2018

Lyme Disease Prevention

Russell D. Himmelstein
UVM Larner College of Medicine

Follow this and additional works at: https://scholarworks.uvm.edu/fmclerk

Part of the Medical Education Commons, and the Primary Care Commons

Recommended Citation
https://scholarworks.uvm.edu/fmclerk/397

This Book is brought to you for free and open access by the Larner College of Medicine at ScholarWorks @ UVM. It has been accepted for inclusion in Family Medicine Clerkship Student Projects by an authorized administrator of ScholarWorks @ UVM. For more information, please contact donna.omalley@uvm.edu.
2018

Lyme Disease Prevention

Russell D. Himmelstein

Follow this and additional works at: https://scholarworks.uvm.edu/fmclerk
Part of the Medical Education Commons, and the Primary Care Commons
LYME DISEASE PREVENTION

Russell Himmelstein
September 2018
Dr. Boulattouf
The problem

- Lyme Disease is a tick-borne illness caused by the bacteria, *Borrelia burgdorferi*, from the bite of infected ticks; symptoms can range from fatigue and myalgias to neurologic disease and carditis.

- There are 300,000 new cases diagnosed each year, and this has more than doubled over the past 13 years.

- Why so many cases?
  - Limited public awareness, clothing choices when outdoors, climate change, and increased tick density.
Public health cost

- $712 million and $1.3 billion each year in medical cost from Lyme and post treatment lyme disease syndrome (PTLDS)

- In 2016, Vermont had 2nd highest report rate of Lyme disease in the U.S.

- Although easily treated, most of the cost comes from PTLDS, with an average of $10,000/case
(Fig. 1) COUNTY-LEVEL LYME DISEASE INCIDENCE IN VERMONT, 2005-2016

Highest incidence counties (not included):
- Bennington
- Rutland
- Windham
- Windsor

Legend:
- Grand Isle
- Addison
- Orange
- Chittenden
- Washington
- Lamoille
- Franklin
- Caledonia
- Essex
- Orleans
“Lyme disease can create, and worsen depression and anxiety, specifically because it can cause a lot of non-specific physical complaints. Patients are often anxious about what the symptoms mean, and it can be difficult to have no clear answers. There is also a financial burden they face, with specialists, multiple expensive treatments. On my end, there is a lot of psychoeducation that takes place, especially as patients adjust to a chronic disease, and how it affects their psychological well being.”

Kay Barrett, clinical psychologist at Berlin Family practice

“While we as cub scout leaders have training focused on safety, there is no training on Lyme Disease or how to prevent it in our kids. With about 60 families, there is a wide range of outdoor experience; from those who have never been outside to those who have hiked the long trail many times over. Having someone talk to our group is a way we are trying to educate parents, especially since most of our participants have no previous education on Lyme.

William Clark, Cub scout leader in South Burlington
Community Perspective II

- “I feel as if I have been removed from the medical system since my disease (LD) is not recognized by insurance. There are a number of expenses that come along with this diagnosis, and it becomes exhausting to go from one specialist to the next. While fatigue no longer bothers me, I know others where it has so much so that they cannot work. I feel as if I am regulated by my disease.”

-Lyme literate community member
Intervention and Methodology

- Developed and presented a 5 minute talk given to 90 cub scouts and their parents in the South Burlington area.

- Interactive talk, with a crossword puzzle to learn about lyme.
Results

- Post-presentation survey for parents and kids that attended the talk
- The scouts and their families were engaged during the talk, and we received positive feedback after

![Average level of understanding: Pre and Post Presentation](chart.png)

1= None
2= I know very little
3= I have some basic understanding
4= I know it all
Evaluation of effectiveness and limitations

Evaluation of effectiveness:

• Post-presentation survey for parents and kids that attended the talk

<table>
<thead>
<tr>
<th>Before the talk</th>
<th>After the talk</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

- Cause of Lyme disease
- How to protect myself
- What does Lyme disease look like

Limitations

• Limited time (5 minutes) for the presentation and to answer questions
• Every family may not read the handouts given about Lyme
• The presentation survey was number based, without room for individual comments
Recommendations for future interventions/projects

• Incorporate Lyme Disease prevention discussions with patients (especially those who enjoy the outdoors) during yearly physical exams

• Have a liaison at the office who’s primary goal is LD education in schools, girl scouts, cub scouts, etc.

• Use an interdisciplinary approach at the time of diagnosis to assist with physical as well as psychosocial distress

• Continue research on a Lyme disease vaccine
References


- Vermont Department of Health website

- Vermont Tickborne Disease Program 2016 Annual Report