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Analysis of factors hindering access to health care in prison: The case of the Abidjan correctional facility (Côte d'Ivoire)

Tape Bi Sehi Antoine
Department of Geography, Peleforo Gon Coulibaly University, Korhogo, Côte d'Ivoire

Abstract
In Côte d'Ivoire, the constitution recognizes the right of inmates to access health care of a level at least equivalent to that provided to the rest of the population living outside of prisons. Generally speaking, in practice, inmates face obstacles to accessing health care in prisons, especially in the Abidjan Correctional Facility (ACF). So, what are the factors that hinder access to health care for inmates in the Abidjan Correctional Facility (ACF)? To answer this question, the study aims at analyzing the factors that hinder access to health care for inmates in the Abidjan Correctional Facility (ACF). The data collection methodology was based on a literature review, semi-structured interviews and questionnaires administered to 25 former inmates based on a non-probability sample and using the convenience method.
The combination of statistical data analysis from the documentary research and field survey refined with the Chi2 and Cramer's V statistical tests allowed us to identify five variables as factors hindering inmates' access to health care in the Abidjan Correctional Facility (ACF). Thus, the study shows that the obstacles are statistically linked to the recurrent rupture of drugs (chi2 cal (13.64) > chi2 tab (3.84); Cramer's V = 0.7), the low level of technical support (chi2 cal (12.04) > chi2 tab (3.84); Cramer's V = 0.7), the inability of the State and the prisoners' parents to pay the costs of outside care (chi2 cal (19.80) > chi2 tab (3.84); Cramer's V = 0.9). In addition to this, there is the lack of hospital beds in the referral hospitals (chi2 cal (19.78) > chi2 tab (3.84); Cramer's V = 0.9) and the ransom of inmates who show signs of illness before being registered in the ''sick book'' (chi2 cal (13.62) > chi2 tab (3.84); Cramer's V = 0.7).
These shortcomings combined with the dual governance of ACF could be corrected through reforms of the normative framework but also by concretely swaying the obstacles to access health care in prisons.

Keywords: hindering factors, access to health care, prison, Abidjan, Cote d'Ivoire

Introduction

Prisons are among the least sanitary places and inmates are not only deprived of their liberty, but are also exposed to threats such as violence, drugs, and infectious illnesses while their own ability to manage these risks is severely restricted (AUSTEN D. *and al*., 2001, p.1) [1]. However, according to DUGUET A. M. (2010, p.129) [6], despite the deprivation of liberty, inmates preserve their fundamental rights, especially their right to health. Côte d'Ivoire also recognizes the right to health of inmates. This right provides inmates with access to health care at least equivalent to that provided in the community out of prisons (Ministry of Justice and Human Rights, 2019, p.9). Indeed, with a theoretical capacity of 7970 inmates, all of Côte d'Ivoire's prisons and correctional facilities hold 15025 prisoners, thus instituting an estimated overcrowding of 7044 inmates (NHRCCI, 2018, p.4). According to TAPE *and al* (2021, pp.66-67) [16], this overcrowding combined with the precarious conditions of detention and the low level of technical facilities are at the root of the resurgence and serious forms of several sicknesses such as malaria, acute respiratory infections, dermatitis, diarrheal diseases, physical trauma and tuberculosis. However, although these illnesses are treated by prison health staff, they often lead to the death of inmates. Thus, between 2015 and 2018, 160 deaths were recorded in Ivorian prisons (Ministry of Justice and Human Rights, 2019, p.9). The Abidjan Correctional Facility (ACF), which is the largest prison in Côte d'Ivoire, is not immune to this reality. That is why it is the subject of this study. Thus, what are the factors that hinder access to health care for inmates in the Abidjan Correctional Facility (ACF)? To answer this question, the study set out to analyze the factors that impede inmates' access to health care in the Abidjan Correctional Facility (ACF).

Created on May 3, 1985, ACF is located in the District of Abidjan, more precisely in the municipality of Yopougon. Built to accommodate 1,500 inmates, the prison houses 7,968 individuals including 7,704 men and 264 women as of April 21, 2021 (Management of the establishment). Its prison population is dynamic and varies from day to day according to the movements of incarcerations, releases and transfers of inmates. This penitentiary center includes three (3) quarters: men, women, and minors.

Figure 1 below shows the location of the research area.

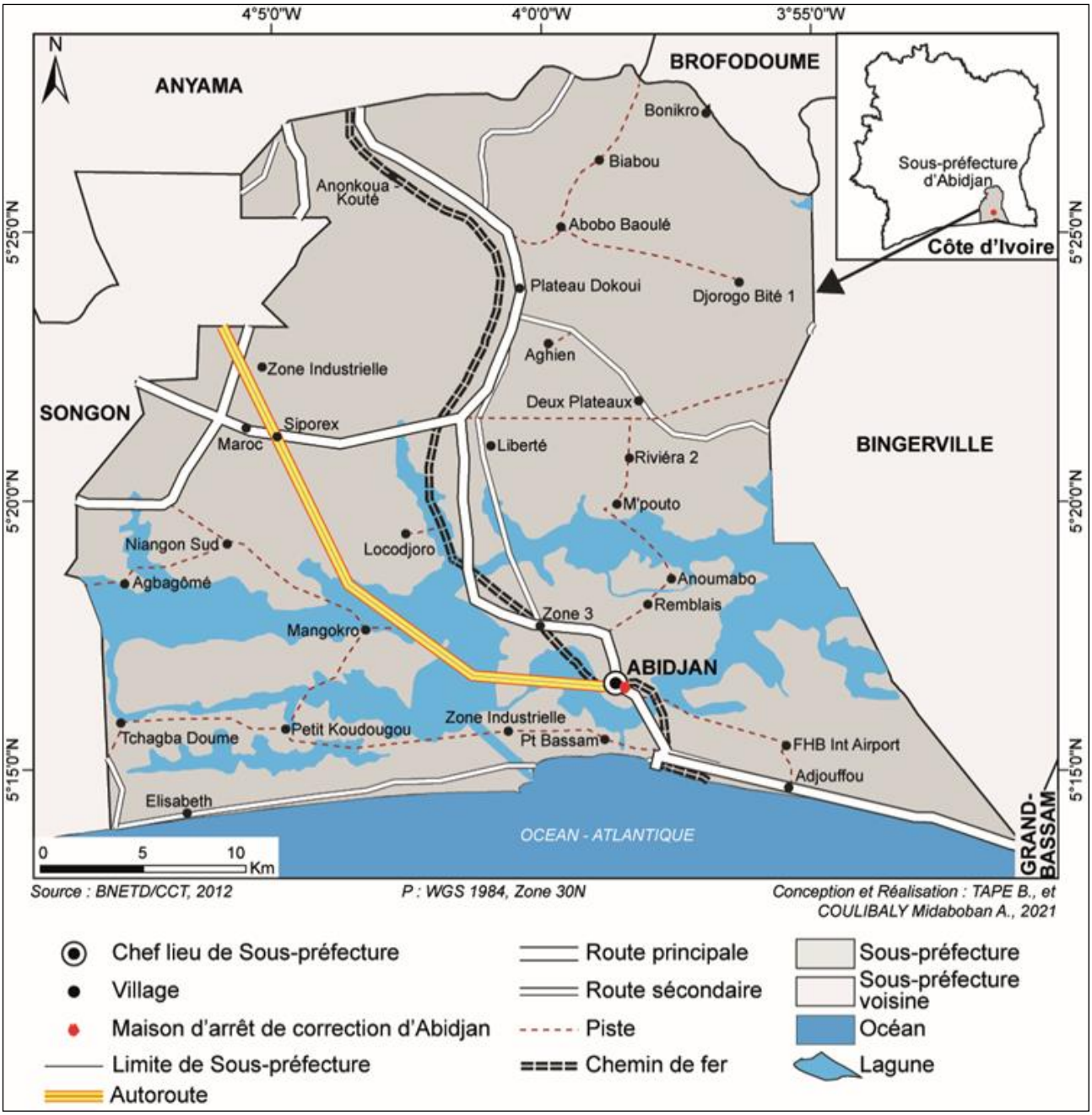

Fig 1

Material and Method

This research is a continuation of a study entitled "Analysis of conditions of access to health care in Ivorian prisons: the case of the Abidjan and Korhogo Correctional Facilities" and it was conducted by TAPE Bi Sehi Antoine and DIABIA Thomas Mathieu in 2021. The objective was to analyze the conditions of access to health care in both the Abidjan and Korhogo Correctional Facilities according to the five (5) dimensions of accessing health care as recommended by PENCHANSKY R. *and al.* (1981 in RICHARD J-L, 2001, p. 14) [14] (TAPE B. S. A. *and al.*, 2021, p.67) [16]. In this second phase, it is about the factors that hinder access to health care for inmates in the Abidjan Correctional Facility (ACF).

Thus, the results are based on a literature review, semi-structured interviews and questionnaires. The bibliographic review consisted of consulting various works (dissertations, theses, reports, etc.) on the Internet and in university libraries (Peleforo Gon Coulibaly University of Korhogo and Félix Houphouet-Boigny University of Abidjan). The capitalization of all this information allowed us to understand the prison environment and, above all, the mechanisms of care administration in prison. Semi-structured interviews were conducted with the Ministry of Justice and Human Rights through the Penitentiary Administration (PA), prison governors and prison health service managers. These interviews were also extended to NGOs that intervene in the prison environment such as the Ivorian section of the International Committee of the Red Cross (ICRC), the National Human Rights Commission of Côte d'Ivoire (NHRCCI) and the West African section of Amnesty International. These interviews focused on the governance of prisons in Côte d'Ivoire as well as their capacity, the number of inmates, recurring pathologies in prisons and correctional facilities, and health care services.

Concerning the questionnaire, it is worth mentioning that due to the global health crisis linked to Covid19, the Ivorian justice system has formally prohibited contact with any

individual under arrest or in detention inside or outside of prisons, under penalty of prosecution. Thus, based on non-probability sampling using the convenience method (J-C. Hamel, 2017, 37p.), 25 former inmates (21 men and 4 women) were interviewed in Abidjan. They were all former prison inmates who had served their sentences during the last three (3) months prior to the study.

Table 1: Distribution of respondents by gender

Respondents Location	Men	Women	Total
ACF	21	4	25

Source: Field survey, TAPE, 2021[15]

All data collected were processed using STAT ⁄SE12 (masses of entries) and Microsoft office 2007 (Word and Excel) software. The geographical position of ACF was obtained using an OSMTracker GPS for Android™. The map was created using ArcGis software (ArcMap 10.2.1).
The statistical tests of Pearson's Chi-2 and Cramer's V were used to analyze the different data from the survey. The first test focused on the link or not between access to health care at ACF and the motive variables (ransom before being registered in the "sick book", inability of the State and the inmates' parents to pay the costs of care, lack of hospital beds in the referral hospitals, etc.) resulting from the survey. These results were then refined by Cramer's V test to determine if this relationship is strong in value to the point of retaining these variables as factors impeding inmates' access to prison health care. The closer Cramer's V is to 1, the stronger the dependence (DROESBEKE J- J., 1997 *In* TAPE B. S. A., 2017, p.220) [7, 16].

$$\text{Cramer's V} = \sqrt{\frac{\text{khi2}}{n \times \min\{(k-1),(r-1)\}}}$$

With chi-2 (calculated for each variable), n (sample size), k (number of columns), r (number of rows), min (is the minimum value of one of the two terms obtained at the end of the calculation). The choice of these different statistical tests is justified by the nature of the data collected during the survey. The margin of error is 5%.

Results

1. Health care provision at the Abidjan Correctional Facility (ACF)

Within the ACF, the health care offer is materialized by the presence of an Urban Health Center of Public Prison Dispensary (UHCPPD). This name is specific to prison health facilities in Côte d'Ivoire. This health center provides general and specialized medical services (gynecology, PPH prenatal care, HIV-AIDS). It also has a laboratory and an X-ray service. A total of 29 health workers with various skills work in these different services (see table 2 below).

Table 2: Number of health personnel at the ACF UHCPPD

N°	Specialities	Effectifs
1	Doctor	3
2	Nurse	13
3	Midewife	2
4	Nursing assistant	5
5	Engineer and technician (Lab and Radio)	2
6	Psychiatrist	2
7	Pharmacy management preparer	3
	Total	29

Source: Field survey, TAPE, 2021[15]

The level of the technical platform of this health center seems relatively good especially when we know those for whom these materials are intended. In addition to the observation and hospitalization beds, there is a centrifuge (to separate the raw blood from the serum), a mixer (to mix the reagent and the blood to give a result), a microscope (to identify the BK, a semi-automat (to dose the examinations to obtain the results of creatinine, urea, glycemia) and a pima (to see the CD4 of HIV).

Photo 1: View of the Rotofix 32 centrifuge machine at the ACF health center

(Source: Survey image, TAPE, 2021)

Photo 2: View of the semi-automated Sinothinker at the ACF health center

2. Health profile of the ACF inmates

The pathologies for which inmates seek prison health services are numerous. However, the most recurrent are malaria, Acute Respiratory Infections (ARI), dermatitis, beriberi, tuberculosis, and HIV-AIDS.
According to the prison health services register in 2020, there were 6088 cases of ARI, 3872 cases of malaria against 3790 cases of dermatitis (pustulosis, mycosis due to humidity) and 1473 cases of beriberi (avitaminosis B).

3. Care circuit and referral

This is the therapeutic itinerary that the inmates follow. Thus, there are two circuits of care: the circuit under detention and the circuit of ambulatory patients.

The first circuit concerns new prisoners who have not yet been tried and sentenced and who are received from their first day in prison (see figure 2 below).

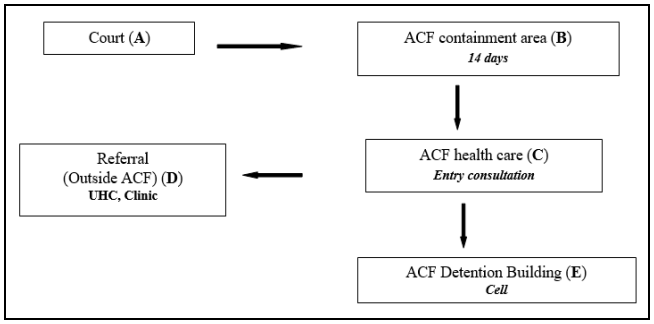

Fig 2: Diagram of the care circuit under a detention order at ACF (Design and production: TAPE, 2021) [15]

Four (4) positions, marked by letters (A, B, C, D, E) are represented on the diagram in figure 2. In position (A), the accused comes from the prosecutor's office and is immediately taken to the Covid 19 confinement area for 14 days (B). After these 14 days of observation, the defendant goes for an entrance consultation to identify the pathologies he suffered from before his incarceration (C). If a pathology is identified and requires outside care, the new inmate is referred to a hospital with a high level of technical support (UHC and the large clinics of Abidjan). He is then in position (D). But if the pathology identified does not require outside care, then the new prisoner remains under observation at the ACF health center (C). On the other hand, if a disease is identified or not, depending on the case, but does not require observation at the ACF health center, then the new prisoner goes to the cell (E).

The second circuit of care is reserved for former inmates, convicted or under detention order (see figure 3 below).

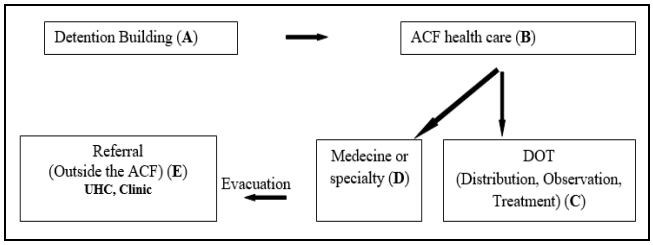

Fig 3: Outpatient circuit diagram at the ACF (Design and production: TAPE, 2021) [15]

Figure 3 shows that in the event of an illness declared among inmates of the Abidjan Correctional Facility, they leave their buildings or detention cells (A) to go to the prison's health center (B). According to our investigations, in practice, reaching this health center is not as easy as one might think. Indeed, whatever the state of health of an intimate is, he/she should necessarily be registered beforehand in the "sick notebook" managed by another intimate. Without this, it is almost impossible for the sick person to cross the threshold of his detention building, let alone the barrier that separates the detention buildings from the prison health center. Barricades and checkpoints are everywhere, guarded by more robust inmates or those invested with power conferred on them by certain prison officials. Very often, registrations in the "sick book" are made for amounts ranging from 100 CFA francs (€0.15) to 1000 CFA francs (€1.52) depending on the mood of the holder of this famous book. Once the "patient's notebook" step is completed, and the patient is at the health center, after the observations and registration by the nursing assistants, the patients are directed according to their pathology either to general medicine or to a specialty (D) or to the DOT (center for Distribution, Observation and Treatment) to obtain pharmaceutical products (C).

In general medicine or in specialty (D), if the case of the intimates is deemed serious, he/she is evacuated or referred to a higher-level hospital (UHC and the large clinics of Abidjan).

4. Factors hindering access to health care at the ACF

The obstacles to accessing health care for intimates in the Abidjan Correctional Facility are listed in table 3.

Table 3: Factors hindering access to health care for ACF inmates

N°	Obstacles to Accessing Care	Number of Respondents	Proportion
1	Recurrent drug shortage	3	12%
2	Low level of technical facilities	4	16%
3	Inability of the Government and the parents of the inmates to bear the costs of outside care	6	24%
4	Insufficient hospital beds in the referral hospitals	5	20%
5	Ransom of the inmates before being registered in the in the "sick book"	7	28%
	Total	25	100%

Source: Field survey, TAPE, 2021 [15]

The data recorded in Table 3 show that 28% of respondents mentioned cases of ransom being paid before being recorded in the "sick book" as a reason for not accessing care in the ACF. The inability of the Government and the inmates' parents to pay the costs of outside care (after the sick inmate has been transferred to a referral hospital) and the lack of hospital beds in the referral hospitals were mentioned by 24% and 20% of respondents respectively. Also, 16% and 12% of the statistical units reported the low level of technical facilities and the recurrent drug shortage as obstacles to access to health care in the ACF.

5. Influence of factors hindering access to health care in the ACF

Data on the impact of factors identified as obstacles to accessing health care in the Abidjan Correctional Facility are presented in Table 4.

Table 4: Influence of factors hindering access to health care in the ACF

Variables obstacles	Calculated Chi2	calculated degree of freedom (cdf) (k-1) (r-1)	Margin of Error	Chi2 Tabular	Number	Min {(k-1), (r-1)}	Cramer's V
Recurrent drug shortage	13,64	1	5%	3,84	25	1	0,7
Low level of technical support	12,04	1	5%	3,84	25	1	0,7
Inability of the Government and the inmates' parents to bear the costs of outside care	19,80	1	5%	3,84	25	1	0,9
Insufficient inpatient beds in referring hospitals	19,78	1	5%	3,84	25	1	0,9
Ransoming of inmates before being recorded in the "sick notebook"	13,62	1	5%	3,84	25	1	0,7

Source: Field survey; Data obtained after calculation, TAPE, 2022 [15]

Table 4 shows that access to health care for inmates in the ACF is statistically linked to
the recurrent drug shortage (chi2 cal (13.64) > chi2 tab (3.84)), the low level of technical facilities (chi2 cal (12.04) > chi2 tab (3.84)), the inability of the State and the inmates' parents to pay the costs of outside care (chi2 cal (19, 80) > chi2 tab (3.84)), the lack of hospital beds in referral hospitals (chi2 cal (19.78) > chi2 tab (3.84)), and the ransom of inmates who show signs of illness before being registered in the "sick book" (chi2 cal (13.62) > chi2 tab (3.84))
The table further indicates that, the relationship between these reason variables and the dependent variable (access) is strong. However, the most hindering variables are the inability of the state and the inmates' parents to pay the costs of outpatient care and the lack of inpatient beds in the referral hospitals. The value of Cramer's V is respectively equal to 0.9.
Thus, the variables cited by the inmates as factors hindering access to health care in the Abidjan Correctional Facility (ACF) are a priori justified.

Discussion

According to ITEN Anne *and al* (2003, p.932) [8], in Switzerland, access to health care for inmates of equivalent quality to that offered to the rest of the population in general is a major challenge, sometimes made difficult by the numerous complaints, requests and demands expressed by inmates. In Côte d'Ivoire, specifically in the Abidjan Correctional Facility (ACF), these obstacles to access to health care for inmates are reflected in the recurrent shortage of medicines and the low level of technical support. It is in this context that the National Human Rights Commission states that the prisons in Côte d'Ivoire do not comply with the required standards for prison facilities. In addition, the care of prisoners is made difficult by the inadequacy of equipment, the weakness and poor quality of the technical platform as well as, by the unavailability of medicines (NHRCCI, 2018, pp.8-9). According to LE BORGNE B. (2021, p.1) [9], drug shortages have become an increasingly frequent phenomenon with dramatic consequences for some patients. Indeed, sometimes vital drugs are out of stock and hospitals are unable to provide quality care to patients. Besides, in the Democratic Republic of Congo, at the large Makala prison, the eight-month stockout of drugs, laboratory reagents and food has caused numerous cases of illness and death among inmates (COLE E., 2020, p.1) [4].
The transfer of inmates from the ACF in emergency situations to referral health facilities also does not necessarily mean access to care. Obstacles arise from the inability of the state and the inmates' parents to bear the costs of care and the lack of hospital beds in these referral hospitals. A study conducted by TAPE B. S. A *and al* (2021, pp.71-73) [15] on "Analysis of conditions of access to health care in Ivorian prisons: the case of the Abidjan and Korhogo Correctional Facilities" revealed that after the transfer of prisoners to these referral health facilities, they are sent back without being cared because of the lack of a systematic collaboration mechanism between the prisons and these referral hospitals. This study also showed that the unavailability of beds in the referral hospitals and especially the financial incapacity of parents and the low budget for financing prison care seriously undermined the health of prisoners. For an estimated prison population of 8,000 individuals in 2021, the budget allocated to health care for the Abidjan Correctional Facility was between 8 and 10 million CFA francs (€12,196 to €152,245). This amount only takes into account pharmaceutical products not supplied by the Government. The costs of laboratory tests and health services outside of prisons are therefore excluded from this budget. The lack of investment in prison care is not unique to Côte d'Ivoire. Even states that have the necessary resources do not invest in the prison health system and neglect the public health problems that develop in

prisons (REYES H. 2007, p.46 in PENAL REFORM INTERNATIONAL, 2007, p7.) [15, 13]. In Switzerland, however, all the costs of care and treatment are not an obstacle to access to care in prison because they are covered either by the prison authorities or by health insurance funds (ITEN Anne *and al*., 2003, p.933) [9].

The informal governance system in place at the ACF, which involves other inmates holding inmates to ransom before they meet with health care staff, excludes patients from the prison health care system because of a lack of financial resources. This represents a high level of violation of the inmates' rights. At the ACF, however, this act has become commonplace in full view of the prison staff. Indeed, without being registered in the "sick book" kept by another inmate, who is more robust, it is almost impossible to access a prison health worker without paying amounts ranging from 100 CFA francs (€0.15) to 1000 CFA francs (€1.52). This situation was observed by LE MARCIS F. (2016, p.2016) [11]. According to him, the registration in "the sick book" is the object of covetousness. This gives rise to the commodification of entries in the said register. Thus, the extensive value of the visit to the infirmary reduces its health significance. And the weakest patients and those least able to pay for their registration in the "sick book" are also the least able to access care. In some African prisons, informal governance also exists. In Niger, in the civil prison of Niamey, the "super-inmates" restrict access to the infirmary to a maximum of 10 or 20 people per day. According to the inmates, it is those who have the trust of the super-inmates who have access to the health care service (BERRIH C., 2021, p.1) [3]. In contrast to Côte d'Ivoire, in Tajikistan, corruption and the existence of gangs are obstacles to accessing health care, so inmates are forced to pay for treatment. As for the United States, it is the non-existence and privatization of certain services that hinder access to care for prisoners (REYES H., 2007; HALIMOVA Z., 2004, in Penal Reform International, 2007, 7p.) [15, 8, 13].

Conclusion

Despite the efforts made by state and prison authorities to improve the organization of health care in prisons, access to health care in Ivorian prisons in general, and especially the one of Abidjan (ACF), remains difficult. The resulting obstacles are various, including the recurrent drug shortage, the low level of technical facilities, the inability of the Government and the inmates' parents to bear the costs of outside care. In addition, there is the lack of hospital beds in the referral hospitals and the ransoming of prisoners by other prisoners before they can access prison health staff. These shortcomings, combined with the dual governance of the ACF (state and informal), could be corrected through reforms of the normative framework, but also by having a concrete impact on the obstacles to accessing health care in prisons.

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