

BABESIOSIS INVESTIGATION OVERVIEW

Babesiosis is caused by microscopic parasites that infect red blood cells and are spread by certain ticks but can also be acquired through contaminated blood donation. In the United States, tickborne transmission is most common in parts of the Northeast and upper Midwest and usually peaks during the warm months. Incubation is around 1-3 weeks or longer for tickborne transmission, and from weeks to months for transfusion associated transmission. Symptoms may appear or recrudesce many months (even >1 year) after initial exposure. More information can be found here: <https://www.cdc.gov/parasites/babesiosis/index.html>

For additional support, consult the NC Communicable Disease Branch at (919) 733-3419.

BASIC STEPS OF A BABESIOSIS INVESTIGATION

1. Review Lab Information	<ul style="list-style-type: none">• Lab is required for Babesiosis. Make sure lab criteria meets the Babesiosis case definition<ul style="list-style-type: none">• If not met, do NOT create an North Carolina Electronic Disease Surveillance System (NCEDSS) event• Clinical criteria and/or an epidemiologic link are required for the Babesiosis case definition. Laboratory evidence alone is not sufficient to meet case definition.
2. Verify County of Residence	<ul style="list-style-type: none">• If out of state, update address in the person profile, then assign to the state Disease Registrar as “Does not meet”.<ul style="list-style-type: none">• CDB will ensure Out of State notifications are complete.• If resident is of another county reassign the event to that county in the Administrative Package
3. Collect clinical information	<ul style="list-style-type: none">• Use information collected from medical records and/or speak with the case.• Due to possibility of blood transfusion transmission, it is important to ask potential babesiosis cases about a history of blood transfusion within one year prior to the collection of a positive specimen. This is a required field in NCEDSS Risk History Package.• Please contact the NC Communicable Disease Branch at 919-733-3419 if there is evidence of transfusion recipient and/or a blood donor to discuss next steps in the investigation.
4. Identify Source of Exposure	<ul style="list-style-type: none">• Risk history is important to track the advancement of tickborne disease into NC, also Babesia can be transfusion associated so it is important to determine transfusion status.• Obtain risk history of possible tick bite, outdoor activity, or travel in the eight weeks prior to symptom onset or date of diagnosis (whichever is earlier).• Obtain transfusion blood donor recipient status for the prior one year.• Since ticks may be extremely small, and person may not have been aware of the tick bite, lack of known tick bite does not eliminate the case.
5. Special Considerations	<ul style="list-style-type: none">• An asymptomatic case may meet case definition if it is in a blood donor or recipient epidemiologically linked to a confirmed or probable babesiosis case per case definition.

CRITICAL ELEMENTS FOR NCEDSS

- Clinical Package
 - “General Diagnostic Information - Date that best reflects the earliest date of illness identification”
 - Best choice is always the date of illness onset (signs and symptoms), 2nd best is date of lab
- Risk History Package
 - Blood and Body Fluid Exposure Risks **within one year** prior to symptom onset or diagnosis, whichever is earlier should be completed. If unable to obtain this information, please indicate the reason on the dashboard.
 - NOTE - For most exposure history (possible tick bite, outdoor activity, or travel) time frame of interest is **8 weeks** prior to symptom onset or diagnosis, whichever is earlier.