Overview

- Maine CDC Infectious Disease Program Overview
- Notifiable Diseases & Conditions Reporting
- Infectious Disease Investigation Process
- Overview of infectious disease issues that affect youth camps
- Recommendations & Resources
Public Health Districts

- 8 Health and Human Services Districts
- ME CDC public health unit in each district
  - Public Health Liaison
  - Public Health Nurses
  - Field Epidemiologist
  - Health Inspector
  - Drinking Water Inspector
Purpose: to study the distribution and determinants of notifiable infectious diseases among citizens and visitors in Maine and to apply this study to the prevention and control of infectious disease.
Infectious Disease Epidemiology:
What we do

- Disease surveillance (bird’s eye view)
- Disease & Outbreak investigations
  - Provide advice regarding testing
  - Facilitate testing (collection & transportation)
  - Provide advice regarding treatment recommendations
  - Contact tracing
- Provide recommendations on disease control
- Act as liaison with state and federal laboratories and federal agencies
- Apply state rules and law regarding exclusion from activities and vaccination requirements
- Provide education and outreach
DISEASE REPORTING & INVESTIGATIONS
# NOTIFIABLE DISEASES AND CONDITIONS LIST

24 Hours A Day, 7 Days A Week Disease Reporting:

Telephone: 1-800-821-5821  Fax: 1-800-293-7534

Conditions are reportable immediately by telephone on recognition or strong suspicion of disease.
All others are reportable by telephone, fax, electronic lab report, or mail within 48 hours of recognition or strong suspicion of disease.

- Directors of laboratories are to submit isolates or clinical specimens, as well as any isolates or clinical specimens as requested by Maine CDC, to the Maine Health and Environmental Testing Laboratory for confirmation, typing, and/or antibiotic sensitivity.

<table>
<thead>
<tr>
<th>Disease / Condition</th>
<th>Reporting Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria</td>
<td>Yes</td>
</tr>
<tr>
<td>Measles</td>
<td>Yes</td>
</tr>
<tr>
<td>Meningococcal Disease, invasive</td>
<td>Yes</td>
</tr>
<tr>
<td>Mumps</td>
<td>Yes</td>
</tr>
<tr>
<td>Pertussis</td>
<td>Yes</td>
</tr>
<tr>
<td>Plague</td>
<td>Yes</td>
</tr>
<tr>
<td>Poliomyelitis</td>
<td>Yes</td>
</tr>
<tr>
<td>Rabies</td>
<td>Yes</td>
</tr>
<tr>
<td>Rabies Post-Exposure Prophylaxis</td>
<td>Yes</td>
</tr>
<tr>
<td>Rocky Mountain Spotted Fever</td>
<td>Yes</td>
</tr>
<tr>
<td>Smallpox</td>
<td>Yes</td>
</tr>
<tr>
<td>Staphylococcus aureus, Methicillin-Resistant (MRSA), invasive</td>
<td>Yes</td>
</tr>
<tr>
<td>Streptococcal Group A, invasive</td>
<td>Yes</td>
</tr>
<tr>
<td>Streptococcal pneumonia, invasive</td>
<td>Yes</td>
</tr>
<tr>
<td>Syphilis</td>
<td>Yes</td>
</tr>
<tr>
<td>Tetanus</td>
<td>Yes</td>
</tr>
<tr>
<td>Tuberculosis (active and presumptive)</td>
<td>Yes</td>
</tr>
<tr>
<td>Tuberculosis (persister)</td>
<td>Yes</td>
</tr>
<tr>
<td>Vibrio species, including Cholera</td>
<td>Yes</td>
</tr>
<tr>
<td>Vibrio species</td>
<td>Yes</td>
</tr>
<tr>
<td>Vincent Infective Fever</td>
<td>Yes</td>
</tr>
<tr>
<td>West Nile Virus</td>
<td>Yes</td>
</tr>
<tr>
<td>Western Equine Encephalitis</td>
<td>Yes</td>
</tr>
<tr>
<td>Yellow Fever</td>
<td>Yes</td>
</tr>
<tr>
<td>Any Case of Unusual Illness of Infectious Cause</td>
<td>Yes</td>
</tr>
<tr>
<td>Any Cluster/Outbreak of Illness with Potential Public Health Significance</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Who must report: Health Care Providers, Medical Laboratories, Health Care Facilities, Administrators, Health Officers, Veterinarians

What to report: Disease reports must include as much of the following as is known:
- Disease or condition diagnosed or suspected
- Patient’s name, date of birth, address, phone number, occupation, race, and ethnicity
- Diagnostic laboratory findings and data of test relevant to the notifiable condition
- Health care provider name, address and phone number
- Name and phone number of person making the report

Complete Rules for the Control of Notifiable Diseases and Conditions:
Notifiable Diseases & Conditions

• Reportable to ME CDC
  – Recognition or strong suspicion

• Category 1
  – Immediately by phone
  – Includes cluster/unusual/critical/unexplained death of any suspected infectious disease

• Category 2
  – No later than 48 hours by phone, fax, or mail
Who Must Report?

- Health Care Providers
- Medical Laboratories
- Health Care Facilities
- Day Care Facilities
- Correctional Facilities
- Educational Institutions
- Local Health Officers
- Veterinarians
- Veterinary Medical Laboratories
Why Report?

• Required by law
• Evaluate risks of transmission
• Intervene when appropriate to prevent the spread of disease
  – E.g. avian influenza, chickenpox
• Determine disease incidence/prevalence
• Increase understanding of the distribution and determinants of the condition in Maine
• Maine required to report to U.S. CDC
How to Report

• [http://maine.gov/idepi](http://maine.gov/idepi) ("disease reporting" tab)
  – Notifiable Conditions List
  – Rules for the Control of Notifiable Conditions
  – Notifiable Conditions Reporting Form
    • Fax: 1-800-293-7534

• Phone: 1-800-821-5821
  – Available 24/7 for disease reporting and consultation
    • After-hours calls are redirected to NE Poison Control

• E-mail [disease.reporting@maine.gov](mailto:disease.reporting@maine.gov)
  – For non-confidential reports or requests for consultation
What to Report

- Disease/condition
- Patient demographics (name, home address, DOB, parent contact info)
- Symptom onset date
- Diagnostic/lab findings and health care provider and facility (if available)
- Reporting individual / facility / contact info (so we can call you back)
- Any other relevant information (% of campers or staff affected, travel, etc.)

If multiple people affected, start a line list with patient demographics, symptoms, onset, and any known health care follow-up (i.e. hospitalized, seen by a doctor, etc.)
What Happens Next?

- Reports & consultation requests are assigned to Field Epidemiologists (usually by region)

- Field Epidemiologist will call you to:
  - establish communication (identify one point of contact)
  - assess current situation
  - collect data (if suspected outbreak – start a line list)
  - plan for continued monitoring of ill children
  - arrange for specimen collection/testing, if needed
  - provide guidance on prevention and control, including template letters, disease fact sheets, and exclusions
INFECTIOUS DISEASES & CAMPS
Youth Camps:
A different kind of community

• Density: a lot of people living, socializing, and interacting
• Diversity: a wide variety of individuals from different backgrounds with different social habits
  – Lack of familiarity with our regional diseases and risks
  – Bringing in diseases uncommon here
• Traveling population
• Changing behaviors, age-related attitudes
• Home address for patient is often out-of-state, which means...
  – Maine CDC often doesn’t receive timely disease reports from diagnostic labs or health care providers
Infectious Diseases Of Concern

• Gastrointestinal (GI) illness
• Vaccine-preventable diseases (VPDs)
• Influenza
• Rabies
• Vector-borne diseases (VBDs)
• Others
  – Common childhood illnesses (HFM, strep, staph); sexually transmitted infections; tuberculosis
Outbreak Detection

• Detect a sudden increase in similar symptoms?
• Can the majority of illness be attributed to one or two symptoms?
  – Gastrointestinal
  – Rash
  – Respiratory
  – Fever
• Is there a potential source?
  – Linked by person, place, time
Real Life Examples

- Pertussis outbreaks in cabins
- Norovirus outbreaks
- Salmonella typhi in cook staff
- Cryptosporidiosis and STEC at a farm camp
- Bats, bats, bats!
- Measles: we got lucky
GENERAL RECOMMENDATIONS
• 10-144 CMR Ch. 208: Rules Relating to Boys, Girls, Boys and Girls, Day Camps and Primitive and Trip Camping:

• 5.B.6. The health histories of each camper and staff member shall be kept and made available for review by the Department upon request. In addition, camps shall comply with the Department of Health and Human Services immunization rules relating to youth camps.
  – 5.B.6.a. Health histories shall include:
    • 5.B.6.a.1. Description of any current health conditions requiring medication, treatment, or special restrictions while at camp.
    • 5.B.6.a.3. A record of immunizations, including the date of last tetanus shot, and available information concerning age specific vaccinations consistent with the sample immunization form in Appendix D.
Rabies Exposures (in general)

• Domestic animal (cat/dog/ferret/etc.):
  – Contact ACO and Maine CDC for notification and guidance prior to recommending Post-Exposure Prophylaxis (PEP)
    • Usually, animals undergo 10-day observation regardless of vaccination status
    • Severe attacks may require expedient response and treatment
Rabies Exposures (in general)

• Wild animal, including bats:
  – If available: **Trap and submit for testing to state lab**
    • Contact Game Warden service (if needed) and Maine CDC
    • PEP only recommended for rabies-positive animals
  – If not available: Consult Maine CDC

– Multiple bat exposures
  • Line list of potentially exposed (name, home address and contact info, etc.)
  • Bat-proof buildings to avoid future exposures
Rabies Exposures (in general)

When in doubt – call Maine CDC:
1-800-821-5821
What You Can Do

- Know WHAT to report, WHEN to report, HOW to report, and TO WHOM to report
- Know your local and state health website
- Know who to call
- Establish a working relationship with local health care providers and clinics for medical referrals and follow-up
- Make it simple
  - Make sure simple preventive measures are easily available
  - Hold vaccination clinics
- Ensure that your Health Department has a single point of contact for your clinic
**Resources!**

- **Maine CDC Reporting and Consultation**
  - [https://maine.gov/idepi](https://maine.gov/idepi)
  - Phone: 1-800-821-5821
    - Available 24/7 for disease reporting and consultation
  - E-mail [disease.reporting@maine.gov](mailto:disease.reporting@maine.gov)
    - For non-confidential reports or requests for consultation

- **Maine School Health Manual**
  - Aimed at educating school nurses, but helpful recommendations for school-aged population
Maine Rabies Management Guidelines

- [https://mainepublichealth.gov/rabies](https://mainepublichealth.gov/rabies)

Maine CDC ID Epi Orderable Materials

- [https://www.maine.gov/dhhs/order](https://www.maine.gov/dhhs/order)

CDC Travel Health

- [https://www.cdc.gov/travel/](https://www.cdc.gov/travel/)
- Travel notices, recommended vaccinations
Questions?

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Maine Center for Disease Control and Prevention
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(207) 822-2369

https://maine.gov/IDEpi
Camps: infectious disease surveillance & prevention

Laura Blaisdell MD/MPH, FAAP
Camp Medical Director, Winnebago
Vaccine Preventable Disease (VPD)

- Tetanus
- Diphtheria
- Pertussis
- Meningococcal A&B
- Pneumococcus
- Measles
- Mumps
- Varicella
- Influenza
- Hepatitis A & B
  - Hib
  - Polio
  - Rubella
  - HPV
Vaccination coverage for combined 7-vaccine series

NOTES: Data for the map are displayed by a modified Jenks classification for the 50 U.S. states and D.C., which creates categories that minimize within-group variation and maximize between-group variation.

SOURCE: NCHS, Health, United States, 2017, Figure 12. Data from the National Center for Immunization and Respiratory Diseases (NCIRD) and National Immunization Survey-Child (NIS-Child).
Vaccine Exemptions in Maine

- Maine was one of 18 states in which school age children may request an exemption from school-required immunizations based on medical, religious, and philosophical beliefs.

- 45 states and DC allow religious exemptions.

- 15 states in 2019 allow philosophical exemptions.

- Only 0.3% of Maine kindergarten parents requested medical exemptions in the 2017-18 school-year.

- Non-medical exemptions were requested nearly 17x more, representing 5% of Maine kindergarteners.
Maine’s Rates

<table>
<thead>
<tr>
<th>County</th>
<th>Diphtheria, Tetanus and Pertussis</th>
<th>Polio</th>
<th>Measles, Mumps and Rubella</th>
<th>Tetanus Diphtheria Pertussis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Androscoggin</td>
<td>95.3</td>
<td>95.6</td>
<td>95.3</td>
<td>94.9</td>
</tr>
<tr>
<td>Aroostook</td>
<td>96.7</td>
<td>97.3</td>
<td>93.7</td>
<td>96.4</td>
</tr>
<tr>
<td>Cumberland</td>
<td>95.0</td>
<td>94.9</td>
<td>94.4</td>
<td>95.0</td>
</tr>
<tr>
<td>Franklin</td>
<td>96.2</td>
<td>95.8</td>
<td>95.4</td>
<td>96.6</td>
</tr>
<tr>
<td>Hancock</td>
<td>93.5</td>
<td>93.3</td>
<td>92.4</td>
<td>92.3</td>
</tr>
<tr>
<td>Kennebec</td>
<td>95.5</td>
<td>95.8</td>
<td>94.1</td>
<td>93.7</td>
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<tr>
<td>Knox</td>
<td>93.4</td>
<td>93.1</td>
<td>91.2</td>
<td>92.5</td>
</tr>
<tr>
<td>Lincoln</td>
<td>94.9</td>
<td>94.4</td>
<td>92.1</td>
<td>96.6</td>
</tr>
<tr>
<td>Oxford</td>
<td>95.3</td>
<td>95.1</td>
<td>94.4</td>
<td>92.4</td>
</tr>
<tr>
<td>Penobscot</td>
<td>96.4</td>
<td>96.4</td>
<td>95.8</td>
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<tr>
<td>Piscataquis</td>
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</tr>
<tr>
<td>Sagadahoc</td>
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<td>96.6</td>
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<tr>
<td>Somerset</td>
<td>92.8</td>
<td>93.7</td>
<td>91.3</td>
<td>91.2</td>
</tr>
<tr>
<td>Waldo</td>
<td>94.4</td>
<td>93.8</td>
<td>93.5</td>
<td>92.3</td>
</tr>
<tr>
<td>Washington</td>
<td>98.6</td>
<td>98.6</td>
<td>96.1</td>
<td>94.2</td>
</tr>
<tr>
<td>York</td>
<td>96.1</td>
<td>95.8</td>
<td>95.4</td>
<td>91.7</td>
</tr>
</tbody>
</table>

Immunization rates by county

The following shows the rate by county in 2012 that children aged 19-35 months received all the vaccinations that were due by the time they were 18 months old. The rates at which parents are not immunizing their children with all recommended vaccines vary by county, with more than 80 percent receiving all vaccinations in several counties, compared to just over 50 percent in Waldo, Lincoln and Sagadahoc counties.

SOURCE: Maine Center for Disease Control

STAFF GRAPHIC | MICHAEL FISHER
Outbreaks

- From January – November 2018 the following diseases outbreaks occurred:
  - Pertussis: 13 schools in Cumberland, Hancock, Waldo, Penobscot, and York counties. This included Sanford and Cumberland schools, among others, and 3 daycare centers in York county.
  - Chicken pox: 1 daycare in Westbrook and a case in a Waterboro middle school.
  - Mumps: Outbreaks occurred among college students in 2016 at University of Southern Maine, Bates, and Bowdoin. Other than one reported case in 2013, Maine has not had a mumps outbreak since 2007.
LD 798

An Act To Protect Maine Children and Students from Preventable Diseases by Repealing Certain Exemptions from the Laws Governing Immunization Requirements
LD798: Who & What Vaccines?

To whom does LD 798 apply?
- All private and public elementary and secondary school as well as special education programs.
- Also daycares, universities, and colleges will become protected.
- Certain health care facilities will also be included.
- Not summer camps.

What vaccines are included in LD 798?
- Students:
  - DTaP
  - Measles, mumps, rubella
  - Polio
  - Chicken pox
  - Meningococcal meningitis.

Healthcare workers and daycares may require additional immunizations.

NOTE: Not
- Hepatitis A
- Hepatitis B
- Human Papilloma Virus (HPV)
- Haemophilus Influenza B (HiB)
- Rotavirus
- Tuberculosis
- Influenza

NOT mandatory vaccination.

No major religion is against vaccination.
Summer Camps Should Pay Attention

- Outbreaks make kids/staff sick.
- Outbreaks create stress & confusion.
- Outbreaks disrupt camp programs.
- Outbreaks can be difficult to control.
- Outbreaks are tricky to explain to parents.
- Camps are responsible for keeping up-to-date vaccine records (preferably electronic).
- Outbreaks, especially now, create news.
New York Camps

- June 2019 NY Passed a bill to end religious exemptions in the setting of a measles outbreak.

- Health Commissioners required all summer camps to send proof of immunity for campers and staff.

- Horrible timing.

- It takes 30 days to get up-to-date on measles alone, it can take 14 months to get up-to-date on all vaccines.
Maine

- Requires record keeping of vaccinations.
- LD798 does not require mandatory vaccines for summer camps yet.
  - But arguably camps could/should follow schools.
  - In an outbreak, health leaders could mandate vaccination for camp attendance.
- Maine camps should consider policy changes now to minimize disruption during the summer season.
ACA/AAP Policy Statement

Before starting camp, all campers should be in **compliance with the recommended childhood** immunization schedule published annually by the American Academy of Pediatrics (AAP), the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention, and the American Academy of Family Physicians.

Camp administrators should be aware **that individual states might require other immunizations** in addition to those recommended by the AAP.

Nonmedical exemptions to required immunizations are inappropriate and should be eliminated by camps.

**Policies** must also be in place regarding participation in the camp program by **campers who are incompletely immunized or unimmunized**.

People who **travel internationally** as part of a camp program should consult the Centers for Disease Control and Prevention traveler’s health Web site or visit a traveler’s clinic for information regarding particular immunization requirements or health concerns that may be associated with their destination.
What Should Camps Do?

- Consider investment into electronic health record.
- Create a vaccination policy and make parents aware during recruitment season.
- Create a under/unimmunized policy.
- Consider screenings and camp policies on attending while sick.
VPD & Immunization Policy

- Consider following schools & mandate immunization for attendance.

- What will happen if a unprotected camper/staff has fever, cough or rash.

- What will happen to other unvaccinated children/staff in camp.
Mandates & Attrition

- Camps may worry that enrollment will decrease with a strong vaccination policy.
- NY state reported that in only 1 or 2 instances, did a family withdraw their camper.
- Similar data out of CA schools, where vaccination as a condition of school entry demonstrated increased vaccination rates.
Surveillance & Prevention

- Educate parents and caregivers on role in illness prevention *before* camp begins
- Establish “opening day” screening process, including right to refuse admission if needed
- Establish, implement, and promote policies that prevent spread of disease
  - Educate staff on when to reach out to Maine CDC
  - Have an plan for responding to outbreaks, especially if campers may need to be isolated to prevent exposure
- Establish policies to keep staff healthy
- Regularly evaluate and update your health care practices and procedures
  - Seek out up-to-date information and recommendations from health department
Surveillance & Prevention

SSSHHHHIP

Surveillance
Sneezing Etiquette
Sunblock
Hand washing
Hydrate
Hygiene
Insects & Animals
Poop
Surveillance & Prevention

- Frontline staff are central!
- Checking in with their campers and being curious about signs of illness or injury.
- Compliance on the boring aspects of prevention.
  - Handwashing
  - Hygiene
  - Cough/Sneeze Etiquette
  - Etc.
General Recommendations

• Promote hand washing before eating and after contact with animals, possible contaminated surfaces, or food
• Do not let campers drink unpasteurized (raw) milk or cider, or any other high-risk foods
• Promote healthy swimming (avoid ingestion of untreated water)
• Switch from self-serve buffets (especially if GI outbreak is suspected)
General Recommendations

• Don’t let campers handle wild animals
• Don’t share towels or personal items
• Clean high-touch surfaces and bathrooms often
• Promote good respiratory etiquette
• Enhance surveillance if something is “off”
ACA/AAP Policy Statement

♦ All camps should have written health policies and protocols reviewed by a physician with specialized children’s health training.
  ♦ Policies and protocols on both major and minor illnesses and injuries should include information on the camp’s relationship and coordination with local emergency services.

♦ Camps should create disaster and emergency plans, as children are particularly vulnerable and limited in their ability to escape or protect themselves from harm in the event of a natural or manmade disaster.

♦ All campers, staff and volunteers should be up to date on vaccinations as recommended by the AAP, Centers for Disease Control and Prevention (CDC) and American Academy of Family Physicians.
  ♦ Nonmedical exemptions to required immunizations are inappropriate and should be eliminated by camps.

♦ Camp activities should be designed to limit the risk of head injuries.
  ♦ Camp personnel need a clear understanding of concussion symptoms and treatment, and should follow CDC and state-specific return-to-play guidelines.

♦ As camps see an increase in campers with food allergies, they should create and provide their food allergy policies to families before the start of camp.
*ACA/AAP Policy Statement*

- Camps should review local regulations and requirements for stocking unassigned epinephrine and other emergency medications for seizures, diabetes mellitus or opioid overdose.

- Camp staff should be trained to respond effectively to mental, emotional and social health needs of campers.
  - Camps also should teach staff to support campers who need extra help and help facilitate communication with parents.

- Pediatricians should discuss homesickness with families and campers as part of the anticipatory guidance associated with the health evaluation before camp.
  - Parents should avoid making “pick-up” arrangements in the event of homesickness because these arrangements may undermine the child’s confidence in his or her own independence.
THOUGHTS & DISCUSSION