Improving Sexually Transmitted Infection Co-testing in a Large Urgent Care Network

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BACKGROUND

- Sexually transmitted infections (STIs) remain a serious public health concern. Improving STI diagnosis and treatment remains imperative to minimize the complications of STIs and reduce ongoing community spread. Encounters for evaluation of possible gonorrhea (GC) or chlamydia (CT) infection is a critical opportunity to co-test for HIV and syphilis.
- During the 2014-2018 period, 1.8 million cases of Chlamydia (CT), up 19% compared to 2015, were reported in the United States (US). 616,392 cases of Gonorrhea (GC) and 129,813 cases of Syphilis were also reported: an increase of 56% and 74%, respectively, from 2015[1].
- Despite declining in the initial months of the COVID19 pandemic, STIs soon experienced a resurgence to pre-pandemic levels and rates of STIs in the US have steadily increased since 2014.
- Prior analyses in the US have demonstrated delayed diagnoses of HIV and other STIs in primary care, emergency department (ED), urgent care (UC), and rural and urban environments along with missed opportunities for testing[3-5].
- The role of urgent care centers continues to expand and address the needs of many under- and un-insured individuals in the US[6]. Visits for GC and CT testing as well as the number of patients diagnosed with STIs in UC centers also increased as they increased in popularity[7].
- Studies have demonstrated continued growth of UC centers for STI testing while also suggesting there exist further opportunities to increase STI diagnosis and treatment via this care delivery model[8,9].
- An electronic decision support tool to improve HIV testing in UC and ED sites has been described, with an observed increase in linkage to care along with increased testing[10,11]. With continued growth, urgent care (UC) sites are well-positioned to increase STI diagnosis and treatment[8,9].
- The state of Utah has the lowest percentage of adults 18-64 years-old ever tested for HIV (26.5%) and the lowest percentage tested for HIV in the previous 12 months (6.5%)[12]. Increasing HIV testing in Utah is of the utmost importance.
- A multi-faceted intervention to increase appropriate STI testing in UC centers has the potential to decrease missed opportunities for diagnosis and treatment of these often missed and untreated infections in all races and ethnicities. We aimed to develop a multi-faceted quality improvement (QI) bundle to increase STI testing in our UC centers.

METHODS

- Intermountain Healthcare (IH) is a large vertically integrated healthcare network in the mountain west, predominantly in Utah. IH operates a network of 35 UC clinics across the state.
- These UC clinics have the same electronic health record (EHR) across all sites, are staffed by physicians (MD/DO) and advanced practice clinicians (APCs), are from one medical group (no private practice clinicians staff the UC clinics), and report to an IH system leader. These UC clinics serve a young patient population and STI testing is commonly performed.
- In 2020, qualitative interviews to evaluate barriers to STI testing were performed with UC clinicians. Thirteen providers participated in these open-ended interviews.
- Based on these interviews a QI initiative was designed and implemented throughout 2021 (Table 1).
- We compared HIV and Syphilis co-testing rates for encounters associated with GC/CT testing from any site before (July 2018 – December 2020) and after the intervention began (March 2021 – April 2022).

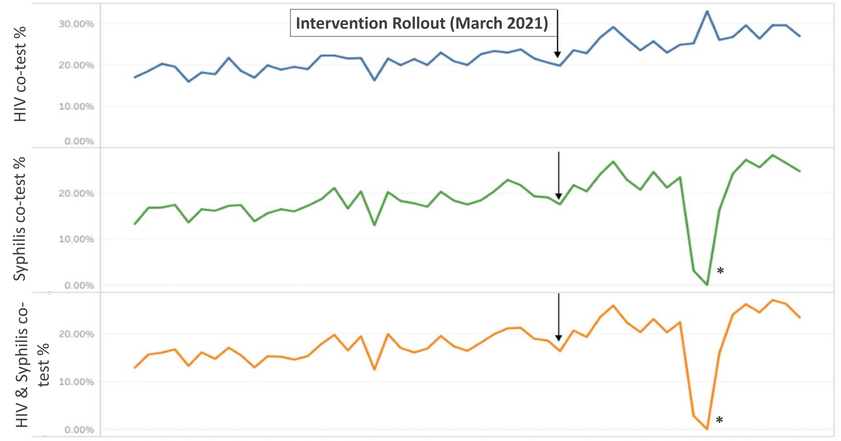
RESULTS

- From July 2018 – December 2020 13,715 UC encounters were associated with gonorrhea/chlamydia (GC/CT) testing from any site. Of these encounters, 2,784 (20.3%), 2,441 (17.8%), and 2,304 (16.8%) were associated with HIV, syphilis, and HIV/syphilis co-testing, respectively.
- From March 2021 – December 2021 4,039 UC encounters were associated with GC/CT testing. Of these, 1,176 (29.1%), 1,082 (26.8%), and 1,034 (25.6%) were associated with HIV, syphilis, and HIV/syphilis co-testing, respectively (Figure 1).
- From January 1 2022 – April 1 2022 3 new outpatient HIV diagnoses were identified. The average time from diagnosis to contact with an ID provider was 30.0 hours.

TABLE 1: Components of the multi-faceted QI bundle to increase STI testing in our UC centers. Components were introduced asynchronously beginning in March 2021.

STI Testing Improvement Initiative Bundle Components	
Component	**Description**
Clinician Education	We created a STI diagnosis and treatment algorithm based on CDC recommendations[13]. The algorithm was distributed across all urgent care sites and multiple system-wide lectures were performed emphasizing recommendations.
Electronic health record (EHR) Improvements	A "PowerPlan" was created to increase STI testing. This feature was implemented in 10/2021. A PowerPlan is an EHR, Cerner based, tool that consolidates testing options into one screen to allow clinicians to easily, quickly, and accurately order STI labs and treatments.
Automatic HIV referral / Positive Syphilis Testing ID Physician Review	All patients with a laboratory diagnosis of HIV are routed to a results pool within the EHR. An Infectious Diseases (ID) physician completes a rapid assessment of the chart, speaks with the patient, provides initial education within 48 hours, and ensures the patient is seen in clinic within 7 days. Positive syphilis test results (treponemal and non-treponemal) within IH were also routed to this results pool for ID physician review (Poster #2219).

FIGURE 1: Co-testing rates for GC/CT UC encounters are presented for HIV (blue), syphilis (green), and HIV/syphilis (orange).



*Testing reagent quality issues in early 2022 lead to an abrupt decline in syphilis co-testing and once these issues were resolved co-testing trends returned to similar rates prior to the reagent quality issue and testing limitation.

CONCLUSION

- Although national standards are not available, CDC guidelines for STI testing suggest these co-testing metrics can be significantly improved.
- Multi-modal QI initiatives may increase STI testing rates within UC centers of integrated healthcare systems. Further study is needed to optimize STI screening, diagnosis, and care in UC centers.

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