

## Special Article

## The Structure of Primary Health Care in Greek Correctional Facilities: A Critical Review

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### Abstract

**Introduction:** Primary healthcare of the incarcerated population is an essential and integral part of all correctional institutions in Greece, that is why it is considered the founding stone of prison healthcare services.

**Objective:** The goal of the present study is to evaluate and examine the literature about the primary healthcare landscape in the prison environment.

**Method:** In this study, English and Greek articles from the literature were included from 15<sup>th</sup> September 2019 to 30<sup>th</sup> September 2019, which were digitally available in PubMed and Google scholar. For the research, included keywords were combinations of the keywords “primary healthcare”, “correctional institutions”, “prison”.

**Conclusions - Discussion:** Because primary healthcare is the most effective, cost-effective, and efficient layer of healthcare in the public health system, it is available to all incarcerated individuals in Greece, but without challenges. Understaffing of healthcare personnel, higher prevalence of transmittable and non-transmittable ailments have proven to be a challenge for proper primary healthcare provision in Greek correctional facilities. Developing telemedicine and especially the mobile health ecosystem (mHealth), shows promising results to the improvement of healthcare in correctional institutes, cost reduction as well as equal access to healthcare.

**Keywords:** primary healthcare, correctional institutions, prison

### Introduction

Sustaining prisoners' health is a challenge for any society, especially since increasing imprisonment percentages have a direct impact on the general health state of prisoners. The assessment of prisoners' health levels and their access to healthcare during imprisonment has raised interest in the international research community. Prisoners display higher levels of physical and mental health issues, related to the prison environment, the main characteristics of which are isolation, overpopulation, violence, and insecurity (Marshall et al, 2000). Imprisonment is connected to unhealthy living habits, such as smoking, insufficient physical activity, and malnutrition (Butler et al, 2005).

The high frequency of health issues among prisoners has been attributed also to various

socio-economical traits, such as poverty, low income, low education levels, and unemployment (Butler et al, 2004). Research has shown that it is more difficult for prisoners to access health services, while they also do not receive proper healthcare compared to the general population (Conklin et al, 2000). Furthermore, prisoners' health and disease frequency differ depending on sex (Van den Bergh et al, 2011).

### Legal Framework

Before delving into the primary healthcare landscape in Greek Correctional Institutes, it is imperative to have a clear understanding of the legal framework that circulates it.

The Code of Medical Ethics for Professional Doctors (2005) stipulates that “*All doctors enjoy, during practicing the medical profession, scientific freedom and freedom of conscience and*

*can provide their medical services with respect to human dignity”.*

Article 12 of the International Treaty for Economic, Social and Cultural Rights, establishes “*the right of every individual to the best possible level of physical and mental health*”. Moreover, prisoners should have full access to health services, available in their country, without discrimination based on their legal state (Watson et al, 2004). Given the fact that prisoners are deprived of the freedom to choose among health services and doctors, the obligation of every member state of the European Council “*to provide for the best possible treatment*” becomes even more imperative (International covenant on economic, social and cultural rights, 2019).

Therefore, the updated European regulations concerning correctional institutes describe the obligation of their administration to safeguard the health of prisoners (article 39), as well as the need for close cooperation of the prison’s health services with public health services (article 40). It is also recommended for each correctional institute to employ at least one trainee doctor (article 41) (Committee of Ministers - Council of Europe, 2006).

In fact, according to article 4 of the Constitution of Greece, all citizens have equal rights and obligations. Moreover, the Correctional Code of Greece (CC) (1999) stipulates that all prisoners have equal rights to free citizens, apart, of course, from deprivation of their personal freedom. Among these rights is the right to health, thus ensuring decent conditions of medical care, whenever it is necessary.

Indeed, according to the Correctional Code, during entry of a prisoner to a correctional institute, the resident doctor is obliged to examine the prisoner, conducting a full clinical examination and record of their medical history. According to article 13 of the Code of Medical Ethics, “*the doctor is obliged to maintain full confidentiality on any information that may come to their attention or that is revealed to them by the patient or third parties, while practicing their duties, which concerns the patient or those close to them. Lifting of medical confidentiality is only allowed when the doctor aims to the fulfillment of a legal duty*”. Furthermore, according to article 14, the doctor should maintain a record, in electronic or other forms, on ailments or health

of their patients. (Code of Professional Conduct for Doctors, 2005)

Also, the Correctional Code (1999), in article 28, specifies that “*a health card is maintained for every prisoner, in which data of medical interest is entered, such as the time of conducting of every medical examination, the relevant diagnosis, the recommended treatment, as well as the full name, specialization, and signature of the examining doctor. This card is kept in the medical records and accompanies the prisoner in each transfer. Knowledge of the contents of the above-mentioned card is extended only to the prisoner or their legal representative, the responsible judicial officer, and the rest responsible departments of the correctional institute, every time that the health of the prisoner is evaluated in order to make the specific decision*”. It becomes clear that keeping a detailed medical record within the prison is of particular importance for practical reasons as well, considered that, due to possible transfers of prisoners, they are not always under the supervision of the same doctor.

Additionally, the Code of Medical Ethics (article 12, paragraph 1), stipulates that “*the doctor is not allowed to proceed to the execution of any medical act without the prior consent of the patient*”. Article 29, paragraphs 2 & 3 of the Correctional Code also indicate that “*any kind of medical examination, surgical intervention, or treatment on a prisoner is allowed only with their consent. If the prisoner is not in a state of consent or refuses to consent to a medical act, according to the previous paragraph and this act is deemed necessary for their wellbeing, the responsible judicial officer commands the taking of appropriate per-case measures*”. It is noteworthy that although according to Type A and B Correctional Institutes Operations Internal Regulation (Ministerial Decree No. 58819/7.4.2003, Greek Government Gazette B’ 463/17.4.2003, article 45) the doctor is obliged to perform regular venipunctures, as well as vaccinations for the prisoners, but this is possible only if the prisoners offer their consent. Prisoners’ consent is necessary also for HIV testing, according to regulation R(98)7 of the European Council (Recommendation No R(98)7, 1998).

In article 45 of the Greek Correctional Code (1999) it is mentioned that, “*the prison doctor is the one that issues all the necessary medical*

reports for prisoners' transfers, awards of pardons and other matters of penalties execution. It is also he who advises on the admission of prisoner-patients in the correctional institute infirmary, as an emergency or as per schedule". In article 29, par. 1 it is mentioned that "it is forbidden to perform any medical or other similar experiments, that put at risk prisoners' life, physical or mental health or insult their dignity and personality, even if they offer consent". It is worth noting that in Greece, conducting any research within a correctional institute is conditional on the written consent of the supervising authority, which is the Greek Ministry of Citizen Protection.

### **Socio-demographic characteristics of incarcerated**

Most prisoners, already upon entering prison, comprise a group of socially excluded individuals with heterogeneous socioeconomic characteristics (Van den Bergh, 2011). The majority come from poor, underprivileged, and socially vulnerable groups that have not received the necessary education and training (Van den Bergh, 2011; Harlow, 2003; WHO 2013). In the United Kingdom prisoners are, in comparison to the general population, 13 times more likely to have grown up out of family and to be unemployed. In fact, prior housing problems are linked to a large extent to the experience of imprisonment (Courtenay-Quirk, 2008).

Many prisoners have literacy problems and show lower IQs compared to the general mean average. 80% of prisoners have writing skills, 65% have reading and math skills and 50% have reading skills below the level of an 11-year old (Social Exclusion Unit, 2002). In a research carried out in Scotland almost 14% of prisoners mentioned that they have difficulty in writing, 12% in reading, and 11% in reading and/or math (Carnie et al, 2015).

The particularities of this social group, but also its increased needs for care, arise more intensely in the healthcare area (White, 2006). Prisoners comprise an understudied population in the healthcare field, although they have a disproportionally high prevalence for many diseases and their health needs are much greater than those corresponding to the general population (White, 2006; Condon 2007).

Prisoners tend to have a poorer level of health and this is associated with an unhealthy way of

life, such as the use of narcotic substances, alcohol, and smoking (Rutherford 2009; Fazel 2011). Health problems have been also attributed to various socio-economic factors including poverty, low income, and unemployment (Butler et al, 2004; Fazel et al, 2011; Kunst et al, 2005; Greenberg et al, 2008). The characteristics of the prison environment, such as violence, overpopulation, and isolation affect the prisoners' physical and mental health (Council of Scientific Affairs, 1990; Marshall et al, 2000; Barry et al, 2010). Compared to the general population, prisoners have a poorer level of physical and mental health, as they face chronic diseases and mental disorders, increased history of self-injury, lower life expectancy, while they experience more frequently incidents of physical and sexual abuse (Barry et al, 2010). Gender is considered as an important factor for evaluating the health state of the prison population (Clow et al, 2009; Moschetti et al, 2015). Incarcerated women are in a particularly disadvantageous position in a correctional institute, which is designed by men for men. Worldwide, women entering prisons often come from a financially and socially underprivileged environment, experience bigger problems of physical and mental health and have more diversified needs than male prisoners (Van den Bergh et al, 2011; Corston et al, 2007; Mooney et al, 2002; WHO, 2009).

Regarding Greece, according to recent data from Prison World Database concerning the year 2019, the number of prisoners in Greek prisons is 10,736. Out of those 31,1% are detainees pending trial, while there are 100 prisoners for every 100,000 inhabitants. Moreover, out of all prisoners in Greece, 5.2% are women. Foreign prisoners amount to 52.7%. According to the same data, as far as infrastructure in Greece is concerned, facilities have a capacity of 9,935 prisoners. However, occupancy of Greek prisons is at 102.6% which is indicative of the overpopulation problem in Greece's correctional system.

### **The health needs of the Incarcerated**

The particular health needs of incarcerated, according to the Greek and international bibliography, result in an increased demand for services of primary healthcare in correctional institutes, which effectively has led certain countries to proceed to a restructuring of their healthcare systems, in order to satisfy these

needs more efficiently. For example, seven European countries, including Norway, United Kingdom, and France, have transferred health services provided to prisoners from the Ministry of Justice to the Ministry of Health with healthcare focusing increasingly on primary healthcare (Hayton et al, 2006; Condon et al, 2007). The main reasons behind this change was the need to improve the quality of healthcare services provided within the correctional institutes, as well as the easier access to medical care, as it is available in community facilities (EMCDDA, 2012).

Prisoners' physical and mental health is affected during incarceration. In particular, prisoners are at higher risk of developing physical health problems compared to the general population, since they show high rates of morbidity when entering prison, especially for chronic diseases, infectious diseases, and sexually transmitted diseases (Butler et al, 2004; Macalino et al, 2005; WHO, 2013). Specifically, prisoners have a higher risk of developing cardiovascular diseases, certain types of cancer, and diabetes (NCCHC, 2002; Fazel et al, 2011; WHO, 2013;). According to Wilper et al, (2009), prisoners display higher rates of hypertension, diabetes, asthma, and arthritis compared to the general population.

Regarding physical health, mental illnesses among prisoners show high rates in numerous countries globally. In 2001 about 450 million people worldwide suffered from mental disorders or behavioral disturbances (Sayers, 2001). Mental health problems are especially widespread and are the most common and significant cause of morbidity in prisons (Birmingham, 2003; Brugha et al, 2005; Fazel et al, 2012). Incidents of abuse, deprivation, and use of substances are common among the prisoners' population. Furthermore, individuals with mental disorders are especially vulnerable to imprisonment (Birmingham, 2003). The prevalence of a wide range of mental disorders is more than double in prisons than the corresponding one in the community (Sirdifield et al, 2009). It is estimated that in European countries the percentage of prisoners facing mental health problems is more than 40% (WHO, 2008). Prisoners' mental health affects both their term in prison and their life after their release. Mental health problems may preexist or develop during the imprisonment term and deteriorate due to the particular environment of

the prison and the imprisonment conditions. Mental illness increases the risk of committing a crime, as well as the post-release relapse (Kunst et al, 2005; Fazel et al, 2011). Providing appropriate psychological support may contribute significantly to reducing the risk of new delinquent behavior (Sirdifield et al, 2009; Moschetti et al, 2015).

Regarding the effect of environmental factors, overpopulation, various forms of violence, solitude, lack of privacy, lack of substantial activity, isolation of social networks, poor relations with inmates, lack of contact with family members, insecurity about future prospects (work, relationships, etc.), as well as insufficient health services are some of the factors that may impact prisoners' mental state. According to Sirdifield et al., (2009), big periods of isolation have a negative effect on mental health and create intense feelings of anger, disappointment, and anxiety. Relations between prison staff and prisoners are a significant factor affecting anxiety levels. The way of life in prison, as well as stressful incidents experienced by prisoners, are strongly connected also to sleep disorders (Nurse et al, 2003; Sirdifield, 2009).

Detainees pending trial (mostly women) exhibit higher rates of depression compared to convicts, while prisoners with a long incarceration experience face less risk of displaying mental disorders during their sentence serving. It has been established that mental disorders are demonstrated in 37% of convicted male prisoners compared to 63% of male detainees pending trial. In women, these rates are 57% and 76% respectively (Andersen et al, 2000; Ministerial Decree, 2014).

### **Prisoners' health in Greek correctional institutes**

In Greece, the presence of health professionals during imprisonment is considered limited (Athanasopoulou, 2016). Regarding medical staff in Greek correctional institutes, in 2010 there was a total of 71 employees, instead of 182 assigned and specifically, 11 instead of 51 doctors, 4 instead of 19 dentists, 2 instead of 5 pharmacists and 54 instead of 107 nurses, while in 2014 there were 77 instead of 140 assigned employees and specifically 6 instead of 50 doctors and 71 instead of 90 nurses (Government of Greece, 2010; Presidential Decree, 2014; Ministerial Decree 70193, 2014; Ministerial Decree 82192, 2014; Ministerial Decree 102371,

2014;). Regarding the headcount of staff caring for mental health in Greek prisons, this is found to be among the lowest in Europe (Blaauw et al, 2000). A typical fact is that understaffing often leads correctional officers, even prisoners, to assume the responsibility of medicine distribution (Cheliotis, 2012). Visits from external specialist doctors are too short to fill the needs of prisoners (Andersen et al 2000; Karidis et al, 2011).

Data regarding the prevalence of non-infectious diseases in the Greek correctional system is very rare (Bania et al, 2016). The most common physical health problems among prisoners in local correctional institutes are hypertension, diabetes mellitus, as well as cardiovascular and respiratory diseases (Andersen et al, 2000; Athanasopoulou, 2016). As far as transmittable diseases are concerned, hepatitis occurrence is increased, due to risky behaviors. As a result of the constant movement of prisoners inside and outside the correctional system (imprisonments, releases), the phenomenon of “revolving doors” is observed, which has an impact on disease prevention and control within the community where prisoners are released (Anastassopoulou et al, 1998; Malliori et al, 1998; Cheliotis, 2012)

High rates of self-injuries are strongly connected to the crowded conditions found in correctional institutions throughout Greece. However, these rates are reduced significantly in farm prisons (Spinellis et al, 1997). Regarding risk factors, smoking habits are particularly widespread in Greek prisons (Bania et al, 2016). Finally, the prevalence of mental disorders in the Greek correctional system seems to be among the highest compared to other European countries (Alevizopoulos et al, 2007). According to official data, mental disorder occurrence in Greek prisons is significantly higher than that of the general population (Livaditis et al, 2000; Fotiadou et al, 2006). Studies in Greece report that a large percentage of prisoners suffer from some kind of anxiety or mental disorder, like major depression (Andersen et al, 2000; Fotiadou et al, 2006; Alevizopoulos et al, 2007; Maniadaki et al, 2008).

Creative use of free time, reconnection to the educational process, acquiring new skills, contact, and collaboration with instructors coming to prison from “outside” seem to have a beneficial effect on prisoners’ personalities (Dimitrouli et al, 2006). In Greece, there are

Prison Second Opportunity Schools in operation. These are high schools for adults residing inside correctional institutes. This institution offers adult prisoners, who did not complete their compulsory education, the ability to acquire knowledge, skills, and a high school diploma. The aim is for learners to become reconnected to the educational training systems, to form a positive stance towards learning, to reinforce their personalities, and finally to access the labor market.

### **Provision of healthcare in Greek correctional institutes**

Healthcare services in prisons are provided by the medical and nursing staff. If no resident doctor is in place, one can serve part-time under contract with the management, paid on a per-visit basis (Ministerial Decree 58819, 2003). Each new prisoner, during entrance to the correctional institute, visits both Social Services as well as the Infirmary, where personal and family medical history is recorded. This record is handwritten, as well as electronic, using a system specifically created for Prisons of the Ministry of Citizen Protection. Prisoners are given all the necessary instructions during admission, by the medical staff and they are informed on the way they can contact the health services of the correctional institute, in case of a medical need. The practice of medicine is applied according to the Code of Medical Ethics, as for all citizens.

Whenever they wish, prisoners can ask to be examined by the prison doctor, provided that a doctor is present at that time in the correctional institute, since the doctor attendance days and hours in the prison are specific. This occurs because resident doctors in a prison are virtually non-existent. The majority of doctors offering services to prisoner patients are paid per visit by the Ministry of Citizen Protection, which means that they are present in the prison infirmary on specific days and hours. During most hours in the day and on weekends, prison infirmaries are without a doctor (the exception to this is the correctional institute of Korydallos, where a resident doctor is present, according to law 2776/99 article 27§3).

### **Admission and placement of prisoners**

As per research findings, what usually takes place is that the prisoner is taken, accompanied by the guarding staff, to the infirmary for an examination by the doctor on the same day and if

a disease is diagnosed, the doctor applies the appropriate treatment or requests an examination by a specialist doctor (in case of an emergency, the prisoner will be transported to the local hospital on the same or next day, or else an examination will be scheduled on a reasonable date depending on the medical problem, the hospital appointment list and the approval process by the responsible party). In case that the doctor is absent, the nursing staff, after filling in the basic information (full name, date of birth, etc.) on the health card created at that time, check the medical reports or medications that may come with the prisoner (the registry sends to the infirmary any medical data on the prisoner's personal record) and if there is a prescription signed by an appointed doctor, the necessary medications are administered. If a prisoner faces a medical emergency, the nursing staff will contact the doctor and if there is an urgent need and the doctor is available, they will come to the prison themselves to examine the prisoner, or else the warden (and in grave need the director) will be notified in order to decide on an emergency transfer to the hospital on call. In cases where there is no medical emergency for the prisoner, they will be informed on the infirmary operational procedures and it will be recommended that they return on the next day or at least very soon for an examination by the doctor. Very often the prisoner does not show up and is repeatedly called, usually because the infirmary is overcrowded by prisoners. Prisoners who have applied for work also pay a visit to the doctor, as it is mandatory for them to be medically examined.

Prisoners may see the doctor (general practitioner, psychiatrist, or dentist), whenever they request it, by delivering a "piece of paper" with their name. Prisoners may also come for an examination in emergencies and whenever deemed necessary by the doctor or recommended by the nurse, the warden, the lieutenant guard, or any guarding correctional officer. Doctors are also responsible for the therapeutic, dietary, and medical treatment of prisoners, depending on the seriousness. Moreover, each prisoner is subjected to laboratory and radiological examination, granted that the prisoners belong to high-risk groups for hepatitis B and C, AIDS, and tuberculosis. All chronic patients are also subjected to an examination in order to monitor the progress of their disease. The above examination must be repeated, as per the treating

physician's recommendation. In order to conduct the above tests, prisoners are transferred daily to local hospitals for other examinations and tests as well, such as cardiological, surgical, orthopedical, ophthalmological, computed tomography, magnetic resonance, etc. Understandably, in correctional institutes, healthcare services are provided at a primary level. Regarding prisoners' dental hygiene, dental services provided are mainly extractions and fillings. The cost of prosthetic work burdens the inmates.

It is clear that the daily transfer of prisoners to the hospital means bureaucratic procedures for the infirmary and the registry, search during prisoners' exiting and entering by the external guard officers, however with a valid risk of escape. Regarding administering of medicines, pathological and psychiatric medication is administered with a medical prescription. Nevertheless, the distribution of psychiatric medication takes place every morning, noon, and evening (in individual containers for each prisoner) by the nursing staff. There is however a limitation that their administering is done shortly before prison evening lockdown for "safety" reasons. At this point, it should be mentioned that the Correctional Code provides the capability to establish and operate health centers and special regional practices inside or outside the prison (Act 2345, 1995).

Finally, regarding healthcare continuity, correctional institutes are charged with caring, medical treatment, as well as transporting prisoners to any correctional institute or transit centers where they may be transferred. In cases where the need for prisoners' specialized treatment is recognized, correctional institutes see to all the necessary actions to further treat any health problems they are facing.

### **Conclusions - Discussion**

Prisoners' health is one of the major challenges for public health. Inmates are an understudied population in terms of healthcare provision, despite the fact they display high prevalence rates for many diseases. Demand for primary healthcare in prisons has increased. The main healthcare concerns in prisons are mental health, use of substances, and infectious diseases. It is understood that there is an excess of legislation on the issue of primary healthcare provision in correctional institutes in Greece. However, the continuous issuing of new laws and ministerial

decreases, in order to fill any gaps that are recognized from time to time in the legal framework, cannot offer a substantial solution to the important matter of healthcare provision in this segment, unless all health units operating in every correction institute are actually integrated into the Greek National Health System.

On the contrary, the prevalent practice in Greece, i.e. to regard the position of a prison doctor as rural service to be filled in intermittently by young non-specialized doctors (and occasionally only by specialized general practitioners), is altogether problematic. Such a concept could only lead to a superficial and fragmentary treatment of prisoners' health problems. Doctors who know that they will remain for a specific time period and will then leave, have no time, capability, and perhaps the disposition to organize their infirmary and their associations with the health services in an efficient and sustainable way. Therefore, as soon as doctors manage to earn the prisoners' trust, after a certain time period, they are forced to leave in order to be replaced by the next provincial doctor, who will also need a reasonable time period to achieve the same goal.

In conclusion, the per-visit doctor system does not offer a meaningful coverage of prisoners' health needs, granted that doctors are present in the correctional institute infirmary only for a few hours per week or per month. Consequently, they are unable to be acquainted with the prisoners' health condition, to daily monitor the progress of the disease and the response to the medical treatment, resulting in their inability to correctly evaluate hospital transfers. It should be noted that transferring a prisoner to a hospital incurs additional cost, as it involves two police officers or external guard officers, plus a driver. Therefore, on the one hand, treatment costs more than prevention and on the other hand, the health of prisoners and corrections institute staff is at risk. It is can be clearly understood that under these conditions, proper healthcare is impossible to be provided. Moreover, senseless spending of human and financial resources takes place, in order to transfer prisoners to other medical facilities and hospitals, even in situations wherein a properly equipped and staffed prison health system they could be treated timely.

Primary healthcare services in prisons should be provided at a high level. Most prisoners return to the community after a long incarceration period

and imprisonment may present an opportunity for preventing and curing diseases and addressing risk behaviors. It is recommended to establish programs aiming to stop smoking, prevent contagious diseases, manage stress, deal with obesity, manage free time, dental hygiene, etc. The incarceration period is also an ideal choice to apply for drug use rehabilitation programs. Concerning mental health, it is necessary to fully comprehend the environmental and imprisonment conditions that increase stress. It is recommended to take measures (psychological support, overpopulation reduction, opportunity for physical and other activities, etc.) in order to address the psychological impact of imprisonment. Developing telemedicine and especially the mobile health ecosystem (mHealth), could lead to the improvement of healthcare in correctional institutes, cost reduction as well as equal access to healthcare.

It is therefore essential to conduct future research, in order to identify determining health factors among the incarcerated population. This way the short-term and long-term impact of imprisonment will be more clearly demonstrated, as well as the demographic, penal, and environmental factors that have a positive or negative effect on prisoners' health.

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