



More than just talk: How the “Tick Talk” works for communicating risk awareness

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Presentation to the Atlantic Tick-Borne Disease Network
May 23rd 2018



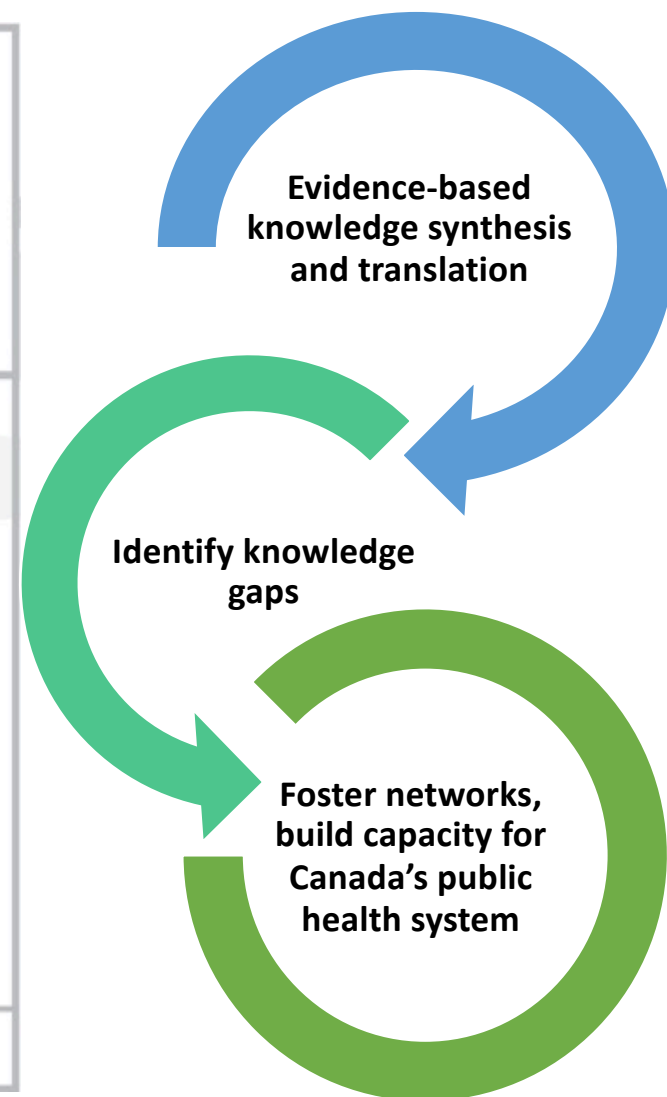


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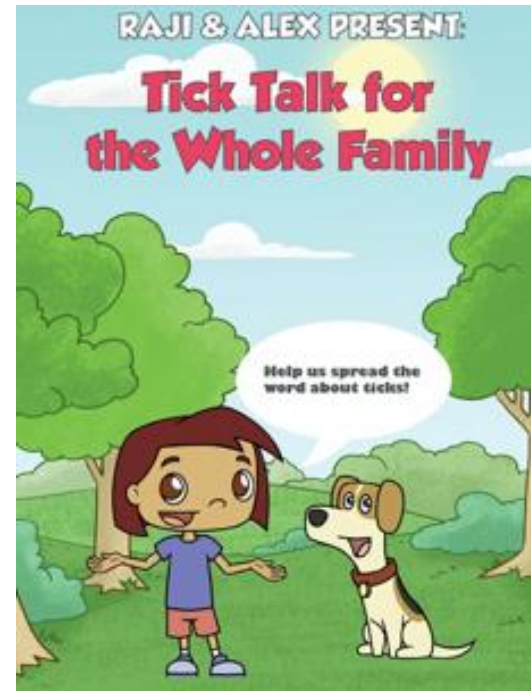


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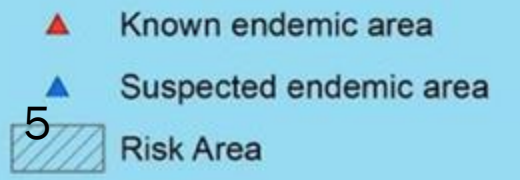
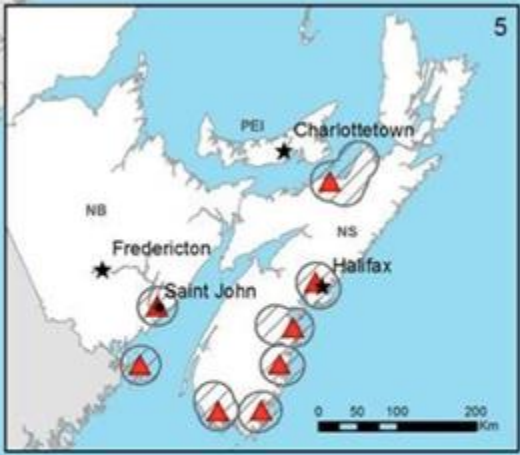
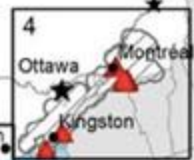
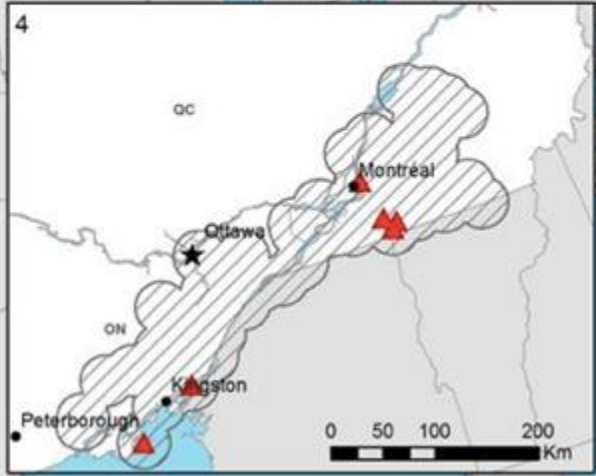
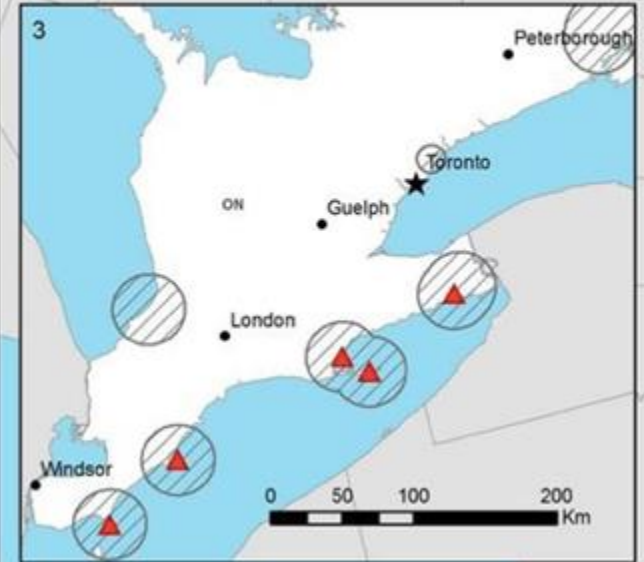
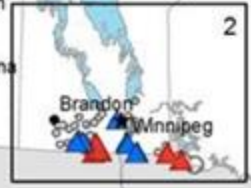
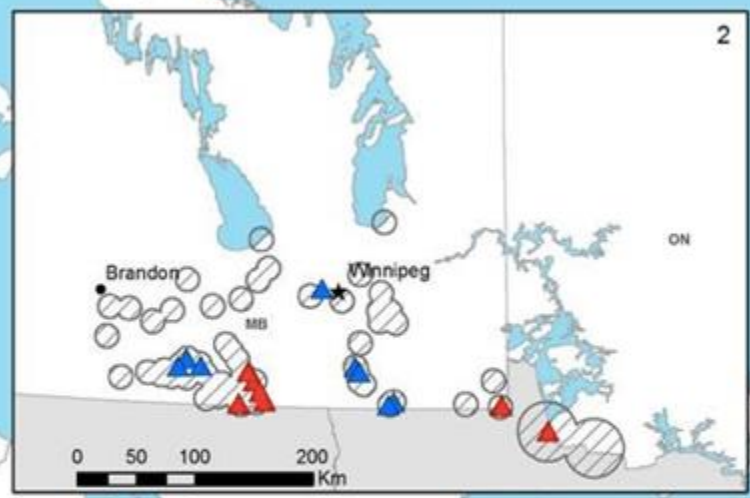
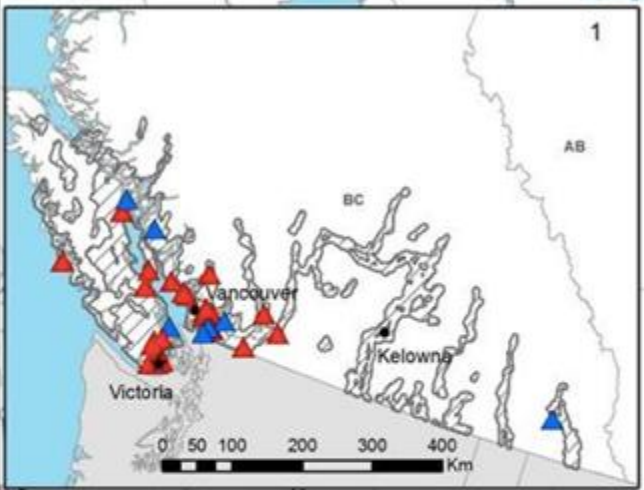
Outline

1. Risk communication and ticks: major challenges
2. The Tick Talk: origin and development
3. Program Evaluation
4. Next steps



Ticks: an emerging problem in some regions

- Climate change has both direct and indirect impacts on tick populations
 - Habitat shifts due to temperature changes
 - Migrating bird shifts, particularly thrushes (Ogden 2008, 2015)
- Urban development initiatives
 - More inner city green spaces
 - Changes in the interface between humans and natural world



Number of Lyme cases in Canada increasing

Reported number of disease

2009: 144 cases

2010: 143 cases

2011: 266 cases

2012: 338 cases

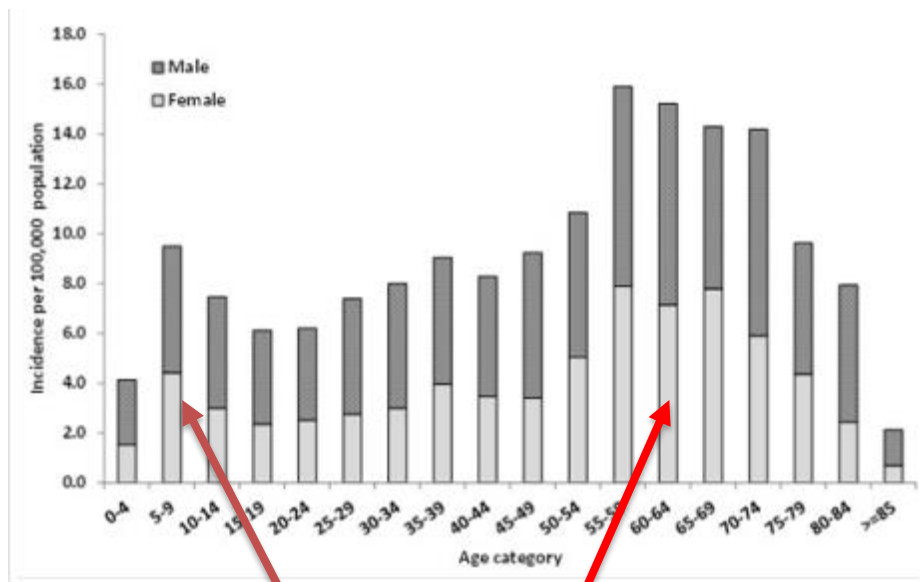
2013: 682 cases

2014: 522 cases

2015: 917 cases

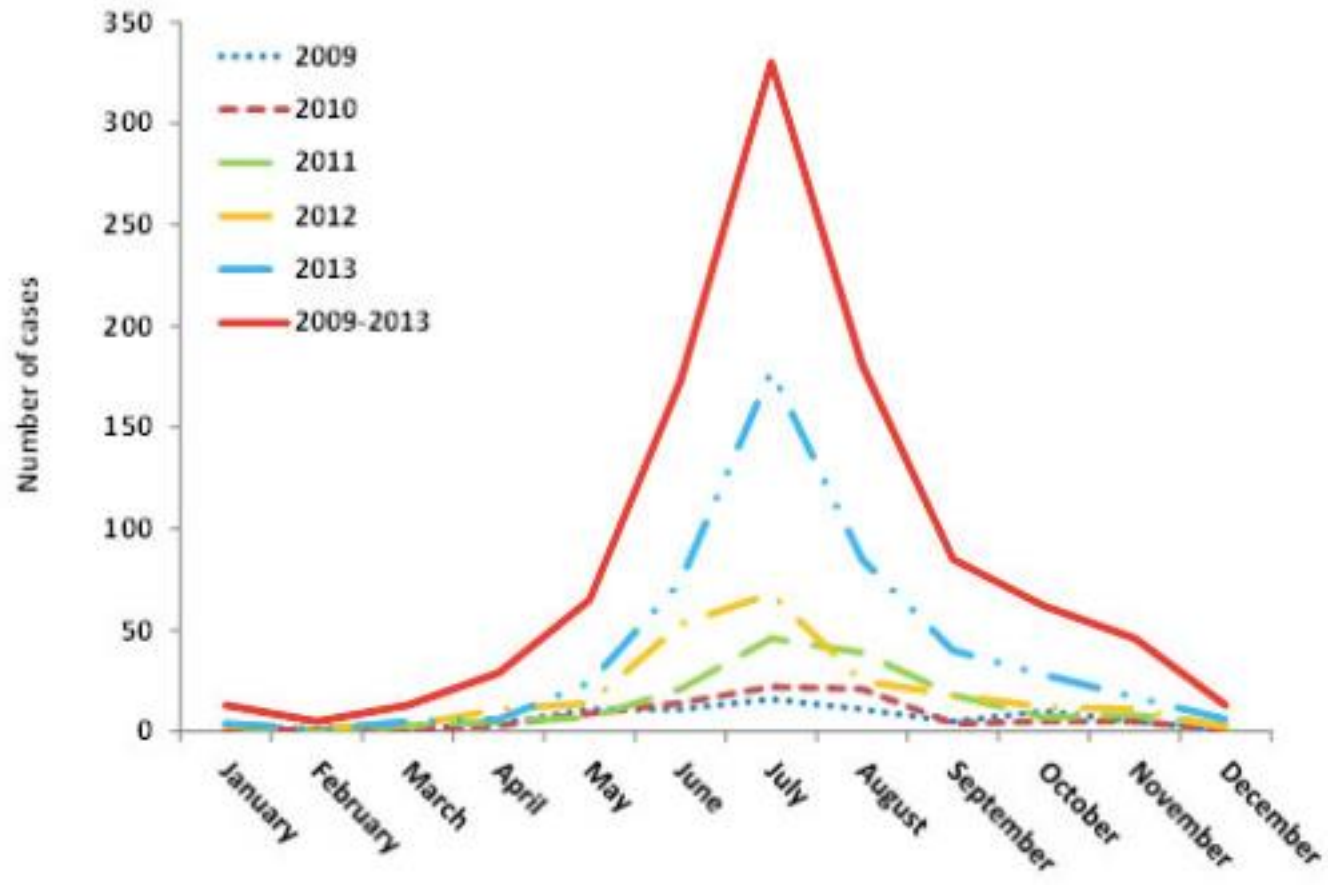
2016: 841 cases* - dataset
not complete

Variations by age and gender



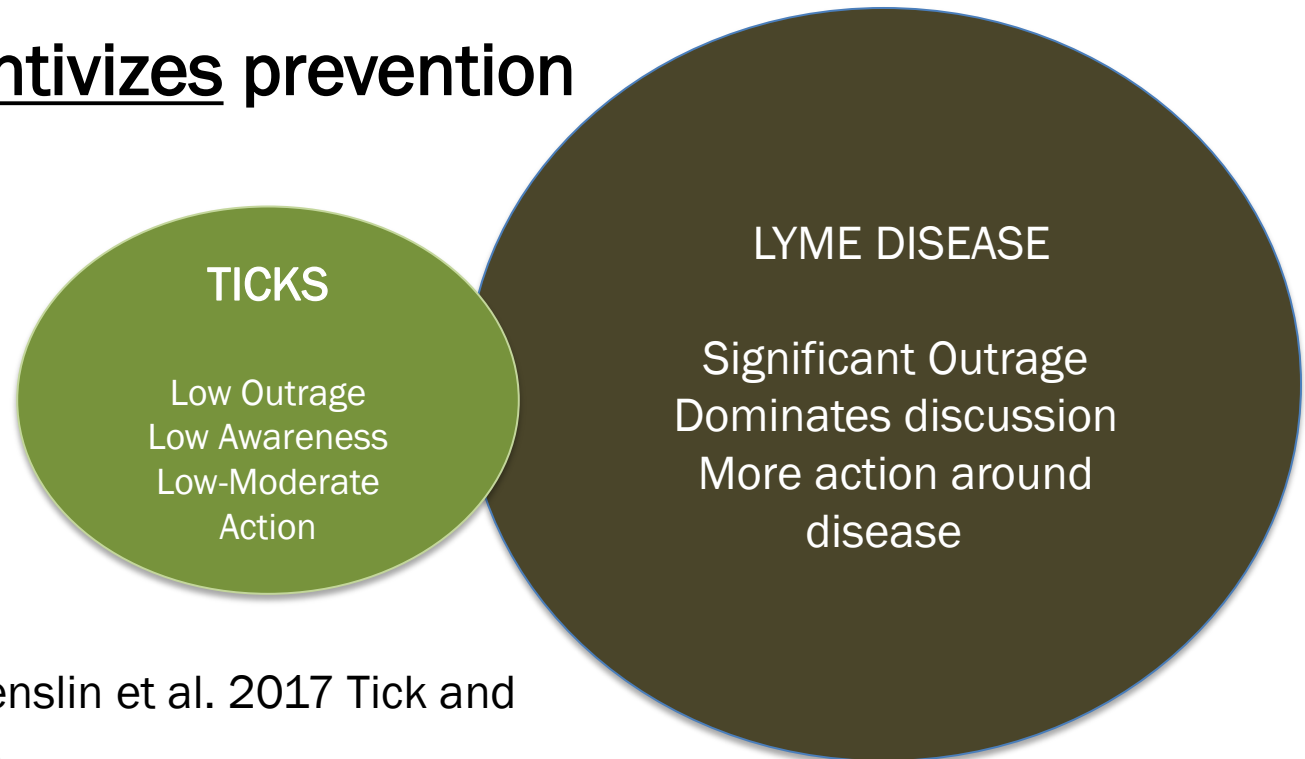
Children and
adults over 55

Clear seasonality



Major communication challenges

- Talking about ticks often intersects with the “outrage” over Lyme Disease
 - Negative cascade
 - De-incentivizes prevention



Reference: Aenishaenslin et al. 2017 Tick and Tick Borne Diseases

Public concern and media coverage

CBCnews | British Columbia

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Test for tick's Lyme disease bacteria now available in Canada

test to see whether it provides reliable information
Last Updated: May 17, 2016 7:09 AM PT

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Patients living in Lyme disease 'medical limbo' push for federal strategy

Lack of awareness, diagnosis and treatment by doctors a problem in Lyme disease battle: advocates
By Keith Doucette, The Canadian Press | Posted: Sep 11, 2016 6:23 PM AT | Last Updated: Sep 11, 2016 6:23 PM AT



Donna Lugar, founder of the Nova Scotia Lyme Disease Support Group, is seen at home in Bedford, N.S. on Friday, Sept. 2, 2016. (Andrew Vaughan/THE CANADIAN PRESS)

UPDATED: Lyme disease sufferers devastated by federal government's action plan

Stay Connected All Canadians at risk from "ticking time bomb", patient groups say
Richmond Hill Liberal
By Kim Zarsour
When Shari Allen first went public with her battle with Lyme disease, she was very sick, but she had hope.
In 2015, the disease had upended her life, left her unable to work, her savings depleted, suffering from constant headaches and joint pain, but the Thornhill woman still believed this disease could be beaten.
RELATED STORIES
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UPDATED: Dangerous ticks found in...
Two years later, she has lost more years of her life, lost her memory, friendships and relationships, lost her ability
WATCH NOW

**Ticks**
The photo
Infected ticks are linked to the growing threat of Lyme Disease. Patient groups have launched a petition to push the federal government to create a better national action plan.

Why does outrage vary?

Ticks

Lyme Disease

Less outrage	More outrage
Voluntary	Coerced/Involuntary
Natural	Industrial
Familiar	Exotic
Not dreaded	Dreaded
Chronic	Catastrophic
Knowable	Unknowable
Individually controlled	Controlled by others
Fair	Unfair
Trusted sources	Untrusted sources**
Responsive process	Unresponsive process

The “Tick Talk” Intervention program objectives

- Create education materials children
- Focus on prevention
- Use seasonality
- Harness the power of children to communicate back to parents
 - see. “Do Bugs need Drugs?” antibiotic campaign



Parameters of Intervention

Avoiding fear-based communication

“alert not alarm”

Include concepts that children find fun

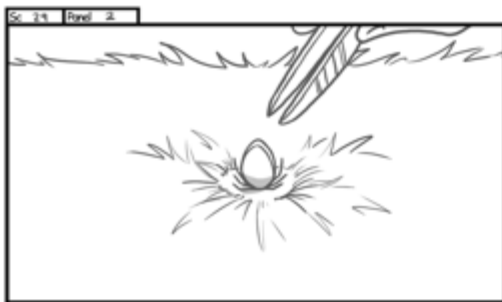
“grossness”

humour

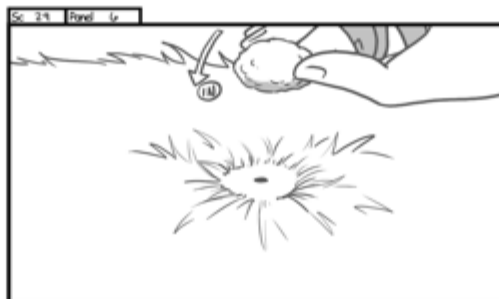
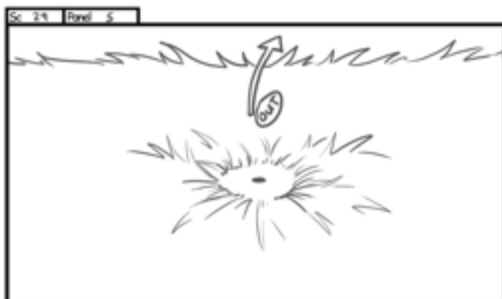
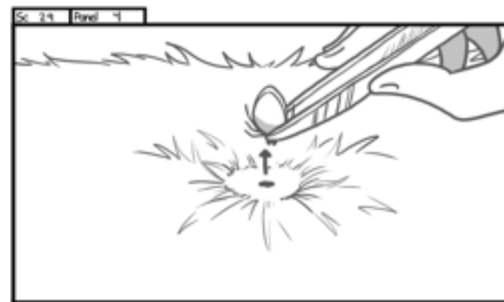
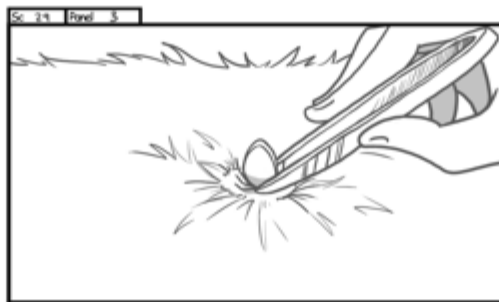
Identify with characters

Reflect cultural reality





Alex: "...with tweezers by the head, since it's attached to the skin."

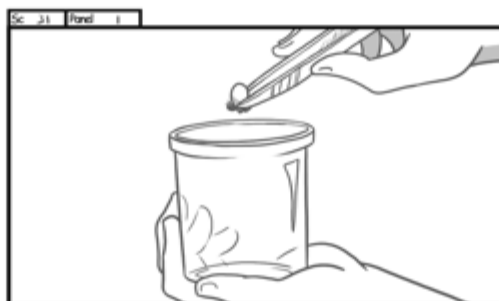


Alex: "After careful removal, clean the spot up and store the little bug away."

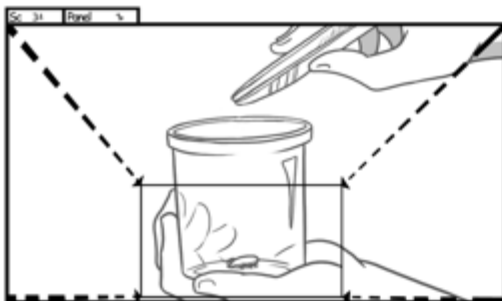
Cut



Raji: "Ew, store it? But I'd just want to throw it out! Why keep it?"



Alex: "To give to your doctor! If the ticks still alive, put it in a container with a damp cotton ball. That way, they can run tests to make sure the..."



Alex: "...bugs bite won't make you sick. And if you can't remove the tick yourself, or if you get sick or a rash shows up where you got bitten, get to your doctor as soon as possible!"

Tick Talk

**Thanks to CIHR, Dr Karen
Bartlett, Dr. Bonnie Henry
and David Murphy**



BC Centre for Disease Control



a place of mind

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CIHR IRSC
Canadian Institutes of Health Research
Institut de recherche en santé Canada



CCHSA CCHSMA
Canadian Centre for Health Services
Centre canadien de santé et de services sociaux

Curriculum Development

- 4 mini-lessons and activities for children
 - Identification, habitat, bite prevention, removal
- Adapted for single contact at camps
 - Dress up clothes race, hand cut-outs art activity
 - I Spy a Tick Zone
 - Tick specimens (dead) in vials



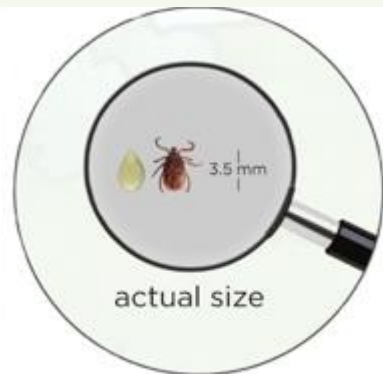
Pilot Project



Summer camps- 2 year evaluation

Table 1. Camp Demographics (N=629 children)

Type of Camp	# camps	# children total	Details
Community Centre based camp	12	308	Week longs camps offered with subsidies. Each week has a different theme, indoor and outdoor activities daily
University Summer Camp program	15	213	Week long day camp, theme based, i.e. tech camp. Offered through two different universities
Science camp	2	49	Day camps at Science World and Nature Centres
Camp based at a school	2	59	Week long day camp with a focus on wildness skills



Qualitative assessment of program

- Video very well received
 - 100% of children paid attention to entire video at every session
- Very few children articulated fear during video
- Multiple requests to repeat video
- Appropriate from 5-10 years
 - <5 too much detail
 - >10- “too babyish”
- Laughter at appropriate places
 - Falling out of tree
- Little fidgeting or talking



Quantitative Evaluation of Video 2012

Table 2. Responses to post-screening question N=320

#	Question	Answer	% Corr.
1	A tick is small enough to fit on your pinky nail.	True	100
2	Ticks are found on short grass.	False	87
3	You can avoid ticks by walking on a clear path.	True	94
4	To avoid ticks you should wear short sleeves and shorts.	False	98
5	When removing a tick, use tweezers to grab the tick anywhere on its body.	False	77

Children asked questions using a Seven-Up style response set up (heads down, thumbs up)

- designed to try and control for peer pressure
- questions mixed as true or false
- Verbal rather than written



Quantitative Evaluation Summer 2013

- Post video quiz across age ranges
 - >7 got 95% correct
 - <5 got 50-70% correct
 - Added a “thumbs middle category”
- Questions 2 had most variability
 - Tick are found in tall grass- yes or no?
- No difference in response rates by camp type
 - Camps spanned socio-economic and cultural divisions
- Most children spoke either English or Punjabi
 - A few children had neither

Some fun questions from kids

- How do they get on dogs if their fur is fluffy?
- Are ticks sticky?
- What if a tick bit my goldfish?
- Can they fly?
- Check your undies for ticks!
- Can I squish them?

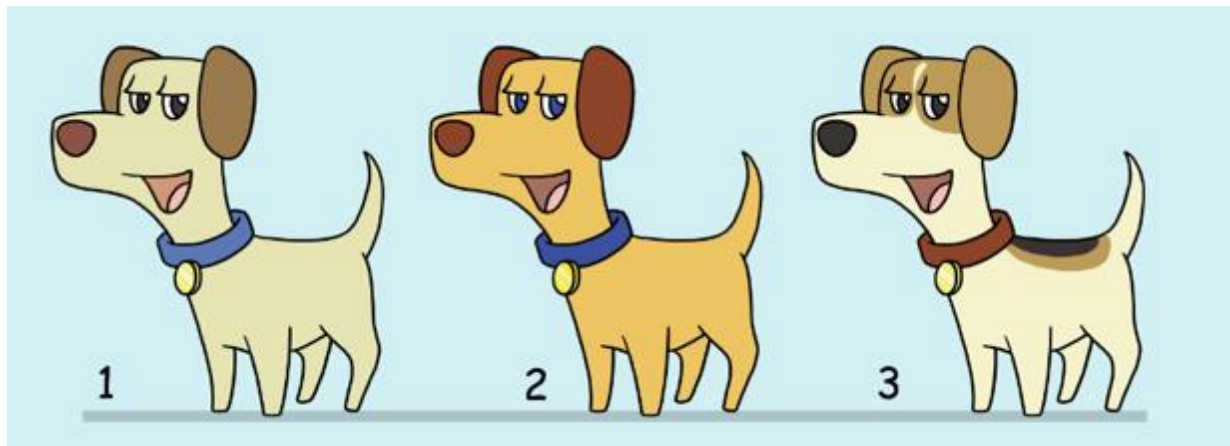


Camp Counsellor Feedback

- Great! We are teaching them about what to do in these types of situations (i.e. snake bites, spider bites) so fit in well
- Would be nice to have more live tick footage
- The fact that the cartoon was short was fantastic
- Video worked very well in the day camp setting as it included some laughs.
- Charge your battery before presentation!
- Positive and kid friendly
- Loved the dead ticks!

Challenges

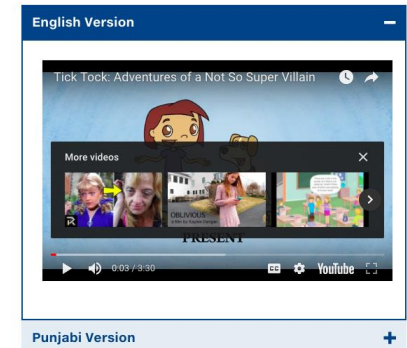
- Outdoor camps don't always have power
- Daylight makes screen viewing difficult
 - Screens a challenge- sheets and pegs
- Requires pre-planning and booking of camps
 - Often programming occurs in the spring
- Requires two people to implement
 - ~5,000 dollars for two students for the summer



In conclusion

- Tick endemic regions shifting
 - many Canadians are still unfamiliar with tick prevention
- Prevention focus side-steps outrage problems
- **“Tick Talk”** program appropriate for children 5-10 years old
 - education can last a lifetime...
- Program could be adapted to other languages

- [In English](#)
- [In Punjabi](#)



For more in-depth information, studies and statistics on Lyme disease, visit the BC Centre for Disease Control disease web page by [clicking here](#).



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Acknowledgements: Lydia Ma NCCEH

Production of this presentation has been made possible through a financial contribution from the **Public Health Agency of Canada**.

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Fishy
Footprint Renovation
How Dinosaurs Learned to Fly
How Do Dinosaurs Say Goodnight?
If You Want to Get Married... You Have to Learn How to Build an Igloo!
Life: Challenges of Life
Life: Plants
Little Armadillos
Ludovic—A Crocodile in My Garden
Ludovic—The Snow Girl
Magic School Bus Holiday Special

Meltdown

Nature's Great Events: The Great Salmon Run
On the Edge of Destruction: The Frank Slide Story
Our Green Dome (in-house production)
Project X: Invasive Species
Project X: What's to Eat?
Pumpkin Circle
Railroaders
The Romance of Transportation in Canada
Ranaway
Science Please! (various short clips)
Stars, Stars, Stars
Tick Tock (Public Service Message)
Walking With Dinosaurs: Giant of the Skies
Walking With Prehistoric Beasts: Mammoth Journey

Program adapted at Telus Science World in Vancouver