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Reinventing the Medical Request Process in a Correctional Healthcare Setting

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Clinical Leadership Theme

The theme of this project relates to Clinical Nurse Leader Essential 1: Background for Practice from Sciences and Humanities. This essential clarifies the CNL role as it relates to working knowledge of the healthcare system, diverse populations, and their related issues. Specifically this project focuses on sections 3 and 4: incorporation of social justice to address healthcare disparities and bridge cultural and linguistic barriers to improve quality outcomes. Integration of knowledge about social, political, economical, environmental, and historical issues into the analysis of and potential solutions to professional and healthcare issues, and application of improvement science and systems theory (American Association of Colleges of Nursing, 2013).

Project Global Aim Statement

This project aims to improve the detainee medical request and sick call process in the medical department of a private correctional facility. The process begins when a detainee submits a medical request for care or service. The process ends when the request has been addressed by an encounter with a health care professional. By working on the process, we expect to see a decrease in patient requests for service by eliminating delays and redundancy, and an increase in patients served by facilitating quick turnaround, improved process organization by utilizing technology, and timely medical care for detainees requesting service by addressing all complaints within 72 hours.

Statement of the Problem

The facility this project took place in is a maximum security correctional facility in an urban setting which houses over 700 male and female detainees. In order to request medical services prior to the project, detainees would write their name on a paper list in their housing
REINVENTING THE MEDICAL REQUEST PROCESS

unit. The lists were collected each morning, Monday through Saturday. There were a total of 40 lists each day, one from each individual housing unit. The average number of names submitted on each day was 80, or 480 each week, which is over 11% of the facility population.

Many of the names on the request lists were repeated through the days and weeks as detainee requests were not addressed expeditiously and they continued to seek care. There was no formal method for tracking requests; the daily lists were stored in binders and file boxes. The “name only” lists eliminated the possibility of triaging requests, and there was not a nurse assigned to the medical request program. Nurses would see patients at random from the list, only when there were no other ongoing tasks to be accomplished. Utilizing this process, the average number of detainees seen each week was 30. Detainee wait time was 10 or more days to be seen by a nurse for non-urgent needs. When needs became urgent, detainees frequently contacted security staff to intervene.

Medical requests in this facility were not being addressed in a timely fashion. The following questions were posed: Where in the system is the process failing, and how can the process be recovered? What can be implemented to facilitate faster turnaround time in addressing detainee medical requests and create opportunity for increased service?

Rationale

A microsystem assessment revealed that the medical department was out of compliance with National Commission on Correctional Health Care (NCCHC) (2014) accreditation standards which addresses access to care and nonemergency healthcare requests and services (p. 3). Specific factors revealed in a microsystem analysis included lack of a documentation/tracking system for medical requests, lack of personnel to run and manage the medical request program, and significantly, excessive wait times for service. Chart audits and
record reviews from 2013-2015 revealed that many requests were never addressed by a nurse, and in many cases a request was not addressed for greater than a months’ time. It was also made clear that detainees were submitting multiple requests for service, some on a daily basis, likely due to the previously mentioned factors. These duplicate requests created blocks in the system by inflating the number of requests for service.

**Specific Aim Statement**

This project aim was to decrease the amount of time it takes to completely address detainee medical requests from 10+ days to less than 72 hours, provide the ability to provide written responses to detainee requests, and increase the weekly number of resolved medical requests by at least 40%, by November 1, 2015.

The specific aim statement directly relates to the global aim statement as it addresses the component “improve the medical request and sick call process in the medical department”.

**Project Overview and Timeline**

The goal of this project was to provide timely access to medical care to all persons detained in this facility, thereby increasing the accessibility of medical services. The concept for the project, reinvention of the sick call process, was proposed in June of 2015.

The project began with the evaluation of the medical request and sick call programs. In July a meeting was held with medical staff and administrators. A previously completed microsystem analysis was utilized, and several areas relating to the medical request and sick call process were identified. This was followed by analyses of the current sick call project (see appendix “fish bone diagram”).
Nursing tasks were reorganized, and dedicated nursing staff were assigned to provide sick call services six days a week. A designated location in the medical department was assigned to host a sick call clinic, with one nurse assigned to see patients. To support the clinic activities, preexisting care protocols were utilized in the clinic. As all nursing staff were trained on protocol use upon hiring, no further nursing education was needed.

In August, carbon copy medical requests were dispersed in conjunction with detainee education on the change. This information was presented in writing and town hall style meetings with administrative staff. The forms provided were in triplicate, which allowed for tracking, accountability, scheduling, triage, and the ability to provide written responses to requests as indicated. Nurses on the third shift began collecting, triaging, and responding to medical requests, and a data entry clerk began scheduling appointments.

Appointments were scheduled and tracked in a computer system already in use in the medical department. Detainee medical requests were collected daily and triaged within three hours of collection by a nurse. The goal was for all detainee medical requests to be addressed within 72 hours, either face to face in a sick call clinic, scheduled with a practitioner, or as a written request as appropriate.

At the end of August, a sick call clinic was opened, and a second nurse was assigned to the sick call clinic program. This resulted in two designated Registered Nurses assigned to separate clinic spaces, and sick call clinic services provided 6 days a week, to include Saturdays.

Cost Analysis

The greatest cost of this project could be perceived as additional staffing. However, the facility has the maximum amount of nurses allowed by budget. Restructuring of other nursing tasks, better departmental organization, and assignment of nursing roles allowed for restructuring
of staffing in a manner which will provide the department the personnel resources to staff medical and sick call clinics. Thus, the project did not incur any additional nurse wages.

Additional support was needed from medical clerks. The facility employs three clerks who do routine data entry, scheduling, and other administrative tasks. An assessment of current tasks and services provided by these personnel revealed that scheduling and filing related to medical requests and sick call could be bundled in with other tasks, and did not require any additional staffing hours.

Provision of specially printed carbon copy forms is an identifiable expense. Sourcing forms from an independent company (Print Runner) would cost between 0.13 and 0.15 cents each, dependent on volume. Detainees have free access to forms. Not all forms will be properly used. If we use a generous figure of 100 forms per a day (based on higher request levels of use + 20), the cost for a month’s supply of triplicate forms would be between $390 and $450 a month. These costs were reduced by utilizing form printing services already contracted by the company, and the costs absorbed by the facility’s parent company. Details of final form costs are not yet available; cost figures are based on the lowest price from Print Runner.

An important factor in this program was reopening the “clinic room” located on the 2nd floor. In order to have compliance with NCCHC (2014) standard J-D-03 (p. 43), the clinic room needed to be properly stocked. The major components are already available (examination table, otoscope, scale, furniture, trash bins, and phone with language line services). It took one nurse approximately four hours to clean, arrange, and stock the room as part of the reopening process. This cost was approximately $180 dollars in wages. Minor components were restocked with negligible additional cost from the medical departments’ supplies (tape, cotton balls, over the counter medications). Several items needed to be purchased specifically for the clinic. These
were two blood pressure cuffs (adult and large sizes), a thermometer, pulse oximeter, and stethoscope. The cost for these supplies was approximately $400 when purchased from the supply company utilized by the medical department (Moore Medical), and of compatible and comparable quality to those used within the main medical department. The most costly item was the thermometer, at $250. A security camera of comparable quality as those used throughout the building had a cost of approximately $200, with $100 in labor. Preexisting monitors and DVRs were utilized in this project.

For operation of the clinic room, a corrections officer was stationed to manage detainees and oversee the safety of the clinic. The clinic runs approximately 30 hours a week with detainees present, the cost for a corrections officer to staff the post is approximately $4,200 a month. Security personnel is the greatest expense to the project. Because the sick call clinic is a vital component to maintaining the facility contract and accreditation, the cost is necessary and acceptable. One additional weekend day of sick call services are held in the doctor’s office in the medical department with no additional security staff needed, as this is already a secure post.

At this time, there are no other foreseeable costs. The projected startup cost for the clinic room and sick call program was $5470. After the first month, operational costs were approximately $4590 a month. The cost of operating the clinic room for a year will be approximately $55,080.

The potential projected savings created by this project could be very large. Litigation and awarded settlement in correctional medical cases can run from hundreds of thousands to millions of dollars. According to the Bureau of Justice Statistics (2015), deaths in local jails and state prisons are on the rise, and 90 percent of deaths occurring in state prisons are illness related.
Potential savings to the facility also come from likely decreased need for urgent medical services provided outside of the facility, by treating medical concerns before they develop into serious medical conditions. These unscheduled costs include: medical appointments, emergency room visits, transportation in facility vehicles (which requires two officers, one of which must be armed), and the cost of two officers at the bedside for the duration of admission if a patient is admitted to the hospital.

It is difficult to ascertain the monetary amount saved by implementing these changes. If even one lawsuit with a potential award and cost of $100,000 is avoided, the potential savings from that one incident would be $44,650 outside of legal and research costs.

**Methodology**

The goal of this project was to provide timely access to medical care to all persons detained in this facility, thereby increasing the accessibility of medical services. Our specific objective was to reduce the amount of time for addressing medical requests from greater than 10 days to less than 72 hours.

This project employed Lean methodology concepts. Author O’Neil, Jones, Bennet and Lewis (2011) offer a succinct definition of Lean methodology:

Services are evaluated to ensure that their processes deliver value to the end customer with maximum quality and minimum time between the time the service is required and when it is delivered. In healthcare, this means organizing care processes around patients and enabling staff to add value through delivery of effective high-quality patient care. Other key lean concepts include flow and waste. Optimal flow occurs when the value-added steps of service delivery occur in rapid sequence without delay, and waste refers to non-value-added activities occurring as a result of the system.
By utilizing Lean methodology, we were able to reduce waste in the process, focus on both flow and problems, and create value in the system.

Additionally, Lewin’s Change Theory was considered in this project. This theory poses three steps that need to take place for change to occur. These included unfreezing stage, in which the group recognizes there is a need for change. The second phase is movement or change, when a plan is developed. At this point change may be resisted. In the final refreezing stage the tasks or changes are implemented, with the goal of freezing into a new state of behavior or operation, (Schriner, Deckelman, Kubat, Lenkay, Nims, & Sullivan, 2010).

Throughout this project of improvement, we employed a plan-do-study-act (PDSA) model. PDSA involves a cycle of experimentation which can be rapidly deployed. As Nelson, Batalden, & Nelson write, “The idea behind this is simple and powerful. You run experiments (PDSA tests of change) until you reach your measured aim” (2007). We utilized this process while finding ways to schedule patient, collect medical requests, and triage the requests.

To evaluate our effectiveness, we reviewed data from the process prior to changes and compared it to data being collected as the project rolls out and develops. After implementing a change in the system, the change was evaluated for its effectiveness, and changes were made when needed.

**Data Source and Literature Review**

Persons in correctional settings have an increased need for health care, as the population has a disproportionate burden of health needs when compared to the general population. Macmadu & Rich (2015) note that more than half of the incarcerated population has symptoms of a psychiatric disorder, whereas approximately 10% of the general population does. Over 50%
of incarcerated persons meet the criteria for diagnosis of substance abuse disorder, and over 70% of those with mental illness also have a substance abuse disorder. Infectious disease rates, including hepatitis C, HIV, and tuberculosis in the detained population far surpass those of the general public. It is estimated that at least 40% of this population has a chronic medical condition like hypertension or diabetes. Additionally the 550% increase in older inmates between 1990 and 2012 means that correctional facilities are dealing with a great deal of geriatric medical concerns and medical disability.

The literature supports the need for the provision of quality health care services in a corrections setting. Nurses in a correctional setting are tasked with providing diverse care which utilizes “aspects of ambulatory care, emergency care, public health, community, psychiatric, school nursing, and occupational health” (Shelton, 2009). Patients in a correctional setting are disproportionately representative of persons who are low-income, and as such are more likely to be medically underserved, and experience greater health problems than the general population (Dumont, Brockmann, Dickman, Alexander, & Rich, 2012; Macmadu & Rich 2015).

When medical care is not adequate or is understaffed, outbreaks of preventable and treatable diseases occur. An outbreak of syphilis was discovered in a California Department of Corrections and Rehabilitation facility. The disease occurred and spread in a facility where there had not been a recognized case for nearly 10 years. Evidence showed that spread of the disease among the inmates was enhanced by delays between symptom onset and examination delays in the sick call process (Brodsky, et al. 2013). This project is further supported by this account of infectious disease transmission between inmates. It is likely that prompt assessment, referral and treatment of the disease would have limited or even eliminated its spread within the population.
While the setting of this project is neither a jail nor a prison, as a federal pretrial facility it is closest in operation to that of a jail. As such, it is worth nothing that jails and related shorter stay facilities (such as this one) provide an opportunity for screening and treatment for an otherwise medically underserved population. The incarcerated and detained population disproportionately represents minorities, persons of low income, those with mental illness, persons with drug and alcohol addiction, and those residing in poverty. Facilities such as this one have the potential to direct those with a broad range of untreated illness to medical care they might otherwise not receive. (Dumont, Brockmann, Dickman, Alexander, & Rich, 2012).

Another important aspect to consider in the provision of medical care to detained populations is the potential to positively affect communities. Most incarcerated persons will eventually return to communities. If treatment is not initiated and maintained, those diseases and conditions return to the general population with the formerly incarcerated. This is increasingly significant when it is considered that the incarceration population directly reflects impoverished communities, disadvantaged populations, and people of color. In this context, “prisoner health is inseparable from community health” (Dumont, Gjelsvik, Redmond, & Rich, 2013). In The Triple Aims of Correctional Health: Patient Safety, Population Health, and Human Rights, McDonald, Parsons & Ventures (2013) speculate that after further changes and implementation in the Affordable Care Act, we can anticipate that correctional health care will be obligated to provide health services more in line with national and community standards. Making changes in the way we provide health care to detained persons now has the potential to be beneficial to not only facility organization later, but community health now.

Successful treatment of infectious disease in a correctional setting decreases the burden on underserved communities and the population as a whole when these persons return to their
communities, and could have a massive overall impact on public and community health (Rich, Allen, Williams, 2015; Macmadu, Rich, 2015).

**Expected Results and Outcomes**

It was expected that the volume of requests for service would decrease as patient needs were addressed in a timely fashion, and that there would be an overall increase in the number of patients served. It was also expected that there would be containment of infectious diseases, and that emergent states would less frequently progress into urgent or emergency states resulting in hospital care. This was expected to be true, as proper care provided earlier can intercept a process before it becomes critical. Additionally, since the sick call clinic was to be run at a time where providers are available, it was anticipated be much easier to push a patient through to a face-to-face provider visit, conduct a phone call with a provider, or request verbal orders.

A potential result considered was that by addressing medical needs in a timely fashion and providing a known appointment, clinic patients/incarcerated persons would feel their medical needs were being addressed. With the confirmation that they would have an appointment (upon returned carbon copy of request), the population would feel less of a need to repeatedly submit requests for service. It was expected the medical department would receive decreased requests, decreased emergent to urgent situations, and decreased alternative means of requesting care (“man down”, grievances, etc.).

**Summary Report**

The goal was for all detainee medical requests to be addressed within 72 hours, either face to face in a sick call clinic, scheduled with a practioner, or with a written response as appropriate. This project took place in a corrections facility. The facility houses pretrial
detainees age 18 to greater than 70 years of age, both male and female. Detainees are constantly leaving the site for other correctional facilities, long term imprisonment, release to the community, or to immigration facilities. The detainee population is predominantly Hispanic, but also include whites, blacks, Asians, and those categorized as “other”. Approximately 17% of the detainee population in this facility is female, and of those there are generally 8 to 12 who are pregnant. The facility has a special housing unit for detainees with increased medical needs, and another special housing unit for detainees who cannot enter general population due to the nature of their crimes (largely sex crimes). The facility maintains housing units for members of specific gangs, and other locations for persons who are in solitary confinement for their own safety or disciplinary purposes.

The facility medical department has several locations for provider offices in which patients are seen. Mental health and basic dental care services are also located in the department. Services provided include; chronic and urgent care, preventative, routine, and prenatal care. Detainees are referred to specialists in the community such as cardiology and imaging as needed. Medical emergencies out of the facility's care abilities are transferred for an area emergency room for evaluation, treatment and admission as needed.

There are several secure holding/waiting rooms, and 7 patient beds. The department is staffed by Licensed Vocational Nurses (LVNs) and Registered Nurses (RNs) 7 days a week, 24 hours a day. Providers with prescriptive authority are on site Monday through Friday. 16 nurses staff the department, and there are several “per diem” nurses on staff. There is at all times a corrections officer staffed in the department.

The goal of reinventing the medical request process in the facility was successfully implemented and continues to show potential for enhancement. Prior to the start of this project,
there was no way to track the multitude of requests submitted by detainees. After implementation of the carbon copy form system, detainees were able to be seen generally within 72 hours. A difficulty encountered with the process continues to be staffing. When a nurse calls in sick it is not always possible to staff the position in the sick call clinic, and the clinic must be canceled. This can cause a backlog of requests. This can be partially mitigated by referring higher level needs to other providers, and skipping over the sick call clinic. Additionally, the flow of requests is highly variable. In November, the highest number of requests was 52, and the lowest was 18. This variability in conjunction with a 72 hour scheduling window has helped to keep backlog to a minimum.

A positive correlation has been seen with reduced wait times for service, and reduced number of requests (see bar graph in appendix). This trend supports expected results. In addition, as these events occurred and backlog has been minimized with computerized tracking and scheduling, the number of patients seen each day has increased. Prior to implementation of this project, approximately 10 patients were seen on a day sick call clinic was hosted, for a total of approximately 30 per week. Currently an average of 140 patients are seen each week, and sick call clinic operates six days a week.

Another component which has served to decrease wait times and requests is the ability to write detainees back about their concerns. Detainees who wish to renew medications, have questions about medical records, or other information and clerical requests, can be responded to without the need for a face to face visit. Currently an average of 10 requests each day are responded to in this manner.

Another benefit to the process is the ability to triage requests. A preexisting policy is now utilized which directs patients who have already been seen by a nurse for the same complaint two
times to be seen by a doctor, physician’s assistant, or nurse practitioner. This has served to move patients forward in the care process. Additionally, the ability to track patient complaints in a computerized system has helped to identify trends in disease and has identified several cases of active or suspected tuberculosis within the facility. This benefits the entire staff and detainee population.

An additional, unanticipated benefit to the restructuring and organizing of nursing tasks has been the ability for positions to develop within the department which target other deficits, such as management of chronic disease and infection spread. These roles are still being implemented and developed.

Certain aspects of the medical request program are now functioning with minimal intervention and need for change, however, sustainability is a concern. Due to the small department size and specialized roles of the staff, the loss of nurses or medical records clerks could destabilize the entire process. To ensure sustainability, staff should be cross trained, and local operating procedures created and developed by department management and nursing staff.

**Nursing Relevance**

Correctional health care is a fascinating discipline, and one which is at times unacknowledged and underappreciated in the community. In the past, jail or prison nursing was viewed as a place where nurses worked who were less skilled, or in some other way not desirable as employees and coworkers. But this perception of corrections nursing is changing. Nursing in a correctional setting requires honed skills, willingness to learn, and the ability to practice with a great deal of autonomy. It is also a place in health care which needs change, and where change is possible. As Shelton notes (2007), there are few well designed studies of the correction nursing
role. This is slowly changing, and advances in awareness of the role nurses play in correctional health are changing as well.

Corrections nursing is complex, and deals with a vast variety of health concerns ranging from infectious diseases to high risk pregnancies. It also has the potential to help bridge a gap in the care of minorities and underserved populations as a component of community and public health. This project has the potential to increase knowledge of the corrections nurse role and its potential by contributing to the limited amount of literature on the subject, and with this, inspire more nurses to consider this avenue of practice with the intent of reaching out and providing high quality nursing care to a diverse, underserved population.

Finally, this project has the potential to inspire nurses operating in dysfunctional systems to create change, not only in correctional nursing, but in any environment nurses are employed. This project is an example of creating a functioning nursing system in an area with a great deal of imposed restrictions created by the environment the system exists in. The application of research, change theories, and evolutionary methodologies has the potential for creating positive impact not only directly for the patient, but their communities, and those who care for them.
Reference


Sick Call Services

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REINVENTING THE MEDICAL REQUEST PROCESS

Effect
Medical requests not being addressed

Environment
- No waiting room
- No location for sick call, hallway not appropriate.
- Lists stored in overflowing binder
- Sloppy chart room

Procedures
- RN has to select patients and charts
- RN must schedule sick calls
- Triage not possible from name only list
- No way to communicate with patients

Policies
- Patients which cannot comingle (protective custody, females, etc.)
- No movement during “count”
- LVNs cannot do sick call
- Sick call given lowest priority

Supplies
- Missing/broken equipment
- Protocols missing
- No single dose meds available to send with patients

Technology
- All work done on paper, hard to manage flow, keep track of requests
- Handwritten lists illegible

People
- Staff unwilling/unable to see patients ("no time")
- Per diem staff not trained to do task (no guidance)
- No one assigned to see patients