PEDICULOSIS PROTOCOL IN WRHA COMMUNITY HEALTH SERVICES CLIENTS AND STAFF

Preamble:
This algorithm and guidelines were developed to assist Community Health Care personnel in managing pediculosis in the community. A single case of pediculosis can be managed with the assistance of these resources and this algorithm contains a suggested strategy in determining the process and individuals involved in case management. While a single case of pediculosis does not have to be reported to Public Health, an outbreak of pediculosis is reportable under the Public Health Act. Public Health is available for consultation in both instances.

The following is an algorithm to follow for case management of pediculosis as well as a guideline for individual points in the algorithm.

Definitions:
Case Coordination in Community Professional that provides coordination of care, i.e. Home Care Case Coordinator, Community Mental Health Coordinator.

Client The individual receiving care in a community setting.

Health Care Worker (HCW) An individual who provides direct care to clients and who may have the potential to acquire or transmit an infectious agent during the course of his or her work in the health care workplace, i.e. nurses, home care attendants, home support workers, family first home visitors, mental health proctors, rehab assistants and emergency responders.

INM Injury/Near Miss form.

Lice: Body Louse (Pediculus corporis) Infestation by body lice is on body surfaces, particularly where clothing is tight, as along the seams of inner surfaces. Exposure is direct contact with an infested person or indirect contact with their personal belongings, especially shared clothing.

Crab Louse (Phthirius pubis) Infestation is usually of the pubic area; lice may also infest facial hair (including eyelashes in cases of heavy infestation), axillae and body surfaces. Exposure is during sexual contact.
<table>
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<tr>
<th>Head Louse (Pediculus capitis)</th>
<th>Infestation by head lice occurs on the hair. Exposure is direct contact with infested person’s head/hair, or indirect contact with personal belongings such as head gear or pillowcases.</th>
</tr>
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<tbody>
<tr>
<td>Non-occupational exposure</td>
<td>Pediculosis acquired from own personal contact, i.e. child</td>
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<tr>
<td>Occupational exposure</td>
<td>Pediculosis acquired from duties of work. Determination of this contact shall be done in consultation with OESH.</td>
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<td>OESH</td>
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<td>Pediculosis outbreak</td>
<td>Two cases of Pediculosis with evidence of transmission to other individuals.</td>
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WRHA Community Health Services PEDICULOSIS (Head Lice) ALGORITHM - CLIENT
(For detailed information/direction and management of Body and Crab Lice
see – Facts About Pediculosis & Definitions)

1. REPORT OF SUSPECTED PEDICULOSIS - CLIENT

- **Client meets the criteria for S&S of pediculosis according to the attached fact sheet.**

  - Notify OESH of Client S&S:
    - OESH will provide follow-up for workers:
      1. Offer HCW education
      2. Assess HCW contact to client with viable pediculosis
      3. Determine presence of viable pediculosis in HCW
      4. Provide treatment to HCW as required

- **Consult Public Health for educational resources if required**

- **Notify CC to arrange treatment of client.**
  - HCW to wear gloves when handling clients’ hair & avoid head to head contact

- **Assess head to head contact or sharing of headgear/hair accessories with other client(s)**

  - **NO**
    - No further follow-up

  - **YES**
    - CC to arrange for assessment and establish process to assess client’s hair daily for presence of pediculosis for 2 weeks after exposure
      - Return to # 1 if Presence of pediculosis

- **Evidence of Lice in HCW**

  - **Follow:** WRHA Community Health Services Pediculosis Algorithm – Health Care Worker

  - Considered as Outbreak if evidence of transmission in ≥ 2 cases.
    - Consult with Public Health for outbreak management as required.

**Team Manager or designate may wish to contact WRHA Community Infection Prevention & Control Professional for resource on management of a case in a client and the Occupational & Environmental Safety & Health (OESH) for resource on management of a case in a health care worker.**
WRHA Community Health Services PEDICULOSIS (Head Lice) ALGORITHM – HEALTH CARE WORKER
(For detailed information/direction and management of Body and Crab Lice see – Facts About Pediculosis & Definitions)

1. **REPORT OF SUSPECTED PEDICULOSIS HEALTH CARE WORKER (HCW)**
   - Consult Public Health for educational resources if required
   - Notification to Supervisor or designate** by HCW:
     - Exclude HCW from work until initial treatment completed
   - OESH will provide treatment to HCW. HCW to be excluded from work until initial treatment completed. OESH to assess fitness to return to work.
   - Supervisor / HCW to notify OESH of Suspected Pediculosis
   - OESH will provide assessment/follow-up to other health care workers who have had head to head contact or sharing of headgear/hair accessories
   - Pediculosis Identified in HCW Contact(s)

2. **Worker meets the criteria for S&S of pediculosis according to the attached fact sheet**
   - HCW to complete INM with supervisor
   - Supervisor to notify TM & CC
   - CC to identify head to head contact or sharing of headgear/hair accessories with clients and arrange for follow-up of community cases as required
   - Pediculosis Identified in Client Contact(s)
   - Follow: WRHA Community Health Services Pediculosis Algorithm – Client

**Team Manager or designate may wish to contact WRHA Community Infection Prevention & Control Professional for resource on management of a case in a client and the Occupational & Environmental Safety & Health (OESH) for resource on management of a case in a health care worker.**
Facts about Pediculosis:

SIGN & SYMPTOMS:
- Presence of live louse or nits (eggs) on the hair shaft.
- Good, ongoing visual assessment by caregivers during personal care is important.
- Viable nits are usually found close to the scalp (1-4mm). Those nits found beyond that are empty egg cases.
- Duration of infestation can be estimated by the distance of nits from the scalp.
- Often confused with dandruff or hair product droplets, which easily comes off hair.
- Eggs are difficult to dislodge.
- Itching, scratching caused by an allergic reaction to the bites.
- Allergic reaction begins 1 – 2 weeks after infestation (1 to 5 lice). This is a reaction to the anti-coagulant products the louse injects locally as it takes its blood meal. Others may be asymptomatic.
- In long standing cases there may be a roseo-like exanthema on the body. Excoriation and crusting with secondary bacterial infection may accompany lice infestation.
- Tickling feeling of something moving in the hair.
- Although infestation generally occurs close to the scalp, behind the ears and the back of the neck, it has been reported to occur anywhere on the scalp.
- Does not need diagnosis by a physician. Signs & symptoms can be determined by any individual who has observed client.

TRANSMISSION:
- Head lice are more common in children and tend to be endemic.
- Primary mode of transmission is by direct person-to-person contact.
- Secondary mode of transmission can be indirect through personal belongings, e.g. hats, bedding, combs, and hair accessories.
- Head lice crawl but do not fly or jump.

INCUBATION PERIOD:
- Egg to egg cycle averages 3 weeks.
- Life cycle composed of 3 stages-eggs, nymph, adult.
- Most suitable temperature for incubation is 32° C and most suitable humidity of 70%.

COMMUNICABILITY PERIOD:
- Lice can be spread as long as lice or viable eggs remain alive on the infested head.
- Nits will not hatch off the head as they are extremely temperature and humidity sensitive.
- Lice that fall off the head and are without a blood meal have been noted to die within 20 – 48 hours.
- Lice are capable of surviving 24 hours immersed in H₂O.
Treatment of Pediculosis:

**PREPARATION FOR TREATMENT**
- Thorough combing and brushing of hair over white towel or sheet will further assist with removal of lice and nits before treatment.
- Wash hair thoroughly with a plain shampoo (without additives) or dish detergent. Additives may coat the hair shaft and prevent the pediculicide from being effective.
- Read directions on pediculicide product carefully.
- Nit removal is an important step in the management of head lice.

**TREATMENT**
- Who provides treatment is assessed on a case-by-case basis, e.g. family, HCW.
- Cost coverage for pediculicide will be determined on a case-by-case basis, e.g. family, Social Assistance.
- Two treatments, seven days apart, with a known effective product after signs and symptoms.
- Natural alternatives- Use with caution as data is lacking and there is no scientific evidence of effectiveness. A number of household products, such as mayonnaise, petroleum jelly, olive oil, tub margarine and thick hair gel, have been suggested as treatment for head lice. Application of a thick coating of such agents to the hair and scalp left on overnight will theoretically occlude lice spiracles and decrease respiration. However, these products show little killing of lice and are less effective than topical insecticides. There are no published trials on the safety or efficacy of these home remedies.
- There appears to be no satisfactory method to get rid of an infestation apart from chemical treatment with an insecticide, which acts on the central nervous system of the louse. These chemicals are thus potentially toxic for humans also.
- All treatments should be applied to the scalp as per product instructions. No product should be applied to open wounds/lesions. Apply shampoo evenly and down to scalp.
- All treatments should be applied at 0 and 7-10 days after signs and symptoms, to ensure all nits are killed, as no treatment is 100% effective the first time.
- R&C can be used to treat pregnant and lactating women and children less than two years.
- Persons with special medical problems such as skin diseases or a convulsive disorder should discuss treatment with his/her physician.
- Pregnant and breastfeeding women should wear rubber gloves when providing treatment.

**Products:**
1. 1% Permethrin products- NIX (Creme Rinse) and Kwellada-P
2. Pyrethrin products- R & C (Shampoo), Pronto, Licetrol, Lice-Enz mousse
3. Resultz- a hair rinse that contains: isopropyl myristate 50% and ST-cyclomethicone 50%. Review of the results of clinical trials show that this product looks promising, but the evidence of efficacy is not strong enough to recommend it except in special circumstances.
4. Lindane
- Not recommended as 8 times reported increase in treatment failure.
- It is not always ovicidal.

**Nit Removal:**
Thorough removal of nits is recommended as it makes it easier to see any new infestations. It also helps avoid unnecessary treatments due to false identification of a reinfestation (e.g. old, dead nits) by an untrained eye. Removal of nits has not been proven to be necessary to prevent spread. Viable eggs are usually too close to the scalp to be removed effectively with a nit comb. Most nits > 7 mm from the scalp, down the hair shaft, are empty eggs.

Suggestions for nit removal:
- Back combing to loosen nits.
- Steel nit combs – may be more effective with nit removal than plastic comb.
- Nit free Terminator comb – anecdotal reports by Public Health Nurses that quite effective when used jointly with pediculicides.
- Vinegar 1:1 with water – to hair directly for 15 minutes.

**Infection Prevention and Control Practices:**
- The risk of transmission of head lice to HCWs from clients or clients to HCWs is rare given the method of transmission (need head to head contact or sharing head gear/hair accessories).
- Emphasize good hand hygiene.
- As soon as lice are suspected, implement gloving for contact with hair.
- Maintain gloving for contact with hair until 24 hours after initiation of treatment.
- Avoid head to head contact.
- While treating client with pediculicide, wash items in hot water that have come into contact with the infested person’s scalp such as combs, brushes, headgear, pillowcases, and shirts/tops with collars and towels. Combs, hair brushes and barrettes, etc. should be disinfected in hot water or pediculicide for 5 – 10 minutes. The heat of the water or the hot cycle of the clothes dryer will kill any live lice and nits.
- Items, which cannot be laundered, should be dry-cleaned, placed in a freezer for 48 – 72 hours or placed in a plastic bag, sealed, and left for 10 days. This measure conforms to the life cycle of the lice, and will ensure any lice or nits on these items are no longer viable.
- Who cleans the above devices is assessed on a case-by-case basis, family member, HCW.
- Environmental decontamination or extra housecleaning measures and use of insecticide sprays are not needed.
- Because lice die 1 – 2 days once off host, nits that hatch away from the head die in a few hours if no host is found.
Management of Exposure to Client:

- Clients should be examined for lice if there is a possibility of transmission through head to head contact or shared head gear/hair accessories with a case of head lice. The contact should examine their hair daily for 2 weeks after the last contact in the infested period. If they are infested, they should be treated.
- There is no benefit to prophylactic treatment. See WRHA Community Health Services Pediculosis Algorithm – Client.
- See attached Headlice Control Checklist.

Management of Exposure to HCW:

- HCWs should be examined for lice if there is a possibility of transmission through head to head contact or shared head gear/hair accessories. The contact should examine their hair daily for 2 weeks after the last contact in the infested period. If they are infested, they should be treated. The process for daily hair examination is assessed on case-by-case basis, e.g. family member, HCW.
- There is no benefit to prophylactic treatment.
- OESH should be contacted for management of a case in a HCW.
- HCWs with occupational exposure shall be provided with a pediculicide in accordance with the WRHA OESH site physician standing orders with instructions for use and education about lice.
- The household contacts of family members of HCWs who have lice should check for lice daily for 2 weeks. Family members will be responsible for provision of their own treatment.
- See WRHA Community Health Services Pediculosis Algorithm – Health Care Worker.
- See attached Head Lice Control Check List.

Communication:

- Communication with and education of clients, family, caregivers is essential to reduce anxiety and stop the spread of lice.
EDUCATION RESOURCE MATERIALS:


   - Head Lice Cycle and Characteristics
   - Management of Persons with Head Lice
   - Product list
   - Lice Presentation
   - Facts of Lice


6. The Facts of Lice, WRHA Website: [www.wrha.mb.ca/health](http://www.wrha.mb.ca/health) info/a-z files/Head Lice.Inf

**Head Lice Control Check List**

Check your head for head lice every week using bright or natural lighting. If you find lice or nits, check other family members or contacts daily for 2 weeks but do not treat unless they have lice.
1. Brush hair thoroughly as brushing does physical damage to the louse.

2. Before treating, wash hair thoroughly with shampoo free of conditioners and other additives. They may interfere with the lice product.

3. Read directions on lice product as some products are applied to damp or dry hair.

4. Shake lice product well.

5. Thoroughly saturate hair and scalp with sufficient amount of lice product. (as indicated on product insert)

6. Leave on hair for period of time stated on product. For thicker, longer hair, you may want to double the time and/or amount of product.

7. Rinse hair well with water and towel dry.

8. Part hair into sections to assist with nit removal.

9. Remove as many nits as possible by pulling them off with your fingers (a nit comb may help). This can take time but it is the most important step. Checking for and removing nits should be done daily for 14 days.

10. Repeat steps 1-9 in 7 days.

11. Use another head lice product if live lice are found in 24-48 hrs after 1st treatment.

12. Call your Public Health Nurse for advice and education needed.

13. Contact personal contacts.

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**Household Cleaning**

1. Soak combs, brushes, hair clips in very hot water for 15 minutes.

2. Wash personal belongings (especially head gear), recently worn clothing and towels and bed linen in hot water and dry using hot cycle of the dryer.

3. Dry clean, or seal in a plastic bag for 10 days, or freeze (-20°C for 48-72 hours) items that cannot be exposed to hot water. Items that cannot be washed (stuffed animals, winter coats) can be put into a hot dryer for 20 minutes.

4. Vacuum or launder area where there has been direct head contact (couch, bed, car seat).