



Palestinian Center for Human Rights (PCHR)  
المركز الفلسطيني لحقوق الإنسان

# Medical Equipment and Medicines in Gaza Strip

## Perpetual Shortage and Serious Repercussions

Report on the impact of perpetual shortage of medicines, medical supplies  
and equipment on the Gaza Strip patients and their right to health

2023 March

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## Introduction

The right to health is a fundamental social and economic right codified by international covenants relevant to social and economic rights. It is the right of everyone to enjoy the highest attainable standard of physical and mental health, the right to adequate healthcare and access to proper treatment. Over the years, the Palestinian Centre for Human Rights (PCHR) has paid special attention to the protection, promotion, and respect of the right to health in order to ensure that all Palestinians citizens have their rights pertaining to health.

In this context, PCHR issues this report to tackle the deteriorating health conditions in the Gaza Strip, sheds the light on the suffering of the Gaza Strip population due to the frail healthcare system arising from the shortage of medicines and medical supplies, and the lack or obsolescence of medical equipment in healthcare facilities.

The report provides an overview of the impact of the shortage of drugs, medical supplies and equipment on the following departments: emergency, surgery and intensive care, orthopedics, primary health care, oncology and hematology, mental health and neurology, Genetic immunodeficiency diseases, epidemics, maternal and child health, nephrology and hemodialysis, ophthalmology, and open heart and cardiac catheterization.

The report attributes the Gaza Strip fragile medical system to two main factors:

1- The 16-year inhuman and illegal closure imposed on the Gaza Strip, which has caused deterioration of healthcare services in terms of availability, access, acceptability and quality, in spite of the Israeli Occupation's legal duties and responsibility for health and integrity of those under its occupation.

2- The Palestinian political division, which has impeded the development of a coherent national healthcare system that meets the health needs of all Palestinians in the Gaza Strip and the West Bank alike, and has led to lack of plans aiming to correct and develop the healthcare system in Palestine, including equality of service provision to all governorates,

localization of health services, and increase in operating expenses in addition to working on adopting a drug policy that guarantees the availability of treatment for all citizens, and the availability of all medical equipment at the governmental healthcare facilities.

Healthcare services in the Gaza strip suffer from the restrictions imposed by the Israeli authorities on the entry of medical equipment and devices; most notably the diagnostic medical devices to diagnose and treat cancer patients, including interventional radiology and ultrasonography devices. The Israeli occupation authorities also ban the entry of spare parts necessary for the maintenance of inoperative medical devices, having serious repercussions on the lives of thousands of patients in the Gaza Strip.

The report stresses Israel's obligations stipulated in the international humanitarian law and international human rights law as an occupying power, to provide Gaza Strip population with medical supplies, and bring in the necessary foodstuffs, medical disposables and other articles if the occupied territory's resources are inadequate. Also, Israel as an occupying power shall respect, protect, and fulfill the Gaza Strip population's right to the highest attainable standard of health, and it extends not only to the provision of health care, but also to the social and economic conditions and underlying fundamental determinants of health.

The report uses PCHR's investigations, monitoring and documentation in addition to information issued by the Ministry of Health (MOH) and interviews conducted by PCHR's researchers with the doctors and medical facilities to shed light on their experience with the shortage of drugs and medical disposables at the hospitals' departments and various medical centers. The report also presents several statements from Gaza Strip patients documenting their suffering.



## i. Top challenges facing the healthcare system in light of the deteriorating conditions of the right to health

The 16-year Israeli-imposed closure on the Gaza Strip has undermined the healthcare system in the Gaza Strip, undergoing immense challenges during these years that included excess of casualties inflicted by the recurrent Israeli aggressions and the outbreak of COVID-19. This has revealed the system's incapability of providing medical services during states of emergency in light of lack of resources and capabilities to conduct medical interventions and preserve citizens' rights to health .<sup>1</sup>

The Israeli restrictions imposed on the entry of medical equipment continued to hurdle the ability of the Gaza Strip health facilities to provide medical services and keep pace with the health needs of the Strip's population. Israel's onerous "dual-use list" of materials it classifies as having a potential military use restricts entry of some medical equipment that serves the health facilities, including X-ray scanners and medical radioisotope.<sup>2</sup>

<sup>1</sup> «The health sector is always on the edge of collapsing» MAP/UK, 27Feb2022.

<sup>2</sup> Written statement submitted by Medical Aid for Palestinians (MAP) to the Human Rights Council under agenda item 7 (A/HRC/43/NGO/203), [https://www.map.org.uk/downloads/map-written-statement-to-unhrc43-\(1\).pdf](https://www.map.org.uk/downloads/map-written-statement-to-unhrc43-(1).pdf)

The unjust Israeli measures and policies taken against the Palestinians are subject to international human rights law, despite Israel's disavowal and disapproval to apply the human rights covenants on the occupied Palestinian territory (oPt) claiming it is not applicable beyond its sovereign territory.<sup>3</sup> This is denied by the International Court of Justice (ICJ),<sup>4</sup> the UN General Assembly,<sup>5</sup> and human rights treaty bodies, which affirm Israel's obligations towards the population of the oPt. This applies in conjunction with their obligations under international humanitarian law.<sup>6</sup> Thus, it is obliged to apply what is stated in Article (12) of the International Covenant on Economic, Social and Cultural Rights (ICESCR) as a state party, stipulating that the States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. Which is not only limited to the provision of healthcare, but also the social and economic conditions and the basic determinants of the right to health.<sup>7</sup>

The Palestinian political division has also created uneven development of the Palestinian MOH institutions, preventing the development of a coherent national health system that meets the health needs of all Palestinians equally in the Gaza Strip and the West Bank. The governmental bodies in the West Bank and the Gaza Strip bear the responsibility for providing financial resources and developing plans and policies that would ensure Gaza Strip citizens' enjoyment of their right to health. Moreover, they shall take all possible measures to increase the operating expenses to purchase and provide medical equipment and disposables as well as the essential drugs necessary for the Gaza Strip residents' full enjoyment of their health rights. Also, Palestine's accession to the ICESCR in 2014 obligate it to fulfill its obligations and apply the Covenant's provisions, especially Article 12. According to the Covenant, failure to fulfill its obligations pertaining to the right to health cannot be justified by lack of resources as this right must be guaranteed to the maximum of the available resources, even if these are tight, and this includes taking the necessary measures to fulfill the full exercise of the right to health.<sup>8</sup>

<sup>3</sup> the fourth periodic report of Israel (E/C.12/ISR/4), paragraph (8), on 19 January 2019.

<sup>4</sup> ICJ Advisory Opinion on the Wall, Paragraph 106).

<sup>5</sup> UN General Assembly Resolution 71/98 (A/RES/71/98), on 23 December 2016.

<sup>6</sup> The report of the UN High Commissioner for Human Rights "Human Rights Situation in the Occupied Palestinian Territory, including East Jerusalem", (A/HRC/34/38), Paragraph (6-9), on 13 April 2007.

<sup>7</sup> CESCR General Comment No. 14, Paragraphs (11-12), in 2000.

<sup>8</sup> International Covenant on Economic and Social Rights.

The health system in the Gaza Strip provides its services through four healthcare providers: Ministry of Health (MOH), Military Medical Services, UNRWA, and private and non-governmental healthcare centers. MOH is considered the main and official provider of primary, secondary and specialized health care via 13 hospitals and 52 primary healthcare centers. The following are challenges facing governmental health facilities:

## 1. Shortage of medical equipment

The 16-year Israeli closure on the Gaza Strip has impeded the entry of new medical equipment or spare parts necessary for the maintenance of the broken machines, which are necessary for diagnosing and treating patients, especially patients with cancer, heart and blood diseases.<sup>9</sup> The Israeli authorities are fully responsible for providing medical supplies to the Gaza Strip residents according to Articles 55 and 56 of the 1949 Fourth Geneva Convention<sup>10</sup>. However, the Israeli authorities evade their responsibilities, despite admitting there is shortage of medical supplies in the Gaza Strip claiming that the Palestinians themselves fail to purchase the equipment and allocate the budget for it.<sup>11</sup>

The Oslo Agreement and the underlying transfer of responsibility of providing healthcare services to the Palestinian authority (PA) do not absolve the Israeli occupation from its obligations towards health care in the oPt, according to Article (8) of the Fourth Geneva Convention, which stipulates that "Protected persons may in no circumstances renounce in part or in entirety the rights secured to them by the present Convention", and Article (47) of the same Convention codifies that "Protected persons who are in occupied territory shall not be deprived, in any case or in any manner whatsoever, of the benefits of the present Convention by any change introduced, ... by any agreement concluded between the authorities of the occupied territories and the Occupying Power...".<sup>12</sup>

<sup>9</sup> World Health Organization, "Medical equipment in Gaza's hospitals", P6, link: [http://www.emro.who.int/images/stories/palestine/documents/pdf/Medical\\_equipment\\_in\\_Gaza\\_EB\\_reportJuly09.pdf](http://www.emro.who.int/images/stories/palestine/documents/pdf/Medical_equipment_in_Gaza_EB_reportJuly09.pdf)

<sup>10</sup> Fourth Geneva Convention relative to the Protection of Civilian Persons in Time of War, 12 August 1949.

<sup>11</sup> IDF, Statements by Major Moshe Levy, Public Relations Department for Coordination and Liaison in the Gaza Strip "Medical Supplies to Gaza: A Beginner's Guide", link: <https://www.idf.il/en/mini-sites/humanitarian-missions/medical-supplies-to-gaza-a-beginner-s-guide/>

<sup>12</sup> Fourth Geneva Convention relative to the Protection of Civilian Persons in Time of War, 12 August 1949.



Not only did Israel renounce its legal obligations towards the Gaza Strip residents, but also its tight restrictions on the entry of medical equipment led to inadequate availability of health care in the Gaza Strip. According to the World Health Organization (WHO), of requests for entry of X-ray/ CT scan spare parts or equipment, 69% were denied.<sup>13</sup>

Moreover, significant services at the Gaza Strip health facilities suffer from shortage of equipment, poor maintenance services, and the unavailability of spare parts. This has rendered these facilities incapable and delay treatment of hundreds of patients, as the demand for diagnostic imaging services is increasing; most notably magnetic resonance imaging (MRI), computed tomography (CT), ultrasound, interventional radiology equipment, cardiac imaging, mammography, and bone densitometry by doctors and specialists.<sup>14</sup>

Although in 2022 the Israeli occupation authorities allowed the entry of 6 X-ray machines for MOH's primary healthcare facilities due to the intervention of WHO<sup>15</sup> and the International Committee of the Red Cross (ICRC), the healthcare facilities in general are still in dire need of new medical devices and in various medical fields as well as spare parts necessary for the maintenance of broken devices.



<sup>13</sup> WHO, Health Cluster "15 years of blockade and health in Gaza (July 2022)", link: [https://www.emro.who.int/images/stories/palestine/documents/15\\_years\\_of\\_blockade\\_and\\_health\\_in-gaza.pdf?ua=1](https://www.emro.who.int/images/stories/palestine/documents/15_years_of_blockade_and_health_in-gaza.pdf?ua=1)

<sup>14</sup> A workshop held by PCHR: "Effects of Medical Devices Shortage on Gaza Strips Patients, intervention was made by Assistant Undersecretary at the MOH, Engineer Bassam Al-Hamadeen, on 22 November 2022.

<sup>15</sup> Information reported by Eng. Karam Al-Halabi, in charge of medical supplies file in Gaza City at WHO, 30 January 2023.



The ability of private and non-governmental hospitals and medical centers to supply various medical devices in advanced fields is an important indicator that has revealed some reasons for the lack of medical equipment in governmental healthcare facilities. This is mainly attributed to non-allocation of sufficient financial expenditure to purchase new devices by MOH in both Gaza and Ramallah and waiting to get these devices through international donations and grants, negatively affecting the conditions of the patients in the Gaza Strip.<sup>16</sup>

There are 12 X-ray machines in MOH's primary healthcare centers in the Gaza Strip that still displays x-ray films using old and worn-out developing machines, affecting the quality of x-ray images. There are also 5 mammograms only in governmental hospitals in the Gaza Strip where medical imaging can only be provided for women who are severely sick and is not part of the routine examination. The availability of mammograms in the Gaza Strip is less than the normal rate per million people.<sup>17</sup>

The Israeli authorities ban entry of imaging devices for early detection and diagnosis of breast cancer among women. Breast cancer is the most-commonly diagnosed cancer among females constituting 34.3% of the types of cancer as in 2021 the number of cases diagnosed with breast cancer reached 363. Also, the Israeli occupation bans the entry of a new cardia catheterization device to Al-Shifa Medical Complex in light of the increase in number of patients with heart and coronary artery patients and the constant need to perform diagnostic and therapeutic catheterization surgeries to save their lives and end their suffering instead of referring them for treatment abroad.



<sup>16</sup> MOH- Gaza, annual report 2021, Page 31 table no. 5 "MOH Donations"- specialized medical tools and equipment. This item is not available in Table 2: "MOH's annual financial payments," reflecting reliance on donations.

<sup>17</sup> State of Palestine MOH, Specialized Treatment Unit Report, the Palestinian Health Information Center (PHIC), 2019.

Shortage of MRI machines is one of the main reasons for referring patients for treatment abroad,<sup>18</sup> as the number of MRI scanners in Gaza totals 3 while two are out-of-service. According to international standards, availability of 5 MRI machines suffices million people, meaning that the Gaza Strip will need at least 12 machines by 2025. Also, there are only 18 CT scanners in the Gaza Strip hospitals and guided by the international standard of 1 per 100,000, the Gaza population will need 24 operative devices by 2025. With the high cancer rates in the Gaza Strip, there is an urgent need for radiotherapy devices, including gamma camera (a CT machine equipped with high energy collimator). According to the international standards, there should be about 12 radiotherapy units by 2025 to ensure the acceptability of healthcare system in the Gaza Strip.<sup>19</sup>

In addition, radiation detector are not available in healthcare facilities, threatening the safety and integrity of the medical personnel working in the medical imaging services in light of absence of clear legislations to protect doctors and technicians.<sup>20</sup>

The Israeli occupation continues to prevent the entry of 8 mobile X-ray machines necessary for providing diagnostic services to patients at inpatient units, including critical units such as intensive care units (ICU), Neonatal intensive care unit, orthopedic and pulmonology, and respiratory triage centers. It is not allowed to send a number of medical devices in the governmental and non-governmental health sectors out to repair them, including MRI machines, CT scanners, X-rays and mobile devices. The Israeli occupation delays the entry of spare parts for medical devices and sending other devices abroad for maintenance such as surgical endoscopes, a pneumatic drill used for complex fractures, worn out X-ray tubes, and medical calibration equipment for testing the accuracy of imaging devices .<sup>21</sup>

<sup>18</sup> WHO, health cluster, Gaza Strip Joint Health Sector Assessment Report. Link: [http://www.emro.who.int/images/stories/palestine/documents/Joint\\_Health\\_Sector\\_Assessment\\_Report\\_Gaza\\_Sept\\_2014-final.pdf](http://www.emro.who.int/images/stories/palestine/documents/Joint_Health_Sector_Assessment_Report_Gaza_Sept_2014-final.pdf)

<sup>19</sup> State of Palestine Ministry of Health, Health Sector Strategic Plan 2021-2025, Gaza Strip.

<sup>20</sup> State of Palestine Ministry of Health, Health Sector Strategic Plan 2014-2018, Gaza Strip.

<sup>21</sup> Press conference held by MOH regarding the prevention of the Israeli occupation to bring diagnostic medical devices into Gaza hospital, on 23 January 2022.



**Table 01: broken medical devices due to Israeli Occupation's ban on entry of spare parts, according to MOH- Gaza.**

|   | <b>The Device</b>         | <b>Hospital</b>        |
|---|---------------------------|------------------------|
| 1 | Digital Mammography       | Al-Remal Clinic Center |
| 2 | Basic X-ray               | Al-Aqsa hospital       |
| 3 | Laparoscope Surgical Unit | Al-Aqsa hospital       |
| 4 | C-arm (3) x-ray           | Al-Shifa hospital      |
| 5 | Basic X-ray               | European hospital      |
| 6 | CT                        | Al-Shifa hospital      |
| 7 | Basic X-ray               | Al-Shifa hospital      |
| 8 | Cath Lab                  | Al-Shifa hospital      |

The lack of budgets to purchase new medical equipment for governmental hospitals and health facilities in the Gaza Strip, in addition to the Israeli occupation authorities' deliberate ban on the entry of a number of new equipment and import of spare parts for the broken medical equipment have rendered hospitals and medical centers incapable of dealing with hundreds of patients and casualties inflicted by the recurrent Israeli offensives.<sup>22</sup> Governmental hospitals had to cancel dozens of scheduled surgeries and postponed others until further notice, posing a threat to patients' lives. MOH adopted a mechanism of referral to alternative hospitals inside the Gaza Strip to do necessary medical examinations or to receive treatment abroad.<sup>23</sup> Gaza Strip patients constitute around 40% at Al-Makassed Charitable Hospital in occupied Jerusalem and 90% of the patients in the pediatric cardiology department at the same hospital. While Gaza Strip patients constitute about 37% of the patients at Al-Mutalaa' Hospital in occupied Jerusalem. This is according to data provided by the administrations of these hospitals to PCHR's researchers.

**Table (2): Out-of-service medical devices due to Israeli occupation banning their maintenance outside the Gaza Strip in 2022, according to MOH**

|   | Device                           | Hospital          |
|---|----------------------------------|-------------------|
| 1 | Jaundice Meter                   | Al-Aqsa hospital  |
| 2 | Gastroscopy                      | Al-Shifa hospital |
| 3 | Colonoscopy                      | Al-Shifa hospital |
| 4 | Pneumatic drill to fix fractures | Al-Shifa hospital |

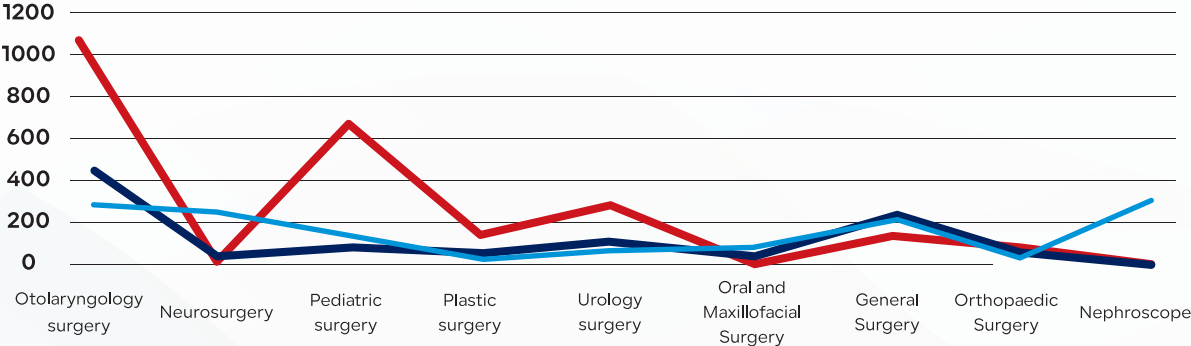
The Israeli authorities' obstruction of the entry of new medical devices and spare parts required for the maintenance of broken devices affected the regularity of surgeries at the Gaza Strip hospitals, where 13,516 patients are still waiting to undergo various surgeries to save their lives.<sup>24</sup>

<sup>22</sup> Ocha, Escalation in the Gaza Strip and Israel 6 August 2022, link: <https://www.ochaopt.org/content/escalation-gaza-strip-and-israel-flash-update-1-1800-6-august-2022>

<sup>23</sup> Information obtained by PCHR's researchers during a meeting held by the MOH's General Administration of Hospitals, where PCHR was briefed on IOF's restrictions on the entry of medical devices, 22 June 2022.

<sup>24</sup> Information obtained by PCHR's researchers during a meeting with the MOH's General Administration of Hospitals, where PCHR was briefed on IOF's restrictions on the entry of medical devices, 22 June 2022

**Figure (1): Number of patients affected by Israeli occupation’s ban on entry of medical equipment and spare parts in 2022, according to MOH**



| Otolaryngology surgery | Neurosurgery | Pediatric surgery | Plastic surgery | Urology surgery | Oral and Maxillofacial Surgery | General Surgery | Orthopaedic Surgery | Nephroscope |
|------------------------|--------------|-------------------|-----------------|-----------------|--------------------------------|-----------------|---------------------|-------------|
| 409                    | 4            | 71                | 52              | 119             | 43                             | 217             | 84                  | 0           |
| 282                    | 252          | 179               | 37              | 85              | 77                             | 203             | 27                  | 280         |
| 1051                   | 0            | 639               | 167             | 236             | 0                              | 165             | 91                  | 0           |

● Moderate  
● Major  
● Minor



## 2. Shortage of Medicines

The chronic shortage of medicines poses a threat to the health of thousands of patients, especially those dependent on the MOH hospitals to provide them with medicines and whose economic conditions prevent them from buying drugs from private sector pharmacies. MOH faces immense difficulties in terms of supplying essential items of drugs and medical disposables in light of lack of operational budgets allocated by the government in the Gaza Strip.<sup>25</sup>

Despite the robust progress made on provision of various drug items to governmental healthcare facilities in the Gaza Strip over the past two year, there has been an administrative deficiency triggered by the ongoing Palestinian political division and the lack of coordination between the two MOH administrations in Ramallah and Gaza. This resulted in a relative drug deficit during some periods annually that significantly increases during the Israeli aggressions on the Gaza Strip.

<sup>25</sup> Palestinian MOH, Health Sector Strategic Plan 2021-2025, Gaza Strip.



Furthermore, the governmental health system in the Gaza is fully dependent on international donations and grants when it comes to provision of drugs and medical disposables to health facilities<sup>26</sup>, with the continued supply of various items of medicines from MOH in Ramallah. In December 2022, 207 drug items out of 522 essential drugs are at zero stock\* in the MOH's central warehouses with a deficit rate of 39.6% while the number of drug items sufficient for 3 months reached 74 items.<sup>27</sup>

**Table (3): Total number of essential drugs list distributed according to the type of medical service, number of shortage items, December 2022**

| Service                                       | Number of items on the essential drugs list |            |                           |
|---|---|------------|---------------------------|
|   | Total                                       | Zero stock | Sufficient for 1-3 months |
| Emergency & surgery & ICU                     | 146   | 28         | 22                        |
| Primary healthcare                            | 132   | 79         | 15                        |
| Cancer & hematology                           | 63  | 23         | 6                         |
| Mental health and neurology                   | 44  | 17         | 7                         |
| epidemics & immunodeficiency genetic diseases | 42  | 23         | 5                         |
| Maternity & child health                      | 28  | 16         | 5                         |
| Nephrology and hemodialysis                   | 22  | 7          | 7                         |
| Ophthalmology                                 | 21  | 9          | 3                         |
| Radiology & Diagnostic items                  | 7   | 0          | 1                         |
| Vaccines                                      | 17  | 5          | 3                         |
| <b>Total</b>                                  | <b>522</b>                                  | <b>207</b> | <b>74</b>                 |

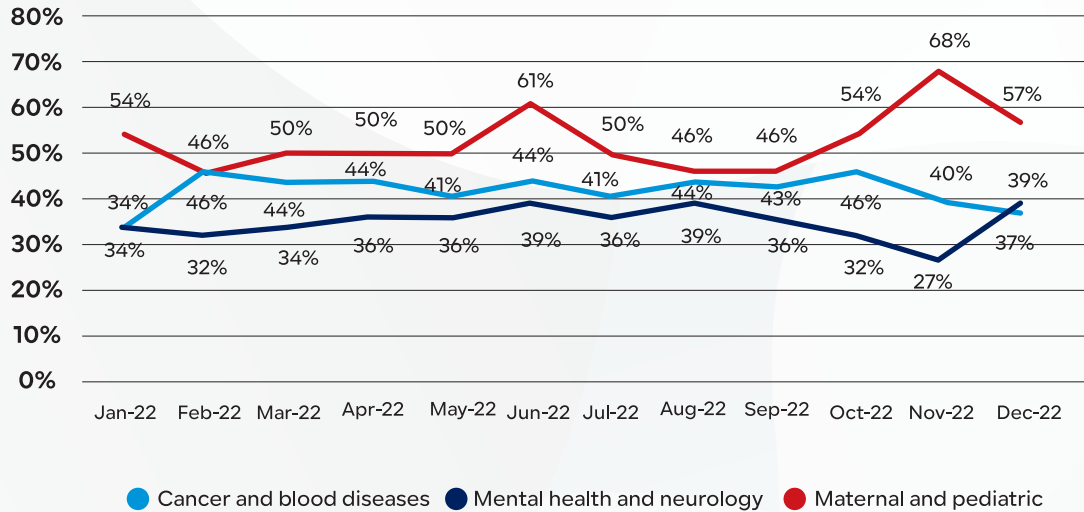
The negative effects caused by drugs deficit in MOH's warehouses in Gaza are on the rise affecting patients in emergency and surgery departments as the deficit rate reached 19%, while the drug deficit for cancer and hematology reached 37%. This increases the suffering of patients in terms of medicine availability and incurring additional costs despite the suffocating economic conditions in the Gaza Strip.

<sup>26</sup> Palestinian MOH, The Annual Health Report for 2021, Page 31, Table (2), where the actual payments for the purchase of drugs and medical supplies are similar to what is implied in Table ( 5) regarding the donations to MOH allocated for the purchase of drugs and medical disposables.

\* Zero stock items: drug items that ran out of the MOH warehouses.

<sup>27</sup> MOH, General Administration of Pharmacy, "Status of Drugs and Medical Supplies in MOH" report, December 2022.

**Figure (2): Deficit rate of drug items for some diseases in 2022**



### 3. Shortage of medical supplies

Medical supplies are fundamental for the operation of various hospital departments and without them, many of the basic services provided to patients at the governmental hospitals will stop, posing an imminent threat in the emergency and ICU departments in particular. Out of the 853 essential medical disposable items, 172 are at zero stock, with a deficit rate of 20%, while there are 110 items sufficient for less than 3 months.<sup>28</sup>

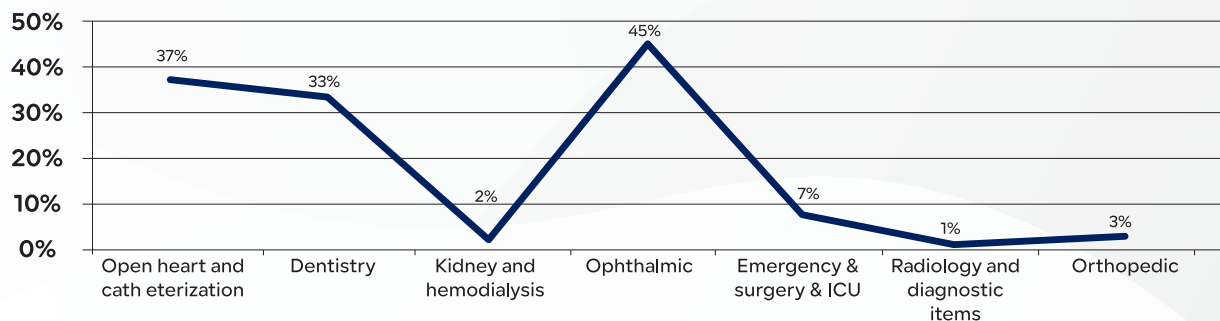
<sup>28</sup> MOH, General Administration of Pharmacy, Shortages of Drugs and Medical Disposables in MOH report, December 2022.

**Table (4): total number of items on the list of essential medical disposables list (EMDL) distributed according to the basic services and showing shortage in items, December 2022**

| Service                              | Number of items on the essential drugs list |            |                           |
|--------------------------------------|---|------------|---------------------------|
|                                      | Total                                       | Zero stock | Sufficient for 1-3 months |
| Emergency & surgery & ICU            | 300   | 23         | 23                        |
| Open heart and catheterization       | 194   | 72         | 43                        |
| Orthopedic                           | 151   | 4          | 32                        |
| General disposables for all services | 101   | 0          | 9                         |
| Ophthalmology                        | 31  | 14         | 22                        |
| Nephrology and hemodialysis          | 25  | 3          | 7                         |
| Radiology and diagnostic items       | 22  | 1          | 3                         |
| Dentistry                            | 21  | 7          | 4                         |
| Ostomy                               | 8   | 0          | 0                         |
| <b>Total</b>                         | <b>853</b>                                  | <b>124</b> | <b>110</b>                |

Patients who receive catheterization and open-heart services suffer from a shortage of medical supplies items in governmental hospitals, with a deficit rate of 37%, while the shortage of medical supplies at ophthalmology departments reached 45%, and dental surgery departments 33%.<sup>29</sup>

**Figure (3): Deficit Rate in medical supplies items, December 2022**



<sup>29</sup> MOH, General Administration of Pharmacy, Shortages of Drugs and Medical Disposables in MOH report, December 2022

As the Israeli occupation authorities allowed the entry of consignments of various types of drugs and medical supplies during normal field situations, MOH administrations in Gaza and Ramallah share the responsibility of continuously providing essential drugs and medical supplies in addition to the private sector under the full supervision of the local authorities in order to encourage the local pharmaceutical industry and work on supplying governmental health facilities with pharmaceutical drugs based on the public procurement law that supports the local industry.<sup>30</sup> In order to make up for the shortage of drugs and medical supplies, more budgets and operating expenses must be allocated, in addition to supplementary coordination and integration of roles between these parties to ensure all patients' access to their right to proper treatment, especially poor patients.

Moreover, the Israeli occupation authorities, as the occupying power besieging the Gaza Strip by air, land and sea, is responsible to work to the fullest extent of the means to provide the population with food and medical supplies, and is obliged in particular to bring in the necessary foodstuffs, medical stores and other articles if the resources of the occupied territory are inadequate, according to Article 55 of the Fourth Geneva Convention. Also, the State of Palestine, after acceding to the 2014 International Covenant on Economic, Social and Cultural Rights (ICRSCR), shall fulfill its codified in the Covenant and to implement its provisions, especially Article 12 stating that everyone shall enjoy the right to the highest attainable standard of physical and mental health.

The failure to respect its obligations of the right to health cannot be justified because of a lack of resources as this right shall be guaranteed to the maximum of the available resources, even if these are tight, and this includes the necessary measures taken to protect the full exercise of the right to health, such as working to reduce the stillbirth rate (SBR) and the infant mortality rate, ensuring the healthy growth of the child, improving all aspects of environmental and industrial health, preventing, treating and controlling epidemic, endemic and occupational and other diseases, and creating conditions that ensure medical services and medical care for all in case of illness.

<sup>30</sup> "2020 national pharmaceutical policy, Ministry of Health- Ramallah, [https://pharmacy.moh.ps/Content/PDF/MI55IcWqdMTL5mQNF5BHZ1eO\\_vYzYnW6botXG9OwMvCd2BQQ.pdf](https://pharmacy.moh.ps/Content/PDF/MI55IcWqdMTL5mQNF5BHZ1eO_vYzYnW6botXG9OwMvCd2BQQ.pdf)



## ii. Repercussions of Shortage of Medicines, Medical Supplies and Medical Devices on Treatment Services

The frail healthcare system in the Gaza Strip caused extremely dangerous consequences on the lives of Gaza Strip's patients due to the lack of essential drugs, medical supplies, and medical equipment at Gaza's governmental hospitals during the past years. The report hereinafter sheds light on the effects of this shortage on various medical departments:



## 1. Emergency, Surgery, and ICU:

Emergency and intensive care Departments at Gaza Strip hospitals suffer from an acute shortage of medicines and medical supplies. The most important items, that always run out of the emergency departments, are antiseptic solutions used to disinfect and clean open wounds, drugs for thrombolytic therapy, which is tissue plasminogen activator (tPA), Glucose Test Strips for diabetes, self-adhesive bandage rolls, medical stitches, breathing tube hoses, urinary catheters, and sterilization pouches.<sup>31</sup>

The Reception and Emergency Department at al-Shifa Medical Complex (a main hospital in the Gaza Strip) receives nearly 900 urgent cases in normal days and provide them treatment services in a place inadequate for this number of patients and their companions. Also, the number of doctors and nurses is insufficient to deal with the number of patients in states of emergency. Moreover, there is only one portable ventilator at the Department, and it is obsolete in addition to an ultrasound machine that frequently breaks down and needs maintenance.<sup>32</sup>

<sup>31</sup> PCHR's researcher interview with Dr. Mohammad Al-Khudari, Nursing Supervisor in the Reception and Emergency Department at Al-Shifa Medical Complex, on 18 October 2022.

<sup>32</sup> PCHR's researcher interview with Dr. Ihab Mutair, a doctor in the Reception and Emergency Department at al-Shifa Medical Complex, on 18 October 2022.



One of the threats at the ICU is the shortage of Intravenous Immunoglobulin (IVIG) medicine, which is essential for children with “Gillian Barre” disease, seriously threatening their health and causing paralysis. Hospitals also suffer from a perpetual shortage of “Intravenous Luminal” drug, which has no alternative and is the main choice for treating cases of neonatal spasms in ICU.<sup>33</sup>

## 2. Orthopedic Surgery:

Orthopedics Departments at the governmental hospitals in Gaza face a perpetual shortage of some types of medical supplies. These departments include several necessary specialized surgeries such as hand, shoulder and elbow surgeries, joint replacement surgery, spine and traumatological surgeries, and pediatric orthopedic surgeries. Also, these departments suffer from limited specialized medical personnel and weak capabilities, as there is a shortage of all medical assistant equipment necessary to conduct medical interventions and orthopedic surgery; most notably fracture fixation tools, including titanium plates used in cases of complex fractures and osteoporosis. Banning entry of artificial knee and pelvis joints for a long time made the medical personnel lose their joint implant skill due to lack of practice. Thus, doctors refer these cases for treatment outside the Gaza Strip, and this what happened during the Israeli offensives on the Gaza Strip and with the injuries during the 2018-2020 Great March of Return protests.<sup>34</sup>

Furthermore, doctors at Orthopedics Departments have no choice but to make multiple uses of most surgical tools. For example, doctors have been obliged to cut from the existing platinum implants and skewers to meet the required size for these materials in surgical operations.

<sup>33</sup> PCHR's researcher interview with Dr. Nabil Al-Barqouni, Consultant Pediatrician, Ministry of Health, on 03 August 2022.

<sup>34</sup> PCHR's researcher interview with Dr. Ashraf Al-Bayaa, Head of the Orthopedics Department at al-Shifa Medical Complex, on 24 October 2022.

Additionally, Orthopedic Departments have a shortage of medical solutions and antibiotics (MEROPENEM - CYSTEINE), especially during the states of emergency and Israeli offensives, where injuries would be contaminated and open needing around 8 liters of solution to sterilize them. In light of this shortage, Doctors are forced to conduct several surgeries on more than one occasion to save the limbs of some cases from amputations due to the severe inflammation. Also, some types of pain killers that patients should take immediately after the orthopedic surgery are not available, forcing patients to buy them from private pharmacies on their own expense.<sup>35</sup>

(M. A.) (45), a patient from al-Sheikh Redwan neighborhood in Central Gaza City, said: "On 07 October 2022, I sustained fractures in my right arm, so I was admitted to al-Shifa Hospital in Gaza City, where I underwent a surgery to repair and fix the broken bones through implanting an external platinum rod in the arm. I had an x-ray that showed the fixation surgery failed, and that I need another one due to the lack of a mobile X-ray machine that is used in surgeries. I am currently suffering from severe hand infections and take painkillers and antibiotics. Most of tests and medicines I need are not available at the hospital, so I have to buy them from outside the hospital at prices incompatible with my financial and economic conditions."

### 3. Primary Healthcare

There are 54 governmental primary healthcare centers distributed across the Gaza Strip's five governorates. These centers provide various primary healthcare services, most prominently: follow Prenatal follow-up, family planning, child health follow-up from birth to vaccinations, reproductive health, primary healthcare for chronic diseases such as hypertension, diabetes, heart diseases, asthma, endocrine diseases, neurological diseases and other diseases such as rheumatism and skin diseases (Dermatology).

<sup>35</sup> PCHR's researcher interview with Dr. Ashraf Al-Bayaa', Head of the Orthopedics Department at al-Shifa Medical Complex, on 24 October 2022.

The chronic shortage of medicines negatively affects both children and elderly with chronic diseases, as they face difficulties in obtaining medicines that are not permanently available, thereby exacerbating their health conditions, especially the poor patients who cannot afford buying medicines from private pharmacies.

(A. Kh.) (47), a patient from al-Rimal neighborhood in Gaza City, said:

"I was diagnosed with Hypertension and diabetes 8 years ago, and I have a medical file at al-Rimal Clinic for periodic follow-up by specialized doctors to check the sugar level in blood and conduct the hemoglobin A1C test so that they can prescribe the proper medication can be prescribed. In the beginning, I used to take "Glucophage" medicine to control blood sugar levels and then shift to regular and mixed insulin injections, which I receive from the clinic at the beginning of every month, and If I was not able to go to the clinic at the beginning of the month, I do not get the medication. Thus, I resort to one of my friends with diabetes who receive their medicines from UNRWA clinics. I suffered a lot during the Israeli offensives on the Gaza Strip and during the outbreak of Coronavirus (COVID-19) as I was unable to go to the clinic and get the medication that led to the deterioration of my health condition."

#### 4. Cancer and Hematology

MOH in the Gaza Strip works on inclusion of all specialized treatment services for cancer patients at the departments of the Turkish-Palestinian Friendship Hospital, which is being equipped to be a main treatment center for adult patients.

The hospital currently has 182 overnight beds, 100 day-care beds, 4 operating rooms, and 3 gynecology rooms, while the hospital needs advanced services for the diagnosis of patients, including equipment and laboratories for genetic and pathology tests. Additionally, the hospital needs specialized clinics such as dental, internal, chest, heart, and urology clinics to ensure the provision of a comprehensive and integrated service to cancer and hematology patients inside the hospital.

The Turkish-Palestinian Friendship Hospital faces several challenges, most notably having only 3 consultants providing services for 2.3 million citizens although the globally adopted normal rate is 20 specialized doctors per million people to ensure the provision of qualitative services for all patients. Also, there are no specialized nurses, physiotherapists, and pharmacists for the service of cancer patients, indicating the dire need to train the current medical staff.<sup>36</sup>

Furthermore, the hospital provides medical services within the available capabilities, especially in light of insufficient specialized medical personnel and nurses and the chronic shortage of medicines, medical supplies, diagnostic equipment, and other treatment requirements for cancer patients.

Around 16,000 cancer patients in the Gaza Strip (47% males and 53% females<sup>37</sup>) suffer from disastrous conditions due to the acute shortage of medicines and medical consumables needed for their treatment at Gaza hospitals. Meanwhile, the Israeli occupation authorities continue to impose restrictions on the entry of new medical equipment and laboratory materials necessary for cancer patients' tests. These challenges impede patients' access to treatment services proper to their serious health status.

The most important medicines necessary for cancer patients that are not permanently available are Herceptin- Glivec - Taxol – Neupogen. Also, radiotherapy and diagnostic equipment, including PET/CT scan and A thyroid scan, are unavailable in Gaza hospitals.

(A. H.) (55), a female patient from al-Naser neighborhood in Gaza City, said:  
“In the beginning of 2018, I found a small mass in the breast and headed to the hospital for medical examination. As there was no device for breast cancer screening at the hospital, I had to do two tests in a private laboratory that cost me NIS 1,200 for each test, which is a high price compared to the difficult economic conditions we live in in the Gaza Strip. The tests showed that I had breast cancer, and doctors started giving me doses of chemotherapy, which sometimes

<sup>36</sup> An interview conducted by PCHR's researcher with Dr. Subhi Skaik, Head of the Turkish-Palestinian Friendship Hospital, on 21 August 2022.

<sup>37</sup> Ibid

are not available at the hospital, so I have to buy them from private hospitals with a price of 100 USD per dose. After the cancer spread, doctors decided last year to remove my breasts, but in vain. Afterwards, the doctors decided to refer me to al-Mutala' Hospital for radiation treatment, and I received 32 radiotherapy sessions. Now, cancer spread to the skin, and on 29 August 2022, I went to al-Mutala' Hospital, where doctors took a skin biopsy to diagnose the disease and identify the proper treatment for my health condition. Now, I only take painkillers."

A clear and detailed medicine policy is necessarily needed for cancer patients that ensures the constant provision of medicine without any interruption, as any shortage in the treatment protocol, which usually consists of 3 to 4 medications, would deteriorate cancer patients' health conditions. Thus, any opportunity to stop cancer spread will be missed and pose danger to cancer patients' health condition. The lack of medical equipment required to diagnose tumors or the shortage of experts to operate the existing ones contribute to increasing the number of patients referred for treatment abroad, as 40% of cancer patients are referred for radiotherapy, 40% are referred for chemotherapy, biological and hormonal therapy, and 20% for nuclear scan.<sup>38</sup>

(A. M.) (30), from al-Karama neighborhood in northern Gaza City, said:

"My 43-year-old eldest brother suffers from a mental disorder since his birth and needs special care. In the beginning of 2020, we noticed that his body became weak, and his skin turned yellow, so we immediately took him to the hospital for medical examinations to identify the causes. Doctors told us that he suffers from Thrombocytopenia without knowing the reason, so the doctors decided to refer him to the hospitals in the West Bank to diagnose the disease and identify the treatment, which is unavailable in the Gaza Strip. Later, it turned out that he had leukemia, and needed periodic plasma transfusions to replace the blood loss. When he returned to Gaza, it was very difficult for us to obtain plasma units due to their unavailability in the blood bank laboratories, and we had to bring a blood donor as each blood he/she donates equal one unit of plasma. My brother received chemotherapy at the Turkish-Palestinian Friendship Hospital in Gaza, but his health condition is getting worse, and he constantly goes to the hospital without receiving the proper treatment."

<sup>38</sup> An interview conducted by PCHR's researcher with Dr. Talha Ba'lousha, Head of the Oncology Pharmacy at the Turkish-Palestinian Friendship Hospital, on 21 August 2022.

## 5. Mental health and neurology

There is only one governmental mental health hospital in the Gaza Strip in addition to 6 clinics distributed across the Gaza Strip's governorates. The stocks of these clinics have an acute shortage of medicines for patients with chronic diseases, especially those diagnosed with schizophrenia, depression, and obsessive-compulsive disorder (OCD). The mental health hospital and specialized governmental clinics suffer from shortage of essential types of medicines used for the treatment of patients with neurological and mental disorders, most prominently the antidepressant medicine "Prozac", which is an effective drug for depression and its shortage affects patients and increases suicide and crime rates in a society.

There are about 3000 patients regularly visiting each of the 6 specialized mental health clinics in the Gaza Strip, where any shortage of medicines at the stocks is disastrous, as some medicines are not available in private pharmacies. Even if available, they are very expensive, depriving poor patients of buying them and causing serious complications to their health that affects the surrounding society.

(Sh. G.) (40), from al-Shiekh Redwan neighborhood in Gaza City, said:

"My 18-year-old son suffers from cerebral atrophy since birth and needs special care. Three years ago, his condition started to deteriorate, and he suffered from severe seizures. I opened a medical file for him at the mental health hospital in western Gaza City to obtain medications for him. He received a "Depakene", which is anticonvulsant and "Risperdal" a hypnotic drug. "Depakene" is not usually available at the hospital, so I have to buy it from private pharmacies that cost me 30 NIS for each pack, and he needs 2 of them weekly. Now, I am unemployed and unable to buy medicine for my son. I only give him the hypnotic drug to keep him calm and prevent seizures. I only hope that I can provide medicine for my son."



## 6. Epidemics and immunodeficiency genetic diseases

Only a limited percentage of Gaza Strip's patients suffers from immunodeficiency and genetic diseases and epidemics. These patients endure high prices of medicines particularly when they are not available at the MOH warehouses. Despite their limited numbers, they still suffer due to the acute shortage of medicines, rendering them insecure, particularly for patients with chronic diseases that require taking medication constantly. Lack of these medicines worsens patient's health condition, as 306 patients, including 80 children, have Thalassemia, an inherited blood disorder. In different period over the past years, thalassemia patients ran out of essential drugs such as "EXJADE" and "DESFERAL" that are both prescribed for life, and any shortage in one of them could lead to life-threatening conditions,<sup>39</sup> including diabetes, cirrhosis and heart problems due to iron overloads in organs, especially liver, pancreas and heart. It should be noted that iron overload in the heart is one of the main causes of death among thalassemia patients. Moreover, at least 140 patients have hemophilia, a rare inherited disorder that is caused by low level or absence of one of the clotting factor proteins needed to form a blood clot and is more common in males, making people with this disease bleed longer than other people. These patients need factor VIII (8) and factor IX (9) medicines, and any shortage of these medicines could cause damage to organs and tissues.<sup>40</sup>

The severity of hemophilia is determined by the amount of factors in the blood as the lower the amount of factors, the more severe the disease will be. When a patient for example has the severe form, he would need more quantity of medicine that would consume all what is stored at the stocks, noting they are only available in MOH stocks for its high price.

<sup>39</sup> An interview conducted by PCHR's researcher with Dr. Hani 'Ayyash, a genetics counselor, on 17 November 2022.

<sup>40</sup> Ibid

Also, about 360 children suffer from cystic fibrosis,<sup>41</sup> which is a genetic disorder that causes severe damage to lungs, digestive system and other organs. These patients need many chronic medicines and treatments such as “Creon” and “Gentamicin” to cope with this disease as well as specific types of therapeutic milk and vitamins of all their types. Any shortage of these medicines poses an imminent threat to patients’ lives. In 2022, 12 patients died after their health condition deteriorated due to their families’ inability to afford buying medicines if not available at the MOH warehouses in the Gaza Strip.<sup>42</sup>

(A. Sh.) (54), from al-Nasser neighborhood in Gaza City, supporting a family of 4 children, including 2 with cystic fibrosis, said:

“In 1998, I lost my first son 12 days after his birth without knowing the reason behind his death, as doctors were unable to diagnose the nature of his disease. When my second child was born, he had similar symptoms, including breathing difficulty and underweight status; thus, he was admitted to hospital. Then, my wife, who works as a lab technician, conducted medical examinations and genetic tests, including “Sweat Test”, making it easier for doctors to diagnose my son with cystic fibrosis. My sons daily need physiotherapy for 30 minutes and inhalation therapy 4 times a day with more than 25 “Creon” capsules as well as other types of vitamins and therapeutic milk. Provision of medicines to patients is a heavy burden for their families. My 17-year-old son died on 20 January 2022, while his 16-year-old brother still needs intensive healthcare, and his treatment is unavailable at Gaza Strip’s hospitals.”

<sup>41</sup> An interview conducted by PCHR’s researcher with Dr. ‘Alaa Hilles, General Administration of Pharmacy at the Ministry of Health in the Gaza Strip, on 22 June 2022.

<sup>42</sup> An interview conducted by PCHR’s researcher with Dr. Nabil Al-Barqouni, Pediatric Consultant, Ministry of Health, on 03 August 2022.

## 7. Maternal and Child Health

There are two governmental children's hospitals in the Gaza Strip: Al-Nasr Children's Hospital and Al Durra Hospital in addition to Dr. Abdel Aziz Rantisi Specialist Hospital for Children which provides specialized services for the treatment of cancer, kidney diseases and others. These hospitals suffer from chronic shortage of medicines and medical supplies, affecting the health status of inpatients and outpatients, including children with rare inherited metabolic disorders. MOH health facilities in the Gaza Strip are the only resort for children with inherited metabolic disorders, needing specific types of therapeutic milk that is available only in limited quantities at the MOH stocks and thereby increasing the suffering of the children's families.

The hospitals provide only part of quantities of these types of milk, while financially capable families buy the rest quantity of milk from private pharmacies in high prices, noting that running out of this milk would threaten children's lives and may lead to death.



There is a shortage of the medicines for children with kidney disease and the antibiotics for children with epilepsy, as well as insulin pens for children suffering from diabetes. Additionally, there is lack of vitamin K needed for children and Slipecter injections for premature babies. Any shortage of dietary supplements such as iron and folic acid for women as well as vitamins A and D for children under 3 years old would affect the mental development of infants, the cognitive development of children in school-age, and women's reproductive health.<sup>43</sup>

## 8. Nephrology and hemodialysis

Hemodialysis service in the Gaza Strip is provided through 8 medical centers; 7 of them belong to the Palestinian Ministry of Health (al-Shifa Medical Complex, Naser Medical Complex, al-Aqsa Martyrs Hospital, Abu Yousef al-Najjar Hospital, Indonesian Hospital, Dr. 'Abdel Aziz Rantisi Hospital for Children, and COVID-19 center at the European Hospital.) There are 177 dialysis machines at the governmental hospitals, with one dialysis unit per 6 patients, noting that the standard indicator is one dialysis unit for 4 patients. Moreover, there are 57 dialysis machines at al-Shifa Medical Complex; 20 of them are inefficient as the spare parts needed for their maintenance are not available.

Kidney and hemodialysis patients suffer from the recurrent shortage of Erythropoietin injections from the Gaza MOH's warehouses. These injections are important for patients with anemia caused by renal failure, and their unavailability may deteriorate anemia and affect the heart and general health. Thus, Erythropoietin injections have become among the zero stock items because they recurrently run out as the available quantity would only suffice the hospital for no more than few days. The normal availability of the quantity of these injections at the MOH warehouses should suffice an upcoming period of 3-6 months. Also, hundreds of kidney patients have difficulty obtaining calcium tablets, especially when governmental hospitals do not provide these tablets for them.

<sup>43</sup> Annual Report 2021, Health Information Center of the Palestinian Ministry of Health.

Any shortage of kidney patients' medicines will seriously risk the lives of 1000 kidney patients; 500 of them have not reached the stage of dialysis yet, rendering them in constant need of blood units.<sup>44</sup>

Although the MOH personnel in Gaza in cooperation with the visiting medical delegations succeeded 10 years ago to offer the kidney transplantation service at its hospitals, they are still not ready to work alone without the help of doctors from outside the Gaza Strip. Additionally, the MOH staffs difficultly operate the only tissue typing device in the Strip due to lack of testing kits. Thus, MOH sends the samples abroad with the visiting medical delegations and receives the samples' results in their next visits. It is worth noting that in 2022, the MOH staff in the Gaza Strip have successfully conducted 10 kidney transplants that are insufficient comparing to the rise on the number of kidney patients in the Gaza Strip.<sup>45</sup>

(S. D.) (55), from al-Zaytoun neighborhood in Gaza City, said:

"My 45-year-old wife has suffered from renal failure since 2007. We discovered her disease when she conducted scans and tests for fertility treatment. The scans showed that there is renal hypoplasia caused by her lupus nephritis disease after taking fertility treatment. My wife started dialysis three times a week and each session lasts 4 hours. Now, she needs hypertension medicine, 4 iodine pills daily, 6 calcium pills, and one alpha medicine. All these medications are not available at the hospital, so I monthly pay about 200 shekels to buy the medications. Also, my wife needs every dialysis session a Recormon injection, which is also unavailable at the hospital."

<sup>44</sup> An interview conducted by PCHR's researcher with Dr. Abdullah Al-Qishawi, Head of Nephrology Department at Al-Shifa Hospital, on 17 October 2022.

<sup>45</sup> Ibid

## 9. Ophthalmology

The ophthalmology services are provided at only one governmental hospital in Gaza City in addition to ophthalmology clinics and departments at hospitals in the southern Gaza Strip, which refer serious cases to the main hospital in al-Naser neighborhood in Gaza City. The Eye Specialty Hospital contains 3 operating rooms and 1 inpatient department before and after undergoing surgeries, and 6 specialty clinics: the cataract clinic, the glaucoma clinic, the squint treatment clinic, the optical clinic, the retina clinic, and the LASIK surgery clinic.

The Eye Specialty Hospital suffers from shortage of specialized medical personnel in ophthalmology, as there are only 19 doctors, including 8 with the Palestinian medical board and 11 enrolled in the Palestinian medical board program and expected to graduate within 4 years maximum. The medical personnel working at the Eye Specialty Hospital provides services to 2.3 million citizens in the Gaza Strip, which is very few comparing to the population. As a result, a large number of patients accumulates waiting too long on daily basis to get the service. Also, there is no laboratory in the hospital, so medical examinations, tests and x-rays are conducted in cooperation with nearby hospitals.<sup>46</sup>

Moreover, the Eye Specialty Hospital suffers from a chronic and periodic shortage of medicines and medical supplies list, which are not available for patients, including glaucoma medications; eye drops such as Trusopt, Alphagan, Xalatan, and Restasis; and Refresh Tears drops for eye dryness. Also, the hospital lacks Mydramid eye drop used to dilate the pupil before the examination, suspending services provided to patients.<sup>47</sup>

(R. N.) (35), from al-Shiekh Redwan neighborhood in Gaza City, said:

“My two daughters have suffered from glaucoma since birth, leading to severe vision impairment, and they are blind. Since they were children, I went to the Eye Hospital in Gaza to examine their condition and provide them the proper treatment. They needed Ahmed Glaucoma Valve

<sup>46</sup> An interview conducted by PCHR's researcher with Dr. Majed Hamadeh, Head of the Government Eye Hospital, on 31 August 2022.

<sup>47</sup> An interview conducted by PCHR's researcher with Dr. Lina Negm, Head of the Medicines Division at the Eye Specialty Hospital Pharmacy, on 31 August 2022



implantation to reduce intraocular pressure in their eyes. As there was no valve implantation at the government hospitals, I obtained a medical referral to St. John's Hospital in Ramallah, where my daughter Janna underwent a surgery to implant a valve in her left eye, causing retinal laceration and almost total vision loss. Currently, she needs cornea transplant, which is unavailable in the Gaza Strip. Meanwhile my other daughter Salma needs valve implantation in both eyes to reduce intraocular pressure. My two daughters cannot see objects away from 1.5 meters, and currently need 4 types of eye drops weekly, costing me 156 shekels. These drops are: Timolen, Trusopt, Lumigan, and Refresh Tears drops and they are unavailable at the MOH's pharmacies. I cannot buy these eye drops because of my difficult economic condition and non-disbursement of social affairs dues, negatively affecting my daughters' health condition and worsening the intraocular pressure."

Moreover, many important devices at the Eye Specialty Hospital are inoperative and have no alternatives, including the Phaco machine, which is used to perform cataract surgeries and has been out of service since February 2022. This affects the surgery scheduling and thereby patients' referral to hospitals outside the Strip despite having professional medical staff to perform eye surgeries inside the hospital. It should be noted that 800 patients are waiting to undergo this surgery, and sometimes financially capable patients had to undergo the surgery in private hospitals. Gaza Strip needs at least 4 Phaco machines to ensure the provision of a proper medical service to the population. Additionally, essential medical devices have gone inoperative, including Autorefractor keratometer that is used to determine the degree of refractive error in the eye and the measurements of eye patients' glasses, and Ultrasonic corneal pachymetry that is used to measure cornea thickness and determine intraocular pressure. When the Ultrasonic corneal pachymetry device breaks down, patients are asked to have the test outside the hospital at their own expense. Also, Pentacam machine, which is used to photograph the cornea and determine its thickness, is out of service as well.<sup>48</sup>

<sup>48</sup> An interview conducted by PCHR's researcher with Dr. Hossam Dawoud, Medical Director of the Eye Hospital, on 31 August 2022.



## 10. Cardiac Catheterization and open heart

There has been a rise on the number of patients with hypertension and diabetes in the Gaza Strip, causing different heart diseases that may lead to angina, cardiovascular diseases or heart attacks. Cardiovascular disease was the main cause of death with a 29.3% of all deaths in the Gaza Strip in 2021.<sup>49</sup>

Medical procedures in heart diseases are considered urgent and sudden where time is essential to save patient's life; thus, any shortage of medical equipment and supplies at the governmental hospitals poses a serious threat to hundreds of patients' lives. Also, recurrent life losses were due to the lack of some medical consumables which patient urgently need, such as stents and medical balloons.<sup>50</sup>

<sup>49</sup> Annual Health Report, MOH of Health, Ramallah, page 65,

link: [https://site.moh.ps/Content/Books/Hqgu4D5vT6bDhDUt!36GHx9oYICS9JplXYDFOMKrnDt6YoDPkPdI\\_16mhnD3xb5MaPpX1mx6k6J4WowTnGUc1135KRHMmuMwEi1Zh1QUmFY.pdf](https://site.moh.ps/Content/Books/Hqgu4D5vT6bDhDUt!36GHx9oYICS9JplXYDFOMKrnDt6YoDPkPdI_16mhnD3xb5MaPpX1mx6k6J4WowTnGUc1135KRHMmuMwEi1Zh1QUmFY.pdf)

<sup>50</sup> An interview conducted by PCHR's researcher with Dr. Alaa Na'im, a physician in Cardiology and Cardiac Catheterization Department at Al-Shifa Medical Complex, on 17 October 2022.

(M. S.) (60), a patient from al-Shati refugee camp in western Gaza City, said:

"I have suffered from a heart disease for 5 years, and doctors decided a hart valve replacement surgery, which cannot be performed in the Gaza Strip due to the lack of suitable valves. Last year, I was referred for treatment at al-Mutala' Hospital in occupied East Jerusalem, where I successfully underwent the surgery. Now, I need Apixaban, which is a type of medicine to widen blood vessels and make blood easily flow, costing me from 50-100 shekels as I buy it at my own expense from pharmacies due to its unavailability at the governmental hospitals. I daily need two pills, but due to my difficult economic condition and inability to buy the medicine, I take only one pill, negatively affecting my health condition. I hope this medicine will be available at the MOH hospitals."

The Gaza Strip has only 6 cardio catheterization devices: 2 at government hospitals, and 4 at private hospitals, with lack of Intracardiac electrophysiology study (EPS) procedure required for cardiac ablation by radiofrequency.<sup>51</sup>

(H. K.) (43), a patient from al-Tuffah neighborhood in Gaza City, said:

"I have suffered from recurrent heart palpitations for 4 years ago. I went to hospital for medical examinations to identify the cause. It turned out that I suffer from Wolff-Parkinson-White Syndrome (WPW), whose treatment is unavailable at the Gaza Strip's hospitals due to lack of EPS procedure which the Israeli occupation authorities deny its entry to the Strip. My condition is getting worse, and now I recurrently pass out for 30 seconds, endangering my life. Doctors advised me to stay away from high places and not to drive a car. Also, I suffer from sweating while walking. I am waiting to receive a medical referral for treatment at the hospitals in the West Bank."

<sup>51</sup> An interview conducted by PCHR's researcher with Dr. Alaa Na'im, a physician in Cardiology and Cardiac Catheterization Department at Al-Shifa Medical Complex, on 17 October 2022.

## Recommendations

The report tackles the impact of the Israeli-imposed closure on the Gaza Strip for 16 years and the ongoing Palestinian political division on the performance of health system in the Gaza Strip. The report also reviews the Israeli restrictions on the entry of medical supplies that impede the ability of health facilities to provide medical services and keep pace with the Gaza population's healthcare needs. The report highlights the repercussions of the ongoing Palestinian political division on the work of health system by non-allocation of budgets and operational expenses required for the work of health facilities in the Gaza Strip as well as the absence of plans aiming at reforming and developing the health system in Palestine, including the fair provision of health services for all governorates, adoption of a medicine policy that ensures the availability of treatment for all citizens, and purchase of medical machines, equipment and spare parts to maintain inoperative machines at the Gaza Strip hospitals.

The report also addresses the suffering of Gaza Strip's population due to the lack of medical consignments, including supplies and medicines, in addition to the acute shortage and obsolescence of medical devices and technicians' inability to repair these devices due to the Israeli occupation authorities' procrastination in supplying new ones and taking the inoperative devices outside the Gaza Strip for maintenance. The report shows how this has led to increasing the number of patients on waiting lists for specialist surgeries, and thereby forcing doctors to refer large number of patients for treatment at hospitals outside the Gaza Strip, and here their suffering begins to have their right to treatment due to the Israeli restrictions on travel of patients referred for treatment abroad.

In light of the above, health conditions in the Gaza Strip seem worse, fearful of ongoing violations of the right to health for the Gaza Strip population, especially against patients' right to receive adequate healthcare and proper treatment. To curb the ongoing and serious deterioration of health conditions,

- The High Contracting Parties to the Fourth Geneva Convention shall exert pressure on Israel, as an occupying power, to fulfill its legal obligations towards Gaza's population as it holds the primary responsibility for providing medical supplies to the Gaza Strip population in accordance with Articles 55 and 56 of the Fourth Geneva Convention of 1949.

- The international community shall compel the Israeli authorities to end the collective punishment policy imposed on Gaza Strip population, including allowing the entry of all necessary medical supplies into the Strip and ending the restrictions on patients' travel for treatment abroad, in line with the 2009 UN Security Council Resolution No. 1860.

- The MOH administrations in Ramallah and Gaza should coordinate with each other to provide all essential medicines and medical supplies, double their efforts, and increase financial allocations dedicated to health sector in order to purchase medicines and all medical equipment and devices necessary for the localization of health services at the Gaza Strip hospitals.

- The international community and concerned organizations should provide medical supplies and medicines needed by the Gaza Strip patients, especially those living in extreme poverty.

## Tables and Figures

### Tables:

Table (1): broken medical devices due to Israeli Occupation's ban on entry of spare parts, according to MOH- Gaza.

Table (2): Out-of-service medical devices due to Israeli occupation banning their maintenance outside the Gaza Strip in 2022, according to MOH.

Table (3): Total number of essential drugs list distributed according to the type of medical service, number of shortage items, December 2022.

Table (4): total number of items on the list of essential medical disposables list (EMDL) distributed according to the basic services and showing shortage in items, December 2022.

### Figures:

Figure (1): Number of patients affected by Israeli occupation's ban on entry of medical equipment and spare parts in 2022, according to MOH.

Figure (2): Deficit rate of drug items for some diseases in 2022.

Figure (3): Deficit rate in medical supplies items, December 2022.



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الاتحاد الاوروبي

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“This publication is the sole responsibility of the Palestinian Centre for Human Rights and can in no way be taken to reflect the views of the European Union.”

