The Tick App: a smartphone application to assess human behavioral risk factors of human-tick contact.

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The Tick App: a tool to collect human behavioral data

What's The Tick App?
A free smartphone application for iOS and Android, designed for the general public.

Main Objective:
To collect high spatial and temporal resolution data on human behaviors and movements associated with tick exposure.

Methodology
It's a survey tool with Citizen Science components.

Questions of interest:
1. Which activities increase the risk of exposure?
2. Where are people most at risk of tick exposure?

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June-August 2017

- Implementation of a pilot app: GeoQuestion
- Design of the new Tick App
- Content development
- Beta testing prior to launch
- Launch date: May 28th 2018
- Recruitment through the spring/summer

The Tick App implementation in the spring/summer 2018

Where were users located?

As reported in the baseline survey: State where they live

GPS location data was collected from 26.7% of users, every 15-30 min:

For how long they used the app?

44% of users interacted more than once

They interacted with the app a median of 24 days (IQR=1255) during the spring/summer.

The user profile: who is using the app?

Gender

50%

48%

Prefer not to say: 2%

Age distribution

Previous tick exposure

29.3%

Previous tick-borne disease diagnosis

14.4%

A sneak peak: what are they reporting?

Ticks on self

5% of daily surveys

Ticks on pets

4% of daily surveys

Tick reports

We received 657 Tick Reports, 61.2% from the Midwest and 28% from the Northeast.

Conclusions

The app allowed us to collect data on general and behavioral risk factors at a broad geographical range but also in well-defined areas which will allow for comparisons at different spatial scales.

To improve the behavioral data collected, more incentives are needed to engage people in reporting activities and tick encounters through the summer.