

## *Detention Health Improvement Collaboration Executive Summary*

**Overview:** An innovative partnership between Contra Costa Health Services and law enforcement agencies in Contra Costa County is improving health care by establishing a methodology for continued improvement and collaboration and leveraging the use of available electronic data to help predict health care needs.

**Challenge:** The planning for a new Contra Costa County detention facility to provide more appropriate care for those with mental health needs prompted Contra Costa Health Services (CCHS), which is contracted to provide health care services at five county detention facilities, to ask how health care delivery could be improved for incarcerated individuals system wide. CCHS is committed to providing consistent, quality care to all patients regardless of the setting, especially for the most vulnerable. Improving detention health presented a unique challenge to provide multiple levels of care in the same physical location to a population who is transient. With 24,000 bookings per year, a daily census of 1500 patient-inmates, and an average length of stay of 21 days, it can be difficult to appropriately assess health needs and provide care that ensures both quality health care as well as safety and security for staff and patient-inmates. A detention health improvement team was assembled, with representatives from CCHS (including Contra Costa Regional Medical Center (CCRMC), Behavioral Health Services, Public Health, and Information Technology) the Office of the Sheriff, the County Administrator's Office, representatives from the Contra Costa Board of Supervisors, Family and Patient Partners and the Mental Health Commission. Team members came to the table with dramatically different perspectives: law enforcement views their work through a security and safety lens while CCHS sees it from a service and care perspective. The challenge was to build trust and understanding before embarking on improving health care delivery for the county's 1,500 inmates. In addition, the team identified an opportunity to leverage CCRMC's use of electronic medical record system, used across the county including in the jails, and combine that information with the data from the jail management system to help predict care needed and support the improvements.

**Innovative Solution:** CCHS introduced LEAN, a proven improvement methodology, which puts the patient at the center of the improvement work and maximizes customer value while minimizing waste. The process started with visits to a number of detention facilities across the country to view different detention health models and identify best

practices. Back home in Contra Costa County, the team developed a Value Stream Map to look at the entire patient experience to pinpoint areas for improvement and included tours of detention facilities and Contra Costa Regional Medical Center (CCRMC), observation and data collection, and interviews with patients, families and providers. The team presented their findings of the current state of detention health care delivery with ideas for improvement to county stakeholders. The team followed this by conducting a series of week-long improvement events to test improvements for specific elements of the health care experience for those incarcerated, including intake, acute mental health, specialty care and release. Future rapid improvement events are planned for access, medication and levels of care for both mental and physical health.

CCHS also introduced the Contra Costa Detention Assessment Tool (ccDAT), a novel approach to identifying patients with increased risk of acute mental health crisis. Combining data from the electronic health record and the jail management system, the team created a database containing real-time information on relevant risk factors. This data was used to train a machine learning algorithm which can provide updated risk estimates for all patients currently housed in the facility. A tiering system allows mental health staff to identify which patients are at highest risk and provide services accordingly. New patients arriving at the facility are matched with their relevant histories within 5 minutes so that staff are alerted to key risk factors at intake.

**Originality:** The detention health improvement work resulting from the unique partnership between health care delivery and law enforcement is one of the few examples of this approach in the United States and one of the only in California.

**Results:** This improvement collaboration is improving quality health care for inmates and encouraging improvements system wide. The improvement work lead to the following results:

- Increases in treatment of chronic hepatitis C with an eight week treatment course. The team was able to do this by increasing supply of post-release medications from a fifteen day supply to a thirty day supply;
- Streamlined the process and reduces time required for obtaining emergency medications for behavioral agitation and increased options within the emergency medical kit.

- Improved the Wifi network allowing laptop use and access to the Electronic Health Record (EHR) on residential modules
- Added two video interpreter mobile units to the Martinez Detention Facility
- Made projected release date visible to providers within the EHR
- Added dedicated appointments for optometry (most impacted specialty clinic) to decrease wait times
- Standardized procedure for nursing to continue outpatient meds at intake until physician review based on standardized procedure
- This project has resulted in improved delivery of health care services both within detention health as well as throughout the CCHS system. Discoveries made at the jail often are relevant to the hospital and clinics, and improvements are implemented system wide.

Contact: Anna M. Roth, RN, MS, MPH, Director, Contra Costa Health Services, 50 Douglas Drive, Martinez, CA 94553, [anna.roth@hsd.cccounty.us](mailto:anna.roth@hsd.cccounty.us), (925) 370-5101