ACADEMY FOR EXCELLENCE IN HEALTHCARE

IMPACT ASSESSMENT PAPER

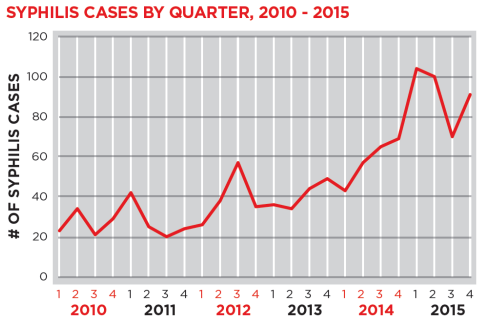
Executive Summary

A Lean Approach to Syphilis Reduction in Franklin County, Ohio

In 2016, Franklin County, Ohio, was in the midst of a syphilis outbreak: Between 2013 and 2015, early syphilis rates in the county had increased by 65 percent — three times the rate for the entire state. Syphilis is a sexually transmitted infection (STI). Left untreated, it can cause vision loss and irreversible damage to the brain and other organs in as little as one year. Like many STIs, it can persist and be spread with no noticeable signs or symptoms. The only way to confirm if an individual has syphilis is to be assessed by a healthcare provider. If tested and found early, syphilis can be diagnosed and cured.

Columbus Public Health (CPH), a 400-person department of the City of Columbus, had issued a public health alert to area medical providers in September 2015, which reinforced recommendations from the Centers for Disease Control and Prevention (CDC) for syphilis screening and treatment and provided a syphilis hotline. With the Ohio Department of Health, CPH regularly analyzes STI data, comparing it to previous years' trends and national, state, and metropolitan-area data. CPH disease intervention specialists (DIS) follow up with every syphilis case to assure education and treatment, and staff conduct briefings to identify trends, risk factors, disparities, and comorbidities: Most of the early syphilis cases in Franklin County were being diagnosed in men who have sex with men, and there also was an increase in congenital syphilis cases (infants born to women exposed to syphilis and not treated at least 30 days prior to giving birth).

Syphilis Cases in Franklin County



Source: Columbus Public Health

A team from CPH attended training at the Academy for Excellence in Healthcare (AEH) at The Ohio State University in July 2016. Lean concepts learned at AEH — voice of the costumer, process mapping, Five Whys, benefit/effort matrix, and root-cause analysis, etc. — could help them to develop new ideas to lower syphilis-infection rates. With guidance from AEH, the CPH team analyzed infection-rate data and found that 155 individuals had more than one syphilis diagnosis from 2010 to 2015, and this group contributed to about 25 percent of all cases. Most of these people (82 percent) had an HIV co-infection. Of those co-infected with HIV, 70 percent had received Ryan White Part A service from CPH, which is a health insurance program that assists low-income and HIV-positive individuals. Most of CPH clients in the Ryan White program were actively engaged and

virally suppressed (i.e., taking HIV medication as prescribed by a healthcare provider). Client compliance with HIV medication, however, does not equate to safer sex practices. Most of those also were being screened for syphilis, but only annually: syphilis-specific information needed to be communicated to the Ryan White network, infectious disease providers, and medical case managers.

The team assessed CPH practices when dealing with clients and local medical staff; engaged staff using the Five Whys to better understand how they worked with clients; and with frontline staff mapped the client process for syphilis notification, testing, and treatment and the Ryan White process: HIV was a parallel treatment process, but not necessarily with the same access to information or the same staff.

The team's goal was to stabilize the syphilis rates from 2015 to 2016. The root cause of syphilis infection is unprotected sex with someone who has untreated syphilis. Using a condom or other barrier method is effective in preventing the spread of syphilis, but it is a challenging objective to fully achieve. The CPH team brainstormed other solutions that could help lower infection rates: i.e., screen people more often and get them treated faster, then they spread the disease to fewer individuals. The team evaluated and selected such countermeasures using a benefit/effort analysis, and began implementation in late 2016.

- *Education and competency building of Ryan White medical case managers:* The team wanted to develop more syphilis and sexual health information, especially for Ryan White medical case managers. One way they did this was by adding syphilis-specific questions to an in-depth biannual psychosocial assessment, which is now part of a statewide assessment document.

- *Communication strategy with medical staff:* The team encouraged five community physicians that were diagnosing the majority of syphilis cases to increase the frequency of syphilis screening; the physicians had been following CDC guidelines, but the language was open to interpretation.

- *Notification process:* This countermeasure was not feasible short-term due to technology issues and would have required overhauling several data systems.

After only a few months of implementation in early February 2017, preliminary data indicated an increase in cases, but it was substantially smaller than prior-year increases and encouraging. The project also has involved frontline staff in decision-making and improved relationships with those who interact with clients. The CPH team has presented their findings in the community and statewide, and also began to apply the lean tools learned at AEH to other projects in the agency.

Read the full study of the Lean Approach to Syphilis Reduction project, which illustrates the applicability of lean concepts to all corners of the healthcare industry. Fundamental to lean is a thorough understanding of the problem, which the CPH team achieved with data analysis and by interviewing and engaging staff who work with clients. The project also shows the importance of scoping projects to an area that has the potential to yield impactful results while still being feasible, efficient, and expandable.

About the Academy for Excellence in Healthcare: AEH blends in-person class time with hands-on project work, interactive simulations, and recurrent coaching, all aimed at helping healthcare teams spark actionable change at their organization. To learn more about AEH, contact Margaret Pennington, Faculty Director, or Beth Miller, Program Director.