Access to a quality healthcare among prisoners – perspectives of health providers of a prison infirmary, Ghana

Terrylyna Baffoe-Bonnie, Samuel Kojo Ntow, Kwasi Awuah-Werekoh and Augustine Adomah-Afari

Abstract

Purpose – The purpose of this paper is to explore the influence of health system factors on access to a quality healthcare among prisoners in Ghana.

Design/methodology/approach – Data were gathered using different qualitative methods (interviews and participant observation) with staff of the James Camp Prison, Accra. Findings were analyzed using a framework method for the thematic analysis of the semi-structured interview data; and interpreted with the theoretical perspective of health systems thinking and innovation.

Findings – The study concludes that health system factors such as inadequate funding for health services, lack of skilled personnel and a paucity of essential medical supplies and drugs negatively affected the quality of healthcare provided to inmates.

Research limitations/implications – The limited facilities available and the sample size (healthcare workers and prison administrators) impeded the achievement of varied views on the topic.

Practical implications – The paper recommends the need for health policy makers and authorities of the Ghana Prison Service to collaborate and coordinate in a unified way to undertake policy analysis in an effort to reform the prisons healthcare system.

Social implications – The national health insurance scheme was found to be the financing option for prisoners’ access to free healthcare with supplementation from the Ghana Prison Service. The study recommends that policy makers and healthcare stakeholders should understand and appreciate the reality that the provision of a quality healthcare for prisoners is part of the entire system of healthcare service delivery in Ghana and as such should be given the needed attention.

Originality/value – This is one of few studies conducted on male only prisoners/prison in the context of Ghana. It recommends the need for an integrated approach to ensure that the entire healthcare system achieves set objectives in response to the primary healthcare concept.

Keywords Prisoners, Quality of care, Health system, Health providers, Access to healthcare, Prisons healthcare

Paper type Research paper

Introduction

The establishment of good administrative systems and procedures can lead to efficient management of limited resources in prisons. Their health systems could as well be improved as such efficient management aids in the collection of appropriate information to enhance training and research (Tapscott, 2006). The Revised Standard Minimum Rules for the treatment of Prisoners also known as the Nelson Mandela Rules provides regulations and standards specific to the quality of healthcare in prisons, noting that healthcare services should be provided by the country’s National Health Service rather than by prison authorities or judicial institutions (United Nations, 2018).

The total number of incarcerated persons in Ghana was estimated at 13,955 with a prison population rate of 48 per 100,000 of the national population as of October 2017; predominantly males and about 1.2 percent females (Prison Studies, 2018). The increase in prison population...
without commensurate increase in prison infrastructure naturally leads to overcrowding; the occupancy level based on the official prison capacity was 141.7 percent making Ghana the 56th most overcrowded in the world (Prison Studies, 2018).

It is open knowledge that the prison population suffers from certain health conditions and generally has a poor health status (Binswanger et al., 2008). A study observed a higher prevalence of HIV and HCV in correctional facilities and prisons than in the general population of Ghana (Adjei et al., 2007, 2008). Telsingehe et al. (2014) concluded that undiagnosed tuberculosis and HIV prevalence was high in prisons in South Africa as well. This could be attributed to the fact that awaiting trial prisoners were highly prone to drug-sensitive and drug-resistant TB in South Africa (Robertson et al., 2011).

A challenge yet to be addressed was whether both healthcare workers and prison inmates had knowledge of some of the health risks (infectious diseases) that prisoners might be predisposed to while incarcerated. A study in Nigeria proved that “despite the fact that many of them [prisoners] knew the modes of transmission, many indulged in high-risk behaviors of AIDS transmission” (Odujinrin and Adebajo, 2001, p. 191). A further study among healthcare workers of Nigerian prison service health facilities in Kaduna State Command found a statistically significant relationship between knowledge and practice of injection safety in relation to cadre of staff, staff that had training on injection safety and years of experience of the staff, respectively (Onyemocho et al., 2013).

However, research has demonstrated a deficiency in health system factors that affect the quality of health services provided to prison inmates in Zambia, including lack of essential medical equipment and medications necessitating external referrals, lack of qualified personnel and inability to pay for health services rendered (Topp et al., 2016). Similarly, Solomon et al. (2014) reported that Nigerian prisons are characterized by inhumane conditions and overcrowding. This leads to a deplorable health situation among inmates. It is also argued that problems with the provision of quality care to inmates in Nigerian prisons include the inadequacy of healthcare personnel, facilities and systems. Others are the “lack of healthcare policies and standard operating procedures, corruption in the criminal justice system and bureaucratic bottleneck” (Solomon et al., 2014, p. 152). These make continuity of care difficult to maintain because records are essentially non-existent; prisoners are not aware of their clinical diagnosis and health staff do not communicate with those on the outside (see Kripalani et al., 2007).

Most of the prisons in Sub-Saharan Africa (SSA), especially Ghana, do not have well-structured healthcare facilities (see Adjei et al., 2007, 2008). The lack of a structured relationship between the prison system and the national health system has a negative impact on the provision of quality healthcare to prisoners, especially in Ghana (Sarpong et al., 2015). Although there are infirmaries in some of the prisons in Ghana, these usually lack stockpiles of essential medicines, equipment, technologies and other medical consumables necessary for providing quality healthcare to prisoners (see Adjei et al., 2007, 2008). This means that this combination of factors identified results in prisoners remaining undiagnosed upon release. The result of a relatively weak surveillance system means cases remain unidentified, thereby heightening the rate of contamination or infection of the general population on their release (Binswanger et al., 2011).

Arguably, the prison population would benefit from quality healthcare if there was provision of suitable health amenities within the prisons and effective linkages with other levels of the healthcare system. For instance, some researchers suggest that to ensure an uninterrupted and quality healthcare system among prisoners, there should be a need for policy makers to re-evaluate the present healthcare policy. This could be achieved by facilitating easy access to medical facilities by patients, including prisoners (see Solomon et al., 2014).

Similar to other SSA settings, the health system in Ghanaian prisons is generally under-researched (see Adjei et al., 2007, 2008; Topp et al., 2016). It is important to note that the majority of the Ghanaian prison population (86 percent) is male (Prison Studies, 2018). Therefore, this study explored the influence of health system factors on access to quality healthcare among male prisoners at the James Camp Prison (JCP). The paper argues that it is important for health policy makers and Ghana Prison Service authorities to collaborate and coordinate in a unified way to undertake policy analysis in an effort to reform the prison healthcare system in the country.
Literature review

Access to quality healthcare

Several researchers have conceptualized access to healthcare and identified determinants which affect it, including the health system, health providers and individual and population factors (Levesque et al., 2013). Topp et al. (2016) argued that prison inmates in SSA experience a high burden of disease and poor access to healthcare. Øvretveit (2009) defined quality care as the provision of care that exceeds patient expectations and achieves the highest possible clinical outcomes with the resources available and further developed a system for improving the quality of healthcare based on three dimensions – professional, client and management.

Donabedian (1990) defined healthcare quality as the application of medical science and technology in a manner that maximizes its benefit to health without correspondingly increasing the risk. This model (which was adapted for this study) has three dimensions: structure, process and outcome. Structure: this is the setting in which healthcare is provided and received. This describes the healthcare provider (physicians, nurses among others) and their skills and attributes, the health facility and its characteristics including total number of staff, equipment available, facilities, etc., and the organization and funding of the healthcare system as a whole.

Process: this describes the interaction between the patient and healthcare provider. Outcome: this refers to the status of the patient following care: cure, morbidity or mortality. Kairy et al. (2009) found that clinical outcomes were generally improved following a tele-rehabilitation intervention and were, at least, similar to or better than an alternative intervention.

Health system factors influencing access to a quality healthcare

In the context of Ghana, primary healthcare (PHC) is the required level of care in prisons as indicated by the Ghana Health Service (2018) organizational structure. It is necessary, therefore, to examine the resources/factors needed to ensure the provision of, and access to, quality healthcare for and by prisoners. Access to quality healthcare is influenced by certain health system factors which include, but are not limited to, administrative systems and procedures (health information and research), availability of health facilities/equipment, health human resources, health service delivery and health financing.

Administrative systems and procedures. It has been reported that the impact of training for prison officials in an effort to correct the imbalances in the prison governance structures in South Africa depends, to a substantial extent, on the administrative and managerial environment in which the training was conducted (Tapscott, 2006). Obioha (2011) argued that despite the reality that the main aim of establishing the prison institution in all parts of the world, including Nigeria, is to provide a rehabilitation and correctional facility for those who have violated the rules and regulations of their society, the extent to which this truism manifests in practice has been a subject of debate. This suggests that even though a good administrative system would enhance the delivery of quality healthcare to prisoners, revamping the institutional landscape could also create challenges, if not handled effectively (Tapscott, 2006).

Tapscott (2006) reported that the dramatic institutional change in South Africa, which included a process of reform and restructuring, had created institutional instability that adversely affected the governance of prisons across the country. Obioha (2011) supported this point by noting that the population that goes in and out of Nigerian prisons presupposes that there are some problems in the system. Invariably, a lack of adequate or well-functioning administrative systems and procedures that keep records of the health conditions of the prisoners would make it difficult to retrieve information on their health status (outside of the prison walls) on their release into the general community.

Health facilities/equipment. In order for an individual to access healthcare, the health facility must first be available and within an acceptable distance to the clients since availability is a component of spatial accessibility (Guagliardo, 2004). Ross et al. (2011) noted that correctional institutions are authoritarian organizations and may control access to healthcare services by using staff to identify and facilitate prisoner medical care. In Norway, unlike Ghana, all prison health services are
integrated into the general health services in the local community and the larger health region where the prison is situated (Bjørngaard et al., 2009). The provision of quality healthcare will also depend on the availability of state of the art and modern medical equipment. The absence of required medical equipment and medications has led to a poor quality of healthcare in Ghana (see Boateng, and Flanagan, 2008). Berendes et al. (2011) concluded that although quality in both provider groups seemed poor, it was better in the private health sector as there was better drug availability and their services were more client-oriented.

**Health human resources.** Qualified health personnel are needed to provide quality healthcare with available adequate medical equipment. The presence of qualified health personnel can help to attract clients/patients to access the services of a health facility (Ashraf et al., 1982; Young, 1983; Peters et al., 2008). Bjørngaard et al. (2009) noted that in Norway, while large prisons have health workers that work in the prison only, small prisons have part-time health workers that work in community health services the rest of the time.

**Health service delivery.** The incarcerated population has been shown to have a higher representation of poor people and their capacity to finance healthcare may be reduced, thereby reducing access to healthcare (Bjørngaard et al., 2009). Ghana’s health sector is mainly financed by the government, its development partners and Ghanaian households; and the national health insurance scheme (NHIS) established in 2013 is the most used insurance scheme with coverage of approximately 40 percent in 2014 (Wang et al., 2017).

**Health financing.** Access to healthcare was noticed to be challenging to prisoners and the Ghana Prison Service because the Ghana Prison Service was saddled with bills owed to healthcare providers and government hospitals (MOGCSP, 2017). Despite attempts to enroll prisoners unto the NHIS, these interventions were not associated with policy changes and remained highly subjective and unsustainable; the prison population may lack the needed finance to access the available healthcare (NHIA, 2013; MOGCSP, 2017; Safo, 2017).

**Theoretical perspective**

The theoretical perspective underlying this study is based on health systems’ thinking and innovation which shows how this system deals with problems by using its institutions to identify innovations for adoption (Atun, 2012). A common fact about a health system is that it is a “means to an end” – a system which “exists and evolves to serve societal needs” – with “components” that can be utilized as policy instruments to alter the outcomes (Hsiao, 2003; Shakarishvili et al., 2010; Atun, 2012). Health systems are open systems with interlinked components that interact in the context within which the health system is situated, thereby forming a whole with properties beyond the component parts (Checkland, 1981; Atun et al., 2007; Atun, 2012).

Accompanying the system’s thinking and innovation is the WHO (2017) framework which recognizes six elements of the health system such as leadership/governance, information and research, healthcare financing, service delivery, human resources/health workforce and medical products and technology; all these elements interact with one another to ensure quality health delivery to the people who are at the center of the health system. The prison health system can be said to have the same elements as any other health system because a prisoner is entitled to enjoy the same standards of healthcare that are available in the community. The only differences are in the context, which is the prison and the people who are the prisoners. A number of factors have been shown to influence the ways in which health systems achieve good health efficiently, including the capacity/abilities of both individuals and institutions within health systems to seize opportunities and some contextual characteristics such as socio-cultural beliefs and economic setup in which the health system operates (Balabanova et al., 2011; Atun, 2012).

This study recognizes that the current health financing system of Ghana excludes a section of the population from accessing even the limited quality healthcare available due to financial constraints (Nguyen et al., 2011; Jehu-Appiah et al., 2011). Additionally, the findings of the study indicate that the current inadequate healthcare provision for the prison population could be explained from the viewpoint of systems’ thinking, which requires that health policy makers address entire health
system difficulties with a holistic approach rather than in bits (Ministry of Health, 2018). The advantage of health systems’ thinking is that it helps to anticipate and prepare for challenges rather than react to them (Atun, 2012).

Methods

Different qualitative methods (interviews and participant observation) were applied to collect data from June to July, 2018.

Study area

The study was conducted in the JCP in the Greater Accra Region. Accra is the national capital of Ghana and serves as a hub for most of Ghana’s economic and tourist activities. It has a population of approximately 2.27m which amounts to 8 percent of Ghana’s estimated population of 29.4m. In the Accra Metropolis, healthcare is provided by both public and private institutions with a host of private health insurance schemes available as well as the NHIS for financing health with out-of-pocket payments for services not covered by the insurance schemes (Wang et al., 2017).

The JCP is one of the 43 prisons in Ghana (Ghana Prison Service, 2018). The Prison is one of three Open Camp Prisons and serves as a “halfway home” where rehabilitation and training of prisoners is undertaken before release. Generally, the prison holds short-sentenced prisoners received from several prisons in the southern part of Ghana instead of directly from the courts. Because prisoners in this prison are transferred-in from other institutions, information obtained from studying this population could be extended to prisoners in many prisons in the southern part of Ghana in particular and the country as a whole (Ghana Prison Service, 2018).

Selection of study participants

A purposive sampling technique was applied to select participants for this qualitative research. Purposive sampling is a deliberate choice of participants due to the qualities they possess. It is also a non-random technique where the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience (Etikan et al., 2016).

Semi-structured interviews

Qualitative semi-structured interviews were conducted with seven participants selected on the basis of literature (Pope et al., 2000; Creswell and Garrett, 2008). A semi-structured interview is explained as comprising predetermined questions which can be modified based upon the interviewer’s perception of what seems most appropriate (Van Teijlingen, 2014). The study was set within a framework to address the question, “What is the influence of health system factors on access to quality healthcare among male prisoners at the James Camp Prison?”

Three administrative heads of the JCP were interviewed in-depth with a focus on soliciting their views on health system factors which could influence prisoners’ access to quality healthcare. Four healthcare providers attached to the infirmary of the JCP were also interviewed in-depth to investigate their perceptions of how health system factors could influence the provision of quality healthcare at the prison. The interviews, which were recorded with a digital voice recorder, were conducted at locations and times suitable to the participants. Each interview lasted between 30min and 1 h. Some interviews were written down and transcribed as participants did not consent to voice recording. The adapted semi-structured interview guide and approach was applied by earlier researchers to interview prisoners and staff at four prisons in the UK (Bowen et al., 2009).

Participant observation

Participant observation, which involves spending time being, living or working with people or communities in order to understand them, and a useful tool for collecting data about people, processes and cultures in qualitative research, was applied to collect data (Kawulich, 2005).
A non-active participant observation strategy was applied to collect information relating to how the availability of facilities and medical equipment at the infirmary and related institutions helped to provide access to quality healthcare for the prisoners of JCP using a checklist. This approach had been applied in earlier studies to support and inform the interview process (Bowen et al., 2009).

**Data analysis and ethical consideration**

The interview recordings were played and transcribed verbatim using a Microsoft application in text format before analysis. In addition, a framework method was applied to theoretically analyze the interview data (Gale et al., 2013). Gale et al. (2013) explained that the framework method sits within a broad family of analysis methods often termed thematic analysis or qualitative content analysis with key components including: transcription, familiarization with the interview, coding and interpreting the data. The framework method was adopted for analysis since it is most commonly used for the thematic analysis of semi-structured interview transcripts (Pope et al., 2000; Gale et al., 2013). The semi-structured interview guide was pre-tested in a male prison in the Accra Metropolis before the main study. Ethical approval was granted by the Ghana Health Service Ethics Review Committee and approval to undertake the research at the prison by the administration. Participants signed a consent form before their participation. Codes were developed to identify the interviewees when quoted. HW means infirmary health worker. PAS means prison administration staff.

**Analysis of findings**

The themes/sub-themes developed from the exploration of the health system/institutional characteristics that could influence access to quality healthcare among prisoners were related to the administrative systems and procedures, availability of health facilities/equipment, availability of health human resources, access to health financing and access to healthcare delivery as presented below.

**Administrative systems and procedures**

The discussion with interviewees centered on how adherence to administrative systems and procedures for admitting transferred prisoners was helping to enhance quality healthcare delivery to the prisoners at the JCP. The sub-themes that emerged under this theme related to medical examinations and health certificates as well as medical records. Participants’ perspectives have been described below.

**Medical examinations and health certificates.** Analysis of interview data showed that the administrative procedure was to ensure that prisoners transferred from other prisons to the JCP arrived with a health certificate and warrant. However, it was revealed that prisoners arrived with only the warrant. This made it difficult for the health providers to know prisoners previous health condition(s) and ensure continuity of care in the event that the prisoner became ill:

[... ] I have been here for a few years but I have never seen a health certificate. I don’t think inmates are examined prior to transfer [...]. (HW-1)

The procedure is that an inmate is supposed to receive a full medical examination when being received into custody and also when being released. Unfortunately, this was not done in the prison due to the limited number of healthcare providers and the huge number of prisoners received into the prison in any particular period. This was likely to affect the health of other inmates and the general community in the event that a prisoner arrived or was released with an infectious disease:

[... ] Unfortunately, the numbers do not permit us to be thorough in doing medical examination - about 100 inmates/prisoners are transferred in at a time [...] We’re only able to do inspection to identify obvious ailments and also to identify contrabands [...]. (HW-2)

However, attempts were made to control transmission of infectious diseases. For instance, in the first month after their transfer to the prison, new arrivals are quarantined in a separate part of the prison. The rationale is to give them an orientation of the prison and also to identify prisoners with
drug or alcohol-related problems, mental health problems and other chronic medical conditions. During this period, drug counseling and screening for HIV are conducted. Although this screening was not compulsory, all prisoners consented because of the incentives that came with opting in. The test kits were supplied or donated by Planned Parenthood Association of Ghana (PPAG) and always available. However, it was understood that Hepatitis B and Tuberculosis testing was not routinely done unless there was a donation of test kits to the prison:

[...] I cannot remember the last time we tested for Hep B when inmates were transferred [...] if an inmate shows symptoms, they will be sent to the hospital where they will be diagnosed [...] (HW-4)

Nonetheless, this showed how the referral system between the infirmary at the prison and the next level of the healthcare system works in the provision of an acceptable level of quality and continuity of healthcare. Once a prisoner was diagnosed with HIV or Hepatitis B, treatment would be started usually at the hospital. All prisoners who were found to be positive for tuberculosis were transferred to the Contagious Disease Prison at Ankaful in the Central Region where they served the rest of their sentence. For prisoners with chronic medical conditions such as Hep B or HIV, the referral health facility was usually informed about the discharge and arrangements made for continuity of care. This was seen as an attempt to reduce the spread of infections in the prison; preventive/public health. However, as a general rule, prisoners were not examined before their release or given a medical certificate.

Medical records. The availability of medical records is important as they help to ensure the continuity or management of the health conditions of prisoners while incarcerated. All infirmary visits were documented in a large record/attendance book but there were no individual prisoner folders. There was a separate record book for documentation of prisoners with HIV/AIDS similar to those used in other health institutions. The process of recording the medical history of the prisoners was:

[...] At the end of every week, we compile a return on types of illnesses, number of referrals and external reviews on the report/ attendance book, which is then forwarded to the headquarters [...]. (HW-3)

[...] Ideally, there should be independent records because sometimes it is difficult to trace back the history and treatments as the book is quite large as you can see and the inmates are many [...]. (HW-1)

The analysis revealed that the provision of individual health records was not viewed by prison administrators as a priority due to the relatively short time that prisoners spent in this prison:

[...] Because of these relatively short sentences (about six months), the need for folders has been less [...]. In other prisons like Nsawam, the inmates do have health records, which are kept at the infirmary, which they can even send to the hospital [...]. (PAS-2)

This was determined by respondents to be a challenge as it poses a risk to the other inmates and the general population as well. However, the administration of the JCP had initiated steps to provide a proper records system to capture the various health conditions affecting the inmates.

Availability of health facilities/equipment

One key factor that the interviewees paid attention to was the availability of health facilities and equipment that could enable provision of quality healthcare to the prisoners at the JCP. The sub-themes that emerged under this theme were medical products and technologies. These were also confirmed through observation using the facility and equipment checklist. Participants’ perspectives are given below.

Medical products and technologies. The interviewees commented on the availability of medical equipment and supplies that would enable healthcare providers in the prison to deliver quality healthcare, noting that most basic equipment were absent. Health providers had to procure them on their own or had to improvise:

[...] Most of the time, I have to arrange to get some basic things in my own box [...] However, if more equipment were available, we would be able to do many of the procedures like suturing and treatment of minor ailments in-house without the need to refer/transport the patient outside the facility – e.g. Police Hospital [...]. (HW-1)
It was observed that much of the sparse equipment and drugs available were from donations. The analysis showed that most of the respondents admitted to having bought essential drugs for prisoners or sourced donations from philanthropists. These findings were further confirmed by the observation checklist.

**Summary of observation – facility and equipment checklist.** An observation checklist was used to collect information on certain amenities or equipment available in the facility in order to ascertain how the availability of medical equipment, or lack thereof, at the infirmary could impact on prisoner access to quality healthcare (see Table I). The checklist showed that the infirmary of the prison had five health personnel made up of four health aids and one physician assistant with no medical orderlies. At the time of the study, the prison population was 262. However, the analysis deduced that this number could be more than 300 at certain times of the year. There were two rooms dedicated to healthcare service delivery at the prison, each with an area of approximately 25 m². One was dedicated to consultation, storage of patient records, equipment and medication while the other room served as the makeshift ward for short-term detention. These rooms were found to be inadequate in terms of size as they could not accommodate more than one patient without breaching other patients’ confidentiality. However, the rooms were well cleaned and ventilated.

Notably present were measuring tapes for height, weight scales, stethoscopes, a sphygmomanometer, thermometers, disposable gloves and a wash-up area. There was also a direct telephone line to the administrative offices. Notably absent were an examination couch, secure filing cabinets for notes and confidential papers, secure drug storage, emergency medications, sterile surgical dressings, surgical instruments and an appropriate waste disposal system. The veranda served as the waiting area and there were no toilet facilities at the infirmary. Due to proximity to the dormitories, prisoners used the toilet facilities in the dormitories. Secretarial support, when needed, was provided by the team in the main administrative offices.

**Availability of health human resources**

Analysis of the interview data revealed the availability of health human resources helping to provide quality healthcare to the inmates at the JCP. The sub-themes that emerged under this theme were health workforce, remuneration and welfare of health workers as detailed below.

**Health workforce.** To establish the availability of skilled healthcare providers who deliver healthcare to the prisoners, discussions as well as the use of a checklist unearthed that there were four health aids and one physician assistant taking care of the healthcare needs of over 200 prisoners. The physician assistant was responsible for the two other facilities in the surrounding area. He was called in by the health aids whenever they were faced with a new case that they could not handle. Most of the care given was essentially first aid and sick prisoners were transferred/transported to the Police Hospital for further management if the need arose. It was noted that some of the healthcare providers did not undergo regular training to upgrade their skills in current healthcare methods. This was also due to the procedure of recruiting health personnel into the prison service:

> […] Most of our staff are health aids. The fully qualified nurses and PAs are very few. […] The whole service has one medical doctor who works in Nsawam - most of the doctors that come to work here are volunteer workers […]. We have one psychiatrist and one physician who come here regularly […] The service could create more opportunities - attractive to the health workers like the Police and Military do […]. Maybe in doing that we could get a Prison Hospital for staff and inmates […]. (PAS-1)

When asked whether they considered themselves well equipped to handle the health needs of prisoners, the responses from the health workers were split:

> […] I was a Prison officer before I was sent for the 6-month health aid training – for the past 10 years and over […] Some of the basic equipment are not in this prison, so I don’t know or remember how to use them […]. (HW-3)

> […] I was also trained by the Prison Service as a health aide […] In addition, I’ve gotten a diploma in drug counselling and a degree in social work since then so I can handle a lot of those issues […]. (HW-2)
### Table I  Summary of observation – facility and equipment checklist – James Camp Prison (infirmary)

<table>
<thead>
<tr>
<th>Description</th>
<th>Number available</th>
<th>Remarks/Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of nurses/physician assistant</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Number of medical orderlies</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Number of Prisoners</td>
<td>262</td>
<td></td>
</tr>
<tr>
<td>Number of prison officers</td>
<td>232</td>
<td></td>
</tr>
<tr>
<td><strong>Facilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of nursing/medical interview rooms</td>
<td>1</td>
<td>1 interview room with a second room designed to be a ward, containing 3 bunk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>beds for short daytime stay</td>
</tr>
<tr>
<td>Rooms</td>
<td>Y/N</td>
<td></td>
</tr>
<tr>
<td>Sufficient size to accommodate three people</td>
<td>Y</td>
<td>No privacy if more than one patient is seen at a time</td>
</tr>
<tr>
<td>Examination couch</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Washbasin</td>
<td>Y</td>
<td>A bunk in the ward can be used if necessary</td>
</tr>
<tr>
<td>Secure filing cabinets for notes and confidential</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>papers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleanliness</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Heating</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Telephone – direct line to outside</td>
<td>Y</td>
<td>No direct line to/from the clinic but each staff of the infirmary had official</td>
</tr>
<tr>
<td></td>
<td></td>
<td>phones or Gota</td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stethoscope</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Auroscope and clean tips</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Ophthalmoscope</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Reflex hammer</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Height/weight scales and measuring tape</td>
<td>Y</td>
<td>2 of each</td>
</tr>
<tr>
<td>Thermometer</td>
<td>Y</td>
<td>1 functioning thermometer</td>
</tr>
<tr>
<td>Sphygmomanometer</td>
<td>Y</td>
<td>1 digital and 2 manual</td>
</tr>
<tr>
<td>Disposable gloves</td>
<td>Y</td>
<td>Adequate supply</td>
</tr>
<tr>
<td>Lubricant</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Tongue depressors</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Ear syringe</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Urine testing equipment</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>ECG with interpretation</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Tourniquet</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Eye charts</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Emergency equipment</td>
<td>Y</td>
<td>Supplies like sutures are usually kept with the PA</td>
</tr>
<tr>
<td>Sharps and storage and disposal</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Clinical waste containers and disposal</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Surgical instruments and dressings</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Autoclave or sterilizer</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Essential drugs and secure storage</td>
<td>Y</td>
<td>Adequate supply of essential medications according to the essential medication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>checklist</td>
</tr>
<tr>
<td>Ambulance system</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Arrangements for blood sampling and dealing</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>with body fluids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory facilities</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Computer terminal</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Computerized prisoner medical record system</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Waiting area</td>
<td>Y</td>
<td>The veranda in front of the clinic was used as a waiting space if the need arose</td>
</tr>
<tr>
<td>Toilet facilities</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td><strong>General office area</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secretarial support</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Fax</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Photocopier</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Shredder</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Stationery</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Computer</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**  
- **Y** = means item is available;  
- **N** = means item is not available
However, the staff in the prison thought that numbers were sufficient for the number of cases they attended to. They also run shifts outside the infirmary:

[...] For the number of cases we see, ideally the number should be enough [...] There are a total of 4 of us and we run 2 shifts [...] Unfortunately, although we are on the weekends, we run duties in the main yard which are not related to health so there is very little off-duty time and this makes us tired and less effective [...]. (HW-4)

Although the staff numbers were assumed to be enough, their lack of skills in certain areas, especially among the health aids, meant that a lot of the work, including setting intravenous lines, had to be done by the physician assistant leading to work overload:

[...] I am the only trained PA in this prison complex which is composed of SCC, JCP and POTS each with, at least, 200 people at each time [...] I am also supposed to take care of prison officers and their dependents in the surrounding barracks as well as the school children in the surrounding schools [...] Hence, although I have fixed working hours, I am always on call [...]. (HW-1)

It was also obvious that the provision of in-service training for the health workers was rare. However, it was revealed that the service allowed an individual to undergo training in their chosen field if that individual chose to, so long as it did not require financial support from the prison service.

Remuneration and welfare of health workers. The delivery of quality healthcare, especially in the context of Ghana and other settings, depends on a well-motivated and skilled staff. It was important to understand how the healthcare providers in the infirmary of JCP were remunerated so as to enhance their performance. The analysis revealed that all healthcare workers were paid based on their rank. The evidence from the analysis showed that the health staff did not receive any extra incentives for the “on call duties, extra duties” and the risks associated with their job:

[...] I am paid my salary and that is it [...] I think that health workers in Ankaful receive extra risk allowance because they deal with infectious diseases like TB but we don’t [...]. (HW-5)

This had led to perceived dissatisfaction among some health workers as they were doing more work and exposed to more risk than they were being paid for. The challenge was how to exactly locate who had the responsibility for providing incentives to the health workers: whether Ghana Prisons Service or Ministry of Health/Ghana Health Service.

Access to healthcare delivery

The discussion with the interviewees centered on issues that could enhance access to healthcare delivery for the prisoners at the JCP. The sub-theme that emerged was health service delivery as illustrated below.

Health service delivery. The Ghana Health Service and the Ministry of Health have produced a document on referrals in the healthcare system of the country. Since the healthcare system in the prison service appears to be a quasi-government facility, the channels of referral are not clearly shown to be linked up with public healthcare institutions. In other words, sick prisoners were referred to other parastatal health institutions such as the Police Hospital if the condition was beyond the expertise of the health team or if supplies were not available at the JCP. The discussion with the interviewees revealed that if this occurred in an emergency setting, patients were given first aid before they were referred to the hospital. They were mostly conveyed by using the prison camp’s vehicles due to a lack of an ambulance service. There were also challenges with the accompanying personnel to take the prisoner to the receiving health facility:

[...] There is only one ambulance for the whole service but it is kept at the main headquarters [...]. (HW-2)

[...] Because of the number of referrals, we sometimes send 2 or 3 prison officers with 3 to 5 inmates, which is not the ideal [...] Transportation of an inmate outside the prison is risky because the officer can be harmed and there is also the risk of absconding - it also requires more resources like fuel, accompanying prison officers and time [...]. (PAS-1)

It was disclosed that for reviews and other non-emergency conditions, prisoners would book sick and when the appointment was due, they would be accompanied to the hospital by an officer.
The prisoners were often given prompt attention at the external health facilities and not delayed or given inferior care or prescriptions because of their status. They were sometimes given preferential treatment because they were accompanied by the prison officers.

**Access to health financing**

The interviewees discussed how the issue of health financing was encouraging access to quality healthcare for the prisoners at the JCP. The sub-theme that emerged under this was health insurance and other sources as considered below.

**Health insurance and other sources.** When asked to identify the sources of financing for healthcare for the prison and its prisoners, the interviewees revealed that healthcare was provided free to all prisoners. All prisoners were registered with the NHIS which covered a host of medical bills such as registration and some laboratory investigations. For other services, payment was made by the Prison Service:

- If a patient is given a prescription at the hospital, we first check if we have the medication in stock and give accordingly. If we do not have, the prescription is made available to the Head of the Prison, who forwards it to the headquarters. From there, funds are made available to buy medications - this applies to other hospital bills as well. (HW-1)

Nevertheless, this process was long and often led to delayed medical attention and interrupted or missed doses of medications which delayed patient recovery.

**Discussion**

The findings have been discussed in the light of health system factors affecting the quality of care while relating them to the World Health Organization framework for health systems which is linked with the theoretical perspective of health systems’ thinking and innovation (Atun, 2012; WHO, 2017). The key concepts in the WHO framework applicable are health information and research, medical products and technology, human resources/health workforce, service delivery and healthcare financing (WHO, 2017) as shown below.

**Administrative systems and procedures (health information and research)**

Health information and research is one of the key tenets of the six building blocks of the health system (see WHO, 2017, 2018). The argument is that a well-functioning health information system is one that ensures the production, analysis, dissemination and use of reliable and timely information on health determinants, health systems performance and health status (WHO, 2018). The study found that contrary to the Ghana Prison Service’s (2018) policy, prisoners were being transferred from various prisons to the JCP without medical certificates. The observational checklist also noted a lack of a secure filing cabinet for patients’ records. The main problem was their inability to trace patients’ histories and poor continuity of care within the prison with the referral facility and upon release. These findings call for the need to consider the suggestion in the literature that a good patient information system is necessary for effective patient diagnosis and treatment (WHO, 2010; Ledikwe et al., 2014).

**Availability of health facilities/equipment (medical products and technology)**

The theoretical model of the six building blocks of the health system indicates that medical products and technology are one of the key concepts necessary to ensure access to quality healthcare (see WHO, 2017, 2018). A well-functioning health system ensures equitable access to essential medical products, vaccines and technologies of assured quality and their scientifically sound and cost-effective use, safety, efficacy and cost-effectiveness (WHO, 2018).

It was ascertained that a major challenge to providing quality health services to prisoners was a lack of basic equipment and medical supplies. This was confirmed by the results of the observation checklist which showed there was an absence of sterile surgical dressings, surgical instruments, appropriate waste disposal systems and secure storage for medications. The disadvantage of receiving most
medications as donations was that many drugs were near expiry or expired at donation. A lack of medical equipment and supplies is a well-established barrier to access to care and has been linked with poor health service quality and overall poor health (see Mosadeghrad, 2014).

**Availability of health workforce (human resources/health workforce)**

According to the six building blocks, the health workforce refers to the human resource component of the health system (WHO, 2010, 2017). The health workforce must be competent and able to deliver quality healthcare. Kak et al. (2001) defined competence as the ability to perform a specific task in a manner that yields desirable outcomes – the knowledge, skill and abilities of the healthcare provider. The study found that even though health workers felt they were adequately trained for their job, they also felt they would benefit from more training. Although the health providers were willing, certain treatments could not be performed because of their lack of capacity and expertise. This contributed significantly to them rendering poor quality health services.

This corresponds with a study which directly relates a lack of skill or competence to overall poor service delivery and worse patient outcomes (Das et al., 2008). The reduced number of skilled/qualified health workers placed an excessive demand on the few qualified ones. This led to the delivery of poor quality health services, confirming the argument that the quantity and quality of healthcare providers affect the quality of services and adequate numbers of high-quality providers are critical to producing high-quality outcomes (Mosadeghrad, 2014).

The evidence showed that health workers at the JCP were subject to risks that went unrecognized by the Prison Service while other prison personnel were remunerated more due to disparities in rank. This affected their morale and exposed them to occupation-related transmission of certain infectious diseases (Adjei et al., 2007, 2008).

It is anticipated that some of these challenges could be addressed if regular and on-the-job training programs on core aspects of healthcare delivery and injection safety among health workers, for instance, were conducted by the health departments in the Ghana Prison Service as is done in the Nigerian Prison Service on a regular basis (see Onyemocho et al., 2013).

**Access to healthcare delivery (service delivery)**

One relevant concept of the theoretical model of the six building blocks of the health system is service delivery which is concerned with the actual delivery and access to healthcare services of an appreciable quality (see WHO, 2017, 2018). The study found that there was no medical screening when a prisoner/patient was transferred from their previous prison to the JCP although this is a requirement of the United Nations and the Ghana Prison Service (Ghana Prison Service, 2018; UNDP, 2018). This was attributed to the lack of funding, test kits and high prisoner-health provider ratio at the time of transfer.

The fact was that inmates were transferred without health certificates, relying often on inmates to report illnesses. However, denial of medical illnesses, especially chronic and infectious ones, is well documented as a reason for delayed reporting, treatment and compliance with medications (Wringe et al., 2009). This could lead to the spread of infections between the inmates, on the one hand, and the general population upon release on the other. Indeed, literature shows that the observed increased rate of external reviews and referrals were thought to lead to a reduced quality of care and an increase in transmission of certain communicable diseases (Mosadeghrad, 2014).

**Health insurance and other sources (health financing)**

One other important concept of the theoretical model of the six building blocks of the health system is health financing (see WHO, 2017, 2018). The evidence shows that a good health financing system raises adequate funds for health in ways that ensure people can use needed services and are protected from financial catastrophe or impoverishment associated with having to pay for them (WHO, 2010, 2017, 2018). The study revealed a gap in the health financing of the
prison health system as financing for the health of prisoners was grossly inadequate even though all prisoners were registered under the NHIS and were exempted from paying premiums and accessing certain services (registration) for free in line with NHIS regulations (Safo, 2017). The supplementary financial support from the headquarters of the Ghana Prison Service was noted to be insufficient and untimely, leading to lower quality healthcare for inmates. The literature indicates how important it is for health systems to have a definite way of obtaining adequate funds for health to ensure its sustainability and efficiency (Uzochukwu et al., 2015). Therefore, there is a need to consider the recommendation that policy makers need to re-evaluate the present healthcare policy by facilitating easy access to medical facilities for every patient, including prisoners (Solomon et al., 2014).

The findings of this study correspond with the theoretical framework applied: health systems’ thinking and innovation (see Atun, 2012; WHO, 2017). Some analysts have explained that the interacting elements of health systems influence each other with positive (amplifying) or negative (balancing) feedback, collectively determining the system’s behavior (Senge, 1990; Atun, 2012). There is an imperative need for health policy makers and the prisons’ authorities to see the prisons’ healthcare system as part of the entire healthcare dynamic system and recognize the need for an integrated approach to ensure that the entire healthcare system achieves its set objectives in response to the PHC concept (Ministry of Health, 2018).

Conclusion

This study explored the influence of health system factors on access to quality healthcare by prisoners at JCP from the perspective of administrators and health workers at the infirmary of the prison. The study concludes that health system factors such as inadequate funding for health services, lack of skilled personnel and a paucity of essential medical supplies and drugs negatively affected the quality of healthcare provided to prisoners. There was a lack of adequate health facilities in the prison, incomplete use of medical examination and health certificates, poor medical records system, lack of skilled health personnel, inadequate supply of medical equipment, supplies and drugs, problems with referrals and external reviews and selective remuneration and welfare packages for health workers due to the administrative structure of the Ghana Prison Service.

The NHIS was also found to be the financing option for prisoners’ access to free healthcare with supplementation from the Ghana Prison Service. This is congruous with results of a study which documented health system factors that contribute to a reduced quality of healthcare and suggested remedies to improve them (Mosadeghrad, 2014). Similar to earlier studies, this study also found some deficiencies in the health system factors that affect the quality of health services provided to prisoners which included lack of essential medical equipment and medications requiring external referrals, lack of qualified personnel and inability to pay for health services rendered (Topp et al., 2016).

Contribution to theory, policy and management of prison service

The findings of this study are relevant for policy makers, prison authorities and practitioners in the health sector. The study recommends that policy makers and healthcare stakeholders should understand and appreciate the reality that the provision of quality healthcare for prisoners is part of the entire system of healthcare service delivery in Ghana and, as such, must be given the attention needed. An integrated approach is required to ensure that the entire healthcare system achieves set objectives in response to the PHC concept (Ministry of Health, 2018). Based on Atun’s (2012) argument, it is essential to understand and apply this concept of interconnectedness and complexity as the essence of systems’ thinking which views the system as a whole rather than its individual component parts (Senge, 1990; Sterman, 2001; Atun, 2012).

This study indicates that the provision of an effective referral system, for instance, between the prisons healthcare system and the entire healthcare system of the country will help provide the needed results to improve efficiency in delivery. Until careful and deliberate efforts are made by policy makers and other health stakeholders to take a second look at the way the current prison health system is alienated from the overall healthcare system, achieving overall health goals, especially the sustainable development goals of the country, may be hampered considerably (Ministry of Health, 2018).
The prisons healthcare system is a reflection of the health of the community and also has a direct impact on it; prison health is public health (Macmadu and Rich, 2015).

One pitfall to avoid in health systems’ innovation and thinking is the limit of the human mind. Atun (2012) suggested that it is common for the brain to ignore the complexities in health systems because its ability to process information is somewhat limited. This may result in over-simplistic analyses of situations with misperception of feedback so that even when information is available, consequences of interactions cannot correctly be deduced (Sterman, 1994; Diehl and Sterman, 1995; Atun, 2012). Even though there may be an existing problem with the provision of quality healthcare for prison inmates, the possibility remains that policy makers might have turned a “blind eye” to them. The need for an overhaul of Ghana’s health system with particular reference to prison healthcare is obvious.

Limitations to the study and future research

The limitations encountered were the limited facilities available and the sample size. That is, the limited number of healthcare workers and prison administrators available impeded the achievement of varied views on the topic. Future studies should apply a quantitative method to include the prisoners and other prison officers working in the entire JCP. In order to improve on studies related to the health of prisoner populations, it is suggested that future studies should increase the sample size and number of prisons, including the bigger ones in the country such as the Nsawam Prisons. Research into health conditions affecting prisoners, their access to health and their quality of health should be conducted regularly to reduce their burden of disease and improve their overall health status through access to quality healthcare.

References


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