Process that veteran undergo when they engage with Orlando VA SSP
Contents of Standard SSP Kit Distributed to Veterans at Orlando VA

Results. Approximately 3000 syringes were dispensed. Of the 17 veterans, 65% received syringes, 82% received naloxone, 100% engagement in mental health and 94% engagement in substance use disorder clinics. In total, 65% were screened for HIV, 82% for HCV and 29% for sexually transmitted infections.

Conclusion. These numbers, while modest, are notable, especially given the financial and organizational barriers that were in place. Furthermore, the COVID-19 pandemic impacted full implementation and outreach. With the recent, official clarification on syringe purchase and support for SSPs, the number of SSPs in the VA will grow, along with opportunity for more robust data collection. The experience of both providers and patients with regards to the process that veteran undergo when they engage with Orlando VA SSP was very positive. Furthermore, the COVID-19 pandemic impacted full implementation and outreach. With the recent, official clarification on syringe purchase and support for SSPs, the number of SSPs in the VA will grow, along with opportunity for more robust data collection. The experience of both providers and patients with regards to the process that veteran undergo when they engage with Orlando VA SSP was very positive.

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1198. Lyme Disease Post-Exposure Prophylaxis by Single-Dose Doxycycline in Three Healthcare Systems
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Session: P-71. Public Health

Background. Lyme disease, the most common tickborne disease in the United States, may be prevented by taking a single 200-mg dose of oral doxycycline after a high-risk bite from a blacklegged tick. Currently, it is not known how Lyme disease post-exposure prophylaxis (PEP) might vary by region and healthcare system. We identified single-dose doxycycline medication orders in three healthcare systems in states with high incidence of Lyme disease and compared associated patient and provider characteristics.

Methods. Electronic health record data during 2012 – 2016 were obtained from three healthcare systems: Geisinger (Pennsylvania), Marshfield Clinic (Wisconsin), and Mayo Clinic (Minnesota/Wisconsin). Creation of analytic variables and analysis were harmonized across the three sites. Medication orders for single-dose doxycycline ≤200 mg that were accompanied by specific key words or diagnostic codes (e.g., tick bite; Lyme disease prevention) were considered evidence of PEP. Manual chart review was performed from a random subset to evaluate the algorithms used to identify PEP.

Results. Among 2,937,585 patients with at least one medication order or clinical encounter during the study period, 14,102 single-dose doxycycline orders for Lyme disease PEP for 13,172 unique patients were identified. The typical patient receiving PEP was older (mean age 51 – 58 years), male (56 – 59%), and non-Hispanic White (81 – 98%). The annual seasonality of medication orders was bimodal, with peaks occurring during April – July and October – November. The most common encounter setting was an outpatient clinic or urgent care center (80 – 91%); medication orders after patient phone calls in the absence of an in-person visit occurred frequently (14 – 19%); in two health systems. Chart abstractions (n=600) revealed instances of PEP prescribed inappropriately (e.g., bite from a non-blacklegged tick; patient with symptoms of acute Lyme disease).

Conclusion. Lyme disease PEP with a single dose of doxycycline was frequently prescribed in healthcare systems where there is a high incidence of Lyme disease. PEP was most commonly prescribed to non-Hispanic Whites over the age of 50 years. Public health initiatives for tickborne disease prevention should include clinician education on the appropriate use of Lyme disease PEP.

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Figure 1. Monthly seasonal variations of number of HRSV activity, NPI indicators, and meteorological conditions during 2014-2020.

(A) Monthly seasonal variations of number of HRSV cases per sentinel sites based on national HRSV surveillance data during 2014-2020. (B) Monthly seasonal variations of retail sales of hand hygiene products per ¥1 billion (unit: yen) during 2014-2020. (C) Monthly seasonal variations of number of domestic airline passengers per 1,000 population (unit: person) during 2014-2020. (D) Monthly seasonal variations of number of international airline passengers per 1,000 population (unit: person) during 2014-2020. (E) Monthly seasonal variations of average temperature (unit: °C) throughout Japan during 2014-2020. (F) Monthly seasonal variations of relative humidity (unit: %) throughout Japan during 2014-2020.

Table 1. Generalized linear Poisson regression model for the monthly number of human respiratory syncytial virus cases among prefectures in Japan.

| Variable               | β   | z    | P    | Odds ratio (95% CI) |
|------------------------|-----|------|------|---------------------|
| Age                    |     |      |      |                     |
| Sex                    |     |      |      |                     |
| Location               |     |      |      |                     |
| Month                  |     |      |      |                     |
| Temperature            |     |      |      |                     |
| Relative humidity      |     |      |      |                     |

Table 2. Table 1: Generalized linear Poisson regression model for the monthly number of human respiratory syncytial virus cases among prefectures in Japan.

| Month | β   | z    | P    | Odds ratio (95% CI) |
|-------|-----|------|------|---------------------|
| Jan   |     |      |      |                     |
| Feb   |     |      |      |                     |
| Mar   |     |      |      |                     |
| Apr   |     |      |      |                     |
| May   |     |      |      |                     |
| Jun   |     |      |      |                     |
| July  |     |      |      |                     |
| Aug   |     |      |      |                     |
| Sep   |     |      |      |                     |
| Oct   |     |      |      |                     |
| Nov   |     |      |      |                     |
| Dec   |     |      |      |                     |

Conclusion. This study suggests that there is an association between the decrease in the monthly number of HRSV cases and improved hygiene and sanitary measures and travel restrictions for COVID-19 in Japan, indicating that these public health interventions can contribute to the suppression of HRSV activity. These findings may help in public health policy and decision making.

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1200. Healthcare Claims-Based Lyme Disease Case-Finding Algorithms in the United States: A Systematic Literature Review

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Background. Lyme disease (LD) is the fifth most common notifiable disease in the US with 30,000-40,000 LD cases reported annually via public health surveillance. Recent healthcare claims-based studies utilizing case-finding algorithms estimate national LD cases are >10-fold higher than reported by surveillance. The reliability of claims-based data depends on the accuracy of the case-finding algorithms using the information available in the claims primarily generated for the administrative purposes. To assess the true burden of LD, it is imperative to use validated well-performing LD case-finding algorithms ("LD algorithms"). We conducted a systematic literature review to identify LD algorithms based upon healthcare claims data in the US and their respective performance.

Methods. We searched PubMed and Embase for articles published in English from January 1, 2000 through the most recent date as of February 20, 2021. We selected articles including all of the following search terms: (1) "Lyme disease"; (2) "claim*" or "administrative* data"; and (3) "United States" or "the US*". We then reviewed the titles, abstracts, and full texts to identify articles describing LD algorithms developed for claims data. Figure 1 shows the flow diagram following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement.

Figure 1. Flow diagram of the identification of articles for literature review on the US claims-based Lyme disease case-finding algorithms published in English since 2000.