse practitioner if no response to treatment.

## DOCUMENTATION

- As per agency policy

## REFERENCES

More recent editions of any of the items in the Reference List may have been published since this DST was published. If you have a newer version, please use it.

Baddour, L. M. (2015). Impetigo. *UptoDate*. Retrieved from <http://www.uptodate.com/contents/impetigo>

Blondel-Hill, E., & Fryters, S. (2012). *Bugs and drugs: An antimicrobial infectious diseases reference*. Edmonton, AB: Alberta Health Services.

Breen, J. O. (2010). Skin and soft tissue infections in immunocompetent patients. *American Family Physician*, 81(7), 893-899. Retrieved from <http://www.aafp.org/afp/2010/0401/p893.pdf>

British Columbia Centre for Disease Control. (2014). Antimicrobial resistance trends in the province of British Columbia. Vancouver, BC: Author. Retrieved from [http://www.bccdc.ca/resource-gallery/Documents/AMR%202014%20Report-3NOV2015\\_FINAL.pdf](http://www.bccdc.ca/resource-gallery/Documents/AMR%202014%20Report-3NOV2015_FINAL.pdf)

British Columbia Centre for Disease Control. (2014). *Guidelines for the management of community-associated methicillin-resistant Staphylococcus aureus (CA-MRSA)-related skin and soft tissue infections in primary care*. Vancouver, BC: Author.

Canadian Pharmacists Association. (2014). *Therapeutic choices* (7<sup>th</sup> ed.). Ottawa, ON: Author.

Cash, J. C., & Glass, C. A. (Eds.). (2014). *Family practice guidelines* (3rd ed.). New York, NY: Springer.

- Klostranec, J. M., & Kolin, D. L. (2012). *The Toronto notes 2012: Comprehensive medical reference & review for Medical Council of Canada Qualifying Exam Part 1 and the United States Medical Licensing Exam Step 2* (28<sup>th</sup> ed.). Toronto, ON: Toronto Notes for Medical Students. Retrieved from [https://books.google.ca/books/about/The\\_Toronto\\_Notes\\_2012.html?id=WHw\\_a-5yIIYC](https://books.google.ca/books/about/The_Toronto_Notes_2012.html?id=WHw_a-5yIIYC)
- DynaMed. (2015, August 17). *Impetigo*.
- Esau, R. (Ed.). (2012). *British Columbia's Children's Hospital pediatric drug dosage guidelines* (6th ed.). Vancouver, BC: Children's & Women's Health Centre of B.C.
- Hartman-Adams, H., Banvard, C., & Juckett, G. (2014). Impetigo: Diagnosis and treatment. *American Family Physician*, 90(4), 229-235.
- Koning, S., van der Sande, R., Verhagen, A. P., van Suijlekom-Smit, L. W. A., Morris, A. D., Butler, C. C.,...van der Wouden, J. C. (2012). Interventions for impetigo (review). *Cochrane Database of Systematic Reviews*, (4).
- Lawton, S. (2014, March 12-18). Impetigo: Treatment and management. *Nursing Times*, 110(11), 18-20.
- Liu, C., Bayer, A., Cosgrove, S.E., Daum, R.S., Fridkin, S.K., Gorwitz, R.J.,...Chambers, H.F. (2011). Clinical practice guidelines by the Infectious Diseases Society of America for the treatment of methicillin-resistant *Staphylococcus aureus* infections in adults and children. *Clinical Infectious Diseases*, 52(3), e18-e55.
- Long, C. B., Madan, R. P., & Herold, B. C. (2010). Diagnosis and management of community-associated MRSA infections in children. *Expert Review of Anti-Infective Therapy*, 8(2), 183-195.
- Napierkowski, D. (2013). Uncovering common bacterial skin infections. *Nurse Practitioner*, 38(3), 30-37. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=cpid&custid=s5624058&db=ccm&AN=2012023989&site=ehost>
- NeVille-Swensen, M., & Clayton, M. (2011). Outpatient management of community-associated methicillin-resistant *Staphylococcus aureus* skin and soft tissue infection. *Journal of Pediatric Health Care*, 25(5), 308-315.
- Pangilinan, R., Tice, A., & Tillotson, G. (2009). Topical antibiotic treatment for uncomplicated skin and skin structure infections: Review of the literature. *Expert Review of Anti-infective Therapy*, 7(8), 957-965.
- Riain, U. N. (2011). Recommended management of common bacterial skin infections. *Prescriber*, 22 (15/16), 14-24. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/psb.783/pdf>
- Stevens, D., Bisno, A. L., Chambers, H. F., Dellinger, E. P., Goldstein, E. J. C., Gorbach, S. L.,...Wade, J. C. (2014). Practice guidelines for the diagnosis and management of skin and soft tissue infections: 2014 update by the Infectious Diseases Society of America. *Clinical Infectious Diseases*, 59(2), e10-e52.
- Watkins, J. (2012). Differentiating common bacterial skin infections. *British Journal of School Nursing*, 7(2), 77-78. Retrieved from

<http://search.ebscohost.com/login.aspx?direct=true&AuthType=cpid&custid=s5624058&db=ccm&AN=2011519936&site=ehost-live>

Watkins, J. (2013). Bullous and non-bullous impetigo. *Practice Nursing*, 24(2), 95-96. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=cpid&custid=s5624058&db=ccm&AN=2011917044&site=ehost-live>