



Healthcare Quality and Safety Delaware Department of Correction

ChristianaCare Quality and Safety Review Team Report

November 2019



ChristianaCare™

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Engagement Background

Overview

At the request of the Commissioner of the Delaware Department of Correction, Claire DeMatteis, ChristianaCare conducted an independent expedited review (the "Review") of the Department of Correction's medical and behavioral health care systems. Specifically, the Commissioner sought ChristianaCare's clinical expertise to provide the Department of Correction ("DOC") with prospective recommendations as to best practice or potential future opportunities to enhance DOC's existing correctional health care systems, including how the DOC could strengthen clinical quality, patient safety and data management practices, as detailed in the Memorandum of Understanding ("MOU") that the DOC and ChristianaCare entered into on September 3, 2019.

The DOC, through its Bureau of Correctional Health Care Services (the "Bureau"), is responsible for contracting medical and behavioral health services in all Level V (e.g. jail/prison) and Level IV (e.g. work release and violation of probation centers) facilities,¹ as well as the behavioral health services provided to individuals on probation after their release from incarceration.

ChristianaCare, ranked in the top one percent of health systems in the country,² is recognized nationally for our clinical excellence and our quality and safety expertise, and we maintain a strong commitment to serving our community, with a focus on improving health and advancing population health and health equity in Delaware and the surrounding communities. ChristianaCare does not have expertise specific to health care in prisons and we have therefore agreed to provide recommendations based on the health care industry standards for quality and patient safety. As a service to the community we serve and consistent with our commitment to community health improvement, ChristianaCare has agreed to provide this independent review at no cost to the DOC or the State of Delaware.

The Review was conducted over a six-week time span, from the beginning of September to mid-October 2019. The goals of the Review were to provide prospective recommendations, best practices, or other potential future opportunities to enhance DOC's existing health care systems that support its mission "to protect the public by supervising adult offenders through safe and humane service, programs and facilities."

Team Development

The Christiana Care Quality and Safety Review Team (the "Team") was comprised of fifteen ChristianaCare staff, who were charged with thoroughly understanding the scope of the Review, developing the tools needed to perform the Review, and completing the Review on the expedited timeline as contemplated by the MOU. The ChristianaCare Team included a wide range of expertise and experience among those who participated in the Review, including nurses, physicians, administrators, and support staff. The individuals' expertise included, but was not limited to, Care Standardization, Change Management, Emergency Medicine, Family Medicine, Internal Medicine, Juvenile Offender Health, Patient Experience and Grievances, Pediatrics, Pharmacy, Process

Improvement, Psychology, Psychiatry, Quality & Safety, Risk Management, Social Work, and Women's Health. Also, prior to the review process, team members participated in training³ to enhance member's ability to promote psychological safety during all phases of the quality and safety review process.⁴

Methodology

Timeline and Structure

The timeline and general structure of the Review was outlined in the MOU. Additional details of the Review Team's methodology and process are summarized below.

Pre-Site Visit Preparation (Weeks 1-2): A general structure was organized at the outset to include team development and pre-site visit document review, site visits and leadership interviews, and finally team member feedback and report writing. The ChristianaCare Team elected to utilize a "High Reliability Organization" ("HRO") framework, defined below, in conducting the Review. The DOC provided the Team with a broad range of DOC documents for review, as specified in the MOU. Additionally, separate structured interviews were conducted with representatives of senior leadership from both the Bureau and from Connections Correctional Healthcare.

Site Visits (Weeks 3-5): The Team conducted standardized site visits at four Level V facilities and three Level IV facilities from September 17, 2019 to October 3, 2019.

Level	Shortened Name	Full Site Name
V	Young	Howard R. Young Correctional Institution
V	Baylor	Baylor Women's Correctional Institution
V	Vaughn	James T. Vaughn Correctional Center
V	SCI	Sussex Correctional Institution
IV	Plummer	Plummer Community Corrections Center
IV	Morris	Morris Correctional Institute
IV	SCCC	Sussex Community Corrections Center

Each site visit began with an opening conference that included members of the Team, Department of Correction's and Connections Correctional Healthcare's site-specific leadership, and leadership from both the Bureau and Connections Correctional Healthcare. This meeting was led by the Team site visit leader and included introductions of everyone present and an overview of the quality and safety review project, with a deliberate emphasis that the ChristianaCare Team was there to listen, learn and provide identified best practices, as well as to provide recommendations on how to improve.

The purpose and activities of the site visit were then reviewed. Specifically, that the Team was here to view the facility's health care delivery processes, how the facility learns and adapts these internal processes as needed, and how leadership, staff, and inmates are engaged and participate in learning. It was emphasized that the Team was not reviewing compliance with industry/regulatory standards, disease specific treatment protocols/guidelines used within the facility, or patient specific treatment. To promote psychological safety and encourage forthright discussion, the Team set the expectation that specifically identifiable information would remain confidential.⁴

Site visit team members conducted three concomitant activities: 1) structured interview of individual stakeholder groups including the warden, health (medical/behavioral) care leadership, health (medical/behavioral) care team members, correctional officers, and inmates; 2) review of site-specific documents, reports, logs and medical records; and 3) going to the sites of care delivery and relevant meetings (e.g. Continuous Quality Improvement or Multidisciplinary Team) to observe and informally talk with staff.

At the end of each site visit, there was a closing session which was held with the same group that attended the opening conference. During this brief meeting the site visit team lead provided a high-level overview of what we learned and provided an opportunity for questions and answers.

HRO Framework Background

High reliability organizing (HRO) is an organization's ability to develop purposeful nonjudgmental attention to the present enabling the detection of latent risks, which if unidentified and/or uncorrected, could result in a catastrophic event.^{5,6} While the early conceptualization of HRO concepts emerged from studying disasters in industries such as nuclear energy and aviation, achieving high reliability is now being promoted and utilized in the health care industry, including at ChristianaCare, to achieve excellence in both the quality and safety of care delivery.⁷⁻⁹ This methodology and framework enable the identification of quality and safety risks in an organization as well as opportunities to create a structure and processes to improve health care quality and safety in the DOC.

Studies of industries pursuing high reliability ("High Reliability Organizations", or "HROS") found the following characteristics in common:¹⁰

- Hypercomplexity - environments depending on the coordination of multiteam systems for safety;
- Tight coupling - teams in which the members depend on tasks performed across their team;
- Extreme hierarchical differentiation - intensive coordination efforts are needed to keep members of the teams working cohesively, and roles are clearly differentiated and defined;
- Multiple decisionmakers in a complex communication network;
- High degree of accountability;
- Need for frequent, immediate feedback to make continuous adjustments which is essential to anticipate and avert problems before they become crises; and

- An operational environment with compressed time constraints.

The hallmark of an HRO is the development of standardized operational processes that undergo continuous improvement to minimize unnecessary variation and to facilitate the workforce "doing the right thing."⁵⁻⁹ This requires interdependent activities that continuously enhance the organization's ability to anticipate and prevent hazards by utilizing standard operating plans, guidelines, checklists, etc. In an HRO, these activities are coupled with the ability to be resilient through developing the capability to catch, mitigate, correct, and learn from surprises as they unfold. This organizational mindfulness is supported by the following behaviors⁶:

- Preoccupation with failure - regarding small, inconsequential errors as a symptom that something is wrong, or "finding the half event";
- Sensitivity to operations - paying attention to what's happening on the front-line;
- Reluctance to simplify interpretations - encouraging diversity in experience, perspective, and opinion;
- Commitment to resilience - developing capabilities to detect, contain, and bounce-back from events that do occur; and
- Deference to expertise - pushing decision making down and around to the person with the most related knowledge and expertise.

Operationalizing an HRO mindset that enables excellence in quality and safety requires commitment at all levels of an organization.⁹ More specifically: executive leadership must create the foundational vision and strategy that quality and safety are fundamental as both the overarching strategies and keystones in achieving safety, efficiency and effectiveness. This includes promoting transparency as a key element for culture change; aligning the business or financial environment to ensure that the pursuit of reliability encompasses fiscal stewardship; linkage of staff behavior with desired outcomes; and championing a "Just Culture"¹¹. A Just Culture is one where people can report mistakes, errors, or waste without reprisal or personal risk. This does not mean that individuals are not held accountable for their actions, but it does mean that people are not held responsible for flawed systems in which dedicated and trained people can still make mistakes. All staff must feel empowered to identify errors, defects, and system failures that could lead to an unsafe environment for patients.

In summary, when a healthcare setting commits to high reliability and to eliminating harm it changes the narrative driving their quality and safety work: the narrative changes from the story that some harms are inevitable to one in which harm to patients can be largely prevented.

HRO Evaluation Tool and Findings

Evaluation Tool

The Johns Hopkins Armstrong Institute for Patient Safety, nationally recognized as a thought leader in patient safety and high reliability, has identified five assessment domains felt to be critical in achieving high reliability.¹² The Team created an evaluation tool organized across these Review Domains. They are as follows:

Review Domain # 1:	Characteristics:
<i>Governance, leadership and accountability</i>	A safety focused governance model with authority and shared accountability with "board-to-bedside" visibility. Safety, quality, and high reliability are key strategic goals that are accompanied by both relevant process and outcome metrics in each of the Quadruple Aim domains: health outcomes, cost of care, patient experience, and provider experience.
Review Domain # 2:	Characteristics:
<i>System thinking, risk identification and mitigation</i>	A system connected to identify and manage risk using integrated data, with a focus to remove unwarranted variation. Staff understand the upstream and downstream implications of their work and senior executives champion locally based safety teams.
Review Domain # 3:	Characteristics:
<i>Capacity and infrastructure</i>	Focus on attracting and retaining key quality staff, investing in a safety and process improvement curriculum, and creating and supporting organizational matrixed management structures to promote risk-informed decision making at all service delivery sites. Physical assets, including information/digital technology, support the efficient delivery of safe, quality patient care.
Review Domain # 4:	Characteristics:
<i>Transparency, teamwork and communication</i>	High reliability daily habits are standardized, multiple forums exist for open communication where staff are empowered to speak up and address hazards adversely impacting operational performance. Families and caregivers are engaged in multidisciplinary collaboration and care coordination.

Review Domain # 5:**Characteristics:***Insights and innovation*

Reliance on internal and external quality data with rigorous analysis and triangulation to develop insights to identify risks, and to develop and measure both short and long-term improvement. Innovation is mindful, near-misses are proactively managed, and there is active identification and support for local migration efforts. Lessons learned are systematically shared across the organization.

ChristianaCare Quality and Safety Review Team Findings:

The following findings and observations are reflective of information the Team obtained during the pre-site visit preparation and all activities conducted during the DOC site visits, focusing on the five attributes of High Reliability Organizations reflected in the HRO Evaluation Tool, as set forth above. For each of the five areas, the following is a brief description of each HRO characteristic followed by the Team's findings, observations, and recommendations.

REVIEW DOMAIN # 1: Governance, leadership and accountability:**Review Domain # 1:****Characteristics:***Governance, leadership and accountability*

A safety focused governance model with authority and shared accountability with "board-to-bedside" visibility. Safety, quality, and high reliability are key strategic goals that are accompanied by both relevant process and outcome metrics in each of the Quadruple Aim domains: health outcomes, cost of care, patient experience, and provider experience.

Key Observations:

Although there are organizational structures for the Bureau and for Connections Correctional Healthcare (both for medical and behavioral health), functional governance and shared accountability extending from DOC leaders and governance to the local sites of care, "board-to-bedside"¹², is minimally apparent across the delivery system. The leadership relationships among the responsible organizations appear to be focused more on oversight, rather than the strategic partnerships required to promote joint accountability, transparency, problem solving, and decentralized responsibility enabling local accountability for outcomes. While across facilities there were the common broad goals of delivering chronic care, evaluating sick call requests in a timely fashion, and safely administering medications, there were no apparent cascading system-wide objectives, no clear outcome goals, no measurement of process performance or outcomes, and no apparent functional process improvement. While operational and care processes were

evident, processes were inefficient, tended to be highly variable and variably reliant. A culture of reporting, learning, and improving deviations in operational and care process was not present.

These conclusions were based upon the information collected from the leadership and site visit interviews, and the non-policy related documents that were available for review. These documents revealed mostly facility-focused counts of health care services provided or audits of various processes. The audit documents noted improvement opportunities that were addressed at the provider level, but there was minimal evidence of a systems approach to comprehensively address the opportunities for improvement found within these audits. There were no documents that articulated goals for healthcare delivery at either a statewide or a facility level. There were no documents that contained data outlining healthcare system performance or included published indicators of prison health care.^{13,14} There were no documents describing any overarching priorities of delivery system issues identified for improvement. These findings are consistent with a 2017 report from the PEW Charitable Trust, detailing that Delaware was one of 26% of states that did not report having a quality monitoring system and was among 17% of states that reported that vendor contracts did not include quality metrics.¹⁴

Additionally, while both the Bureau and Connections Correctional Healthcare's organizational structures indicate the integration of medical and behavioral health, meaningful collaboration between these two organizations was not evident, either with respect to medical and behavioral health integration or otherwise. To enable the transformation of current efforts to a best practice requires an organizational structure and leadership to role model collaboration, develop mutual accountability, and support improvement resources that focus upon goals and continuous measurement.

While there were widespread opportunities for improvement identified, there were also instances where it was evident that facilities possessed the ability to deal with and learn from health crises while remaining resilient. At Plummer Community Center, narcotic overdoses by inmates are an ongoing challenge and have led to correctional officers being trained to administer naloxone. While at Sussex Community Corrections Center, there were six simultaneous overdoses where all were successfully rescued by a robust interprofessional team-based effort. We were able to identify additional efforts to train correctional officers in the administration of naloxone at other facilities visited.

Priority Improvement Recommendations

- Create a governing body structure that includes key strategic partners necessary to promote collaboration and joint accountability for performance excellence. This governing body should be inclusive of the numerous stakeholders involved in prison healthcare delivery (e.g. DOC; the Bureau: medical, behavioral and pharmacy services; and inmate advocacy).
- Create a goal-oriented problem-solving culture by having the governing body develop short and long-term objectives and plans to improve prison healthcare delivery, with such plans addressing each of the four quadruple aim domains: quality, cost, patient experience, and staff experience.

- Create a triad leadership structure at each facility, comprised of Department of Correction, Medical leadership, and Behavioral Health leadership, that has mutual accountability to reach the cascading organizational outcome-based goals.

Other Key Improvement Recommendations

- Promote transparency, a Just Culture, and the expectation that leadership learns directly from the front-line of care delivery.
- Develop the ability to capture, track and analyze both process and outcome measures.^{13,14}
- Invest in staff development and training in quality, safety and process improvement.

REVIEW DOMAIN # 2: System thinking, risk identification, and mitigation:

Review Domain # 2:	Characteristics:
<i>System thinking, risk identification and mitigation</i>	A system connected to identify and manage risk using integrated data, with a focus to remove unwarranted variation. Staff understand the upstream and downstream implications of their work and senior executives champion locally based safety teams.

Key Observations:

The prison healthcare delivery system is highly siloed between DOC, the Bureau, Connections Correctional Healthcare Medical, Connections Correctional Healthcare Behavioral, and Correct Rx. These silos, in conjunction with the lack of shared goal setting or mutual accountability, result in ineffective partnerships creating substantive barriers to the development of the systems thinking approach necessary to effectively identify and mitigate quality and safety risks across the organization.

As mentioned in the governance, leadership and accountability section of the report there was an absence of process or outcome data at either the facility level or aggregated centrally. As such, variation in processes are known only through anecdote. For instance, it is well known that seeing patients for sick call visits is a priority and poses a challenge for offenders in work release programs. However, process or outcome data (e.g. average time from request to visit time) is not known for this or other populations of offenders; a necessary first step in learning. Another example where there is no apparent local or systemwide data-driven learning pertains to naloxone administration. Facilities do not have comprehensive (e.g. both correctional officer and provider administered) data detailing the doses of naloxone administered, the administration trends over time, or an assessment of other potential drug overdose-related interventions (e.g. medication assisted therapy). In both examples, knowing process or outcome related data, along with some other basic analytics, are fundamental requirements to understand the extent of any potential opportunity and to begin to create effective solutions.

In the delivery of chronic care there are numerous populations of patients for whom the effectiveness of treatment will have impacts on the quality, safety and cost of healthcare delivery. Examples include percent of offenders with well-controlled illnesses such as diabetes, HIV, or hypertension. If actionable process and data were appropriately captured and shared, harnessing the data to drive the effectiveness of treatment would likely result in decreases of transfers to acute care or consultants, decreases in the preventable disease-associated complication rates, and decreases in associated costs.

Additionally, while there are processes to analyze events with bad outcomes (e.g. unexpected "man down" or "code" within a facility), there were no apparent mechanisms to learn from situations where processes simply did not function as intended. Moreover, staff are not encouraged to contribute to a system thinking approach to solving problems; it is commonly felt that such learnings and problem solving "is for leadership." For example, debriefs and after-action reviews that are conducted after an offender is "found down" typically only involve senior level staff and not the frontline staff involved in the event.

Instances where there was the demonstration of applied system thinking included a strong example: SCCC's Medication Assisted Treatment ("MAT") program. The Director of Nursing and team designed a step-by-step process for offenders receiving opioid addiction therapy who were transitioning to another site or back out into the community. The team developed a standardized approach to communication with the nearest clinic where the offender could pick up their buprenorphine or methadone and then review the medication plan moving forward with the staff. Another example of applied system thinking was evident at Plummer where, when the medical staff voiced a concern, the Correctional Officers would draw a pair of eyes next to an offender's name on the visual board signaling "keep an eye out". Additionally, at SCCC, the teams have developed standard documentation templates for Intakes, Transfers and Chronic Care. Also, at Morris, there was the identification of a medication safety risk for inmates transitioning to the community. Recognizing that Plummer also has inmates who leave on weekends, the staff at Morris reached out to Plummer to learn and adapt their processes locally. Lastly, under the leadership of a new Chief Medical Officer, there are some early indications of a system thinking approach to the delivery of healthcare.

Priority Improvement Recommendations

- Create and support a system-wide leadership position in quality and safety who would be responsible for building a functional continuous quality improvement program from the ground up.¹⁵

Other Key Improvement Recommendations

- Train interprofessional leadership (DOC, medical and behavioral health, pharmacy) at each facility in process improvement methodologies to engage the facility in system thinking.
- Engage all staff in system thinking, including process vulnerabilities and risks of harm to patient, or staff.

- Develop organization-wide definitions to report process vulnerabilities, risks of harm to patient or staff, and harm events, along with the capacity to measure and report this reporting activity.
- Develop facility-based huddles to consistently and rapidly identify and mitigate upstream and downstream risk. Huddles are an operational tool to briefly bring relevant team members together for the collective sharing of priorities, challenges, and important updates.^{8,16}

REVIEW DOMAIN # 3: Capacity and infrastructure:

Review Domain # 3:	Characteristics:
<i>Capacity and infrastructure</i>	Focus on attracting and retaining key quality staff, investing in a safety and process improvement curriculum, and creating and supporting organizational matrixed management structures to promote risk-informed decision making at all service delivery sites. Physical assets, including information/digital technology, support the efficient delivery of safe, quality patient care.

Key Observations:

The Team found the frontline staff overall to be passionate and caring professionals who work tirelessly to deliver the highest quality medical and behavioral healthcare services possible within the system's significant resource, capacity and infrastructure limitations. The frontline staff work to prevent common causes of preventable harm that are within their span of control. For instance, the frontline medical and behavioral health staff frequently partner with their correctional officers to problem- solve the daily challenges of healthcare delivery (e.g. medication administration, offenders fit for work release, and sick call); however, these frontline partnerships are not consistent within the same facility either across shifts or day-to-day, contributing to unnecessary variation in care delivery.

Healthcare delivery appears to consistently operate with a backlog of chronic care visits. There are numerous examples where there are efforts to decrease the backlog using supplemental visit days or times, however, there was no evidence that the fundamental drivers for the backlogs are reported on, measured, or analyzed; thereby creating barriers to identify and implement potentially sustainable improvement efforts. Overall, it is not clear whether or how the organization systematically changes any processes based upon learnings from operational challenges.

It is also evident that there is a high degree of staff turnover with numerous current vacancies that adversely impact safe care delivery. While Connections Correctional Healthcare has an interprofessional orientation program, support for statewide staff development focused on care standardization is a relatively new effort. It was evident in numerous facilities that staff were second victims, experiencing psychological trauma from adverse events, and that support for them was inadequate or non-existent.

There are countless examples where improvements to the physical plant and adequate equipment is required to deliver efficient and safe healthcare. Regarding equipment procurement, there are different processes according to whether the items cost more or less than \$500. The approval process for changes to the physical plant that are aimed to improve the timeliness and efficiency of care delivery, or equipment items that cost more than \$500, is siloed between the key stakeholders (i.e. the Bureau, Connections Correctional Healthcare, and DOC). A sample of basic equipment supply needs identified by frontline staff include electrocardiogram machines, otoscopes, straps to secure patients to stretchers enabling safe transport downstairs, diabetes test strips, wheelchairs, and paper-based calendars to facilitate scheduling efforts. The processes to procure supplies that cost less than \$500 are not reliable. It was not unusual to hear that when a box of supplies arrives on site, it is like "opening presents on Christmas"; it is always a surprise as you don't know what you will be receiving, and it may not be consistent with the items requested. These flawed processes result in the team's perception of inaction and contribute to facility leadership, and frontline staff, disempowerment.

The informational technology infrastructure (hardware and software) does not support efficient operations, communication between members of the healthcare team, care delivery continuity, chronic disease management, or healthcare quality or safety. It is questionable whether the current technology system used, iCHRT, even can be considered a viable electronic health record system, a critical component of an infrastructure that supports healthcare delivery. There was widespread evidence that the use of iCHRT as part of the care delivery process creates substantial waste, including rework, for staff and providers, with questionable benefit. Whether it is writing clinical notes in Word[®] that staff then "cut and paste" into iCHRT, repetitive issues with speed and reliable connectivity with the facility's network, staff "work-arounds" to keep track of numerous facets of care delivery, iCHRT losing data that is unable to be recovered, or after-hour documentation due to system limitations, iCHRT creates tremendous waste of workforce productivity that impacts all staff. These findings substantiate the information revealed in the May 2018 "Focused Assessment of Health Services" conducted by NCCHC Resources, Inc. Staff ponder whether their leaders comprehend "What my job entails" and the day-to-day challenges they face and time they expend in using an outdated and inefficient information technology infrastructure.

While a robust approach to onboarding new staff was described, the Team did not actually review the curriculum; however, there is no education or training on process improvement, quality or safety, or nonpunitive response to errors.

One area that highlights what is possible is the consult center at Vaughn, where quality dedicated staff work in a highly matrixed environment that coordinate healthcare among multiple stakeholders (e.g. Correctional Officers, internal and external health care providers) in an environment demanding daily risk-informed decision making. This area could be an exemplar best practice as part of a focused, yet robust, process improvement initiative championed by the Commissioner and supported by leadership commitment across the organizational structure. Other positive examples include a practice at Baylor, in which the healthcare team recognized their facility leadership's support, particularly when they had had a tough day. In addition to listening to team members, facility leadership worked at the bedside to actively support the team.

Lastly, at SCI and SCC, the onsite leaders developed a recognition system where staff can give each other stars; this recognition is celebrated at their quarterly education sessions.

Priority Improvement Recommendations

- Convene an interprofessional body or team including frontline staff (administrative, nursing, pharmacy and providers, DOC, state technology experts, external providers representing the consultant community and healthcare systems) to conduct a comprehensive quality and safety evaluation of the information technology infrastructure, including necessary capabilities of an electronic health record system, with the authority to determine the future status of iCHRT (consistent with NCCHC, Resource Inc. report), recommendations for electronic health records management, and any opportunities to utilize the DHIN. This body or team should conduct this evaluation with the potential for ongoing oversight of the DOC healthcare information technology infrastructure.
- Launch a systemwide and site-specific process improvement initiative, including regular education or training on process improvement, quality and safety, and nonpunitive response to errors, as well as standardized processes to ensure adequate supplies, reduce waste and optimize spending.

Other Key Improvement Recommendations

- Recruit, reward, and retain staff that embrace a safety, quality, and performance culture.
- Develop clinical and non-clinical staff training programs designed to improve patient outcomes, based on innovative thinking, and in line with current best practice.
- Prioritize process improvement efforts that focus on reducing overuse of staff resources.
- Develop reliable processes to evaluate and secure a work environment and equipment that promotes efficient, effective, and safe care delivery.

REVIEW DOMAIN # 4: Transparency, teamwork and communication:

Review Domain # 4:

Characteristics:

Transparency, teamwork and communication

High reliability daily habits are standardized, multiple forums exist for open communication where staff are empowered to speak up and address hazards adversely impacting operational performance. Families and caregivers are engaged in multidisciplinary collaboration and care coordination.

Key Observations:

As noted previously, frontline staff describe that during normal operations (i.e. not emergencies) efficient and effective communication across the existing silos, specifically Connections Correctional Healthcare Medical, Connections Correctional Healthcare Behavioral, and DOC, is inconsistent at best, and that this barrier is more prominent in larger facilities. These

communication failures contribute to potential delays in sick call or chronic care visits, coordination of lab or diagnostic testing, and referrals to specialty services. There was minimal evidence that any forum exists to discuss these or other operational care issues. Additionally, there was minimal evidence demonstrating staff was encouraged to contribute to quality and safety discussions, or to speak up or otherwise participate in risk identification, mitigation and resiliency in the delivery of healthcare services. Psychological safety, the belief that one will not be punished or humiliated for speaking up with ideas, questions, concerns or mistakes,⁴ is not readily evident across the health care system. While mutual respect and appreciation were generally evident at the frontline, it was not universal. The perception of appreciation and mutual respect varied as one ascended through the vertical hierarchical levels.

Though a patient grievance process exists, there was inconsistent application of lessons learned from this process to improve care delivery, nor are patients and their families engaged in care improvement efforts. The combined absence of all three factors - an effective communication structure, a forum to share operational concerns, and an environment supporting and encouraging staff, patients and families to participate in identifying risks and improving care - was both notable and significant especially given the impact on care delivery.

An exemplar model demonstrating the key features of transparency, teamwork and communication is at Young, where an interprofessional team created a model behavioral health unit that exemplifies collaboration, including the inmates. Instrumental in the success of this unit is its governance model, which includes the team's ability to provide feedback for improvement to the Warden with knowledge that reasonable suggestions will be granted. Another positive model is in place at Baylor, where the healthcare team and facility leadership collaborated to create a program that enables pregnant women to meet and learn from each other, which promotes healthy pregnancies within the prison system.

Priority Improvement Recommendations

Create facility-based forums to engage the interprofessional staff where they are empowered and have the psychological safety to speak up and address hazards adversely impacting operational performance.

Other Key Improvement Recommendations

- Develop the ability to learn from operation irregularities (i.e. events) in a non-punitive manner that is supported by a Just Culture and promotes respect among all staff and patients.
- Develop, promote, and reward staff and inmates for utilizing an event reporting system for potential risks that may result in inmate or staff harm.
- Enhance the ability to integrate the learning from events into standard operating procedures.

REVIEW DOMAIN # 5: Insights and innovation:

Review Domain # 5:

Characteristics:

Insights and innovation

Reliance on internal and external quality data with rigorous analysis and triangulation to develop insights to identify risks, and to develop and measure both short and long-term improvement. Innovation is mindful, near-misses are proactively managed and there is active identification and support for local migration efforts. Lessons learned are systematically shared across the organization.

Key Observations:

The current use of data by the Bureau and Connections Correctional Healthcare is quite limited and is primarily focused on counting healthcare services delivered, rather than using the data to identify risks, proactively manage and improve quality and safety of care, or identify opportunities for system or process improvements to improve outcomes or lower costs. The utilization of process or outcome metrics was minimally apparent at the facility level or within the documents provided by the DOC, though there is some evidence of information being shared across facilities. Key data is siloed, creating a barrier to understanding either improvement opportunities or monitoring the effectiveness of interventions. For example, Naloxone administration is tracked separately for doses administered by healthcare personnel versus doses administered by correctional officers. Facility-level aggregated data on this intervention is not tracked or discussed at the individual facilities, so there is not appreciation or understanding of the breadth of Naloxone administration at any given facility. While this information is known at the state level, it is unclear whether or how the aggregated information is used to improve care outcomes. Additionally, there is no apparent adoption of published healthcare quality metrics across the system^{13,14} and there is no availability of external benchmarking data. While the organizational leadership for both the Bureau and Connections Correctional Healthcare have regional and national networks to both share their work and to learn best practices from other prison-based healthcare systems, it is unclear what opportunities exist for facility leadership learning and professional development.

Connections Correctional Healthcare does have facility-based resources dedicated to continuous improvement and have conducted several clinically oriented chart audits. To capitalize on this early phase improvement effort would require creating the capability to conduct ongoing monitoring and measurement, along with the accountability to act on the information learned. At SCI, a safety risk was identified in the sharp/instrument count processes. An improvement effort resulted in photos of sharps/instruments being taped to the bottom of the tray, thereby improving the accuracy of the counts, and improving the tracking of equipment and staff safety.

Priority Improvement Recommendations

- Train operational leaders and managers how they can use data and information to learn and create insights that drive improved quality and safety, support planning, and advance innovative practices.

Other Key Improvement Recommendations

- Create dashboards that transparently monitor and highlight facility performance towards organizational-wide goals and that allow facility-to-facility comparisons.
- Support facility leadership to attend regional or national conferences to develop a network for learning about external and national best practices.

Summary

The Department of Correction operates a healthcare system for a population of individuals with substantial needs for the evaluation and treatment of medical, mental health, and substance use conditions. It became evident by the end of the quality and safety review that the delivery of quality-focused safe healthcare services to the inmate population is complex and would benefit from developing a system of care where strategic partners co-develop mutual goals and accountability around the domains of quality and safety, staff and patient experience, and cost.

In general, the Review found a passionate caring healthcare and corrections workforce who work daily to meet the needs of their patients especially considering the challenges and resource constraints of the work environment. While some challenges are inherent to prisons, the Team found that other quality and safety challenges result from a health care system that has not fully operationalized foundational components of patient and staff quality and safety and process improvement programs. While the appropriation of funds to address the identified deficiencies in physical plant, equipment or IT infrastructure is critically needed, that is only part of the solution and done alone will serve only as a band-aid to more deep-seated barriers to optimal healthcare delivery in this environment. To advance the quality and safety of prison health within Delaware's correctional facilities requires a long-term commitment and resources to develop a governance and operational structure to support strategic partnerships that foster mutual goal setting and accountability and create and nurture a high reliability learning organization. To be successful, this commitment and structure must endure changes in leadership, such as those experienced in Delaware prison health care since 1996 (Appendix A), and must be accompanied by a commitment to delivering high quality, safe and cost-effective healthcare to inmates whose care and health is entrusted to the Department of Correction and the State of Delaware during the term of their incarceration.

Appendix and References

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Appendix A

Changes in Delaware Prison Health Care

- Since 1996, there have been five Commissioners of Correction, with Claire DeMatteis being the third in the past six years.
- The Bureau of Correctional Health Care Services was created in 2009, and as of November 2019 the "Bureau" will have its third Chief.
- Since 2010, there have been three separate contracts for health care services, mental health and substance use treatment services, and pharmacy services. Currently, two separate vendors hold these contracts.
- In 2006, as part of a Memorandum of Agreement ("MOA") with the United State Department of Justice, the DDOC agreed to an 87-point improvement plan that was monitored by former Superior Court Judge Joshua Martin.
https://www.justice.gov/sites/default/files/crt/legacy/2010/12/15/delaware_prisons_moa_12-29-06.pdf
- In 2012, the Delaware Department of Correction was released from the Amended MOA.
<https://doc.delaware.gov/assets/documents/newsroom/2012/12press1231-2.pdf>