The continued 20-22 hour electricity cuts are placing an increasing burden on hospitals and primary healthcare clinics across Gaza. With funding for fuel from the humanitarian pooled fund, released by the UN Humanitarian Coordinator, and from WHO resources, life-saving services have been sustained. This has directly reduced the mortality risk of 452 newborns, 400 intensive care patients and 658 patients requiring haemodialysis twice or three times a week.

- Out of the 516 medications on the essential drug list, 204 drug items (40%) were at zero stock levels in August. 190 drugs, which are considered to be critical and life-saving, are at less than one month’s supply in Gaza, out of which 46 drugs are completely depleted.

- WHO has recently secured US $1 million from the Central Emergency Response Fund (CERF) to replenish hospitals with life-saving medical equipment that has stopped functioning due to the electricity crisis.

### Impact of fuel shortages on health

As of June 2017, the prolonged electricity cuts have extended to at least 20-22 hours per day, affecting the entire population. This has dramatically undermined the provision of critical health care services at hospitals, primary healthcare clinics, blood banks and the storage of vaccination. In particular, this has jeopardized the functionality of the 14 public hospitals in the Gaza Strip, which are the main source of secondary care to 90% of Gaza’s population. The complete collapse of the health sector is being prevented by targeted humanitarian interventions, initially through funds released by the UN Humanitarian Coordinator and then by WHO on an emergency basis.
So far, the funding from the humanitarian pooled fund, released by UN Humanitarian Coordinator and the resources released by WHO have prioritised the most critical health services, such as ICU’s, operational theatres, emergency departments, maternity wards and neonatal intensive care units. Essential fuel supplies have sustained these critical services and reduced the risk of preventable mortality of 452 new-borns in the six neonatal intensive care units, 400 intensive care patients and 658 patients requiring haemodialysis twice or three times a week, in addition to supplying fuel for the refrigeration of blood and essential blood products used in the hospitals and for vaccine storage in the MOH healthcare facilities.

Whilst critical departments in Gaza’s hospitals are coping with the electricity crisis, primary healthcare clinics (PHCs) are forced to close early due to the lack of available electricity. Many PHCs are rationalising fuel by reducing or stopping diagnostic services. The impact on PHCs has been visible even at UNRWA’s primary healthcare clinics. As patients turn to UNRWA facilities when MOH clinics are closed, there has been a noticeable increase in the number of patient consultations in UNRWA primary healthcare clinics since the onset of the fuel crisis. UNRWA health clinics are now consuming an additional 25,000 litres of fuel every month to cope with the electricity shortages and the increasing patient demand.

Hospitals are coping with the limited fuel by reducing services such as sterilisation services, elective surgeries, and diagnostic services, cleaning and catering. WHO has been following the waiting list for elective surgery, using ENT (ear, nose and throat surgery) as a key indicator. In 2016, the average waiting period for an elective surgery in ENT was 12 months. In comparison, the waiting period for an elective surgery in ENT has now increased to a 14-month waiting period. This increase is a direct result of the electricity shortages. Elevated waiting times for surgeries can lead to further complications in patients. Chart 1 (illustrated below) shows the increasing trend in waiting time for elective surgeries since the electricity crisis in June 2017.
Chart 2 shows the daily number of elective surgery cases managed in Gaza hospitals since the start of this year. The red line refers to the emergency cases and the green line is the number of elective cases. There is a noticeable dramatic decline in elective cases immediately after the 19th June when the electricity was reduced by an additional two hours in Gaza. Whilst figures for elective surgery have picked up over the course of the last few days in July, the total cases of elective surgery are still lower than at the start of the year.

The extended power cuts result in hospitals facing the risk of closure as fuel supplies and generators become increasingly overused. The more heavily generators are used, the more quickly they will degrade and need to be repaired or replaced. Many are already at risk of recurrent malfunctioning due to overuse. This has also increased the maintenance required, which is difficult to provide, as spare parts are on the “dual-use list”¹ and restricted from entry to Gaza. The constant fluctuation in the generators has led to a direct impact on the quality of available medical equipment, which is necessary for diagnosis and treatment. WHO has found that essential life-saving medical equipment has stopped functioning due to the constant fluctuation in the current of electricity, including a CT scanner at Nasser Hospital. As a result, without essential equipment, doctors face difficulties in diagnosis and treatment.

¹ The Government of Israel restricts the entry of a large number of materials, particularly machinery and related equipment, on the grounds that these serve dual-purposes (i.e. civilian and military) and are misused by the Hamas authorities and armed groups in Gaza. As such, every import of a good or material on the dual-use list must be individually approved by the relevant Israeli authorities.
Lack of clean water poses a public health risk

- The impact of the electricity shortages has also affected the availability of drinking water. Approximately one million people in Gaza are at risk of contracting waterborne diseases due to the consumption of unsafe water. This is due to the electricity shortage that is negatively impacting the operations of approximately 160 critical water and sanitation facilities and is also resulting in the daily discharge of around 110,000 liters of untreated or partially treated sewage into the sea.

- WHO has been monitoring the prevalence of diarrhoeal disease amongst children less than 3 years of age. This involves passive recording of cases at the hospital and primary healthcare level for MOH, UNRWA and NGO facilities across the whole of the Gaza Strip. WHO has found, that whilst prevalence of diarrhea is significantly lower overall in 2017, there is a noticeable increase in the number of diarrheal cases in June and July, when the electricity crisis worsened impacting sanitation, hygiene and access to drinking water. Chart 3 illustrates the prevalence of diarrheal diseases amongst children compared to the same months in 2016 and 2017.

![Chart 3: The prevalence of diarrhoea among children less than 3 years of age in Gaza](image)

Waled Khawaja from Gaza is in need of kidney dialysis twice every week. He explains that the nurses in Shifa Hospital are working constantly to meet the needs of the patients, “there are 5 sessions per day; the last session starts at 12:00 a.m. and ends 03:00 a.m. It’s very difficult for those patients to come at night but with limited nurses and dialysis machines, this is the only option”.

Waled often feels very tired after his treatment at the dialysis unit in Shifa Hospital. but returning home is not comforting because there is no electricity. “The electricity crisis has become a major obstacle in our live, especially for those of us with a chronic disease. It exacerbates our suffering”. 

Waled Kahawaja in Shifa Hospital at the Kidney Dialysis Unit, also known as the “Artificial Kidney Unit”. Photo credit: WHO
Shortages in drugs and disposables

- There are 516 drugs on the essential drugs list and 853 items on the essential medical disposables list considered by the Palestinian MoH as necessary for the provision of essential health care. Disposables include a wide variety of essential items such as syringes, line tubes, filters for dialysis and dressing materials. "Zero level stock" designates critical supplies that will be totally depleted in less than one month at the Central Drug Store (CDS). The CDS in Gaza supplies all 14 MoH hospitals (2,243 beds) and 51 MoH primary healthcare clinics in Gaza. These health facilities provide 40% of Gaza’s primary healthcare covering 600,000 people and 90% of hospital care services.

- The Palestinian Ministry of Health is responsible for providing drugs and medical disposables to MoH facilities in both the West Bank and Gaza and for sending regular shipments, once every two months, according to the requests of the CDS in Gaza. In practice, drug deliveries are made irregularly and often in insufficient quantities; since March 2017, no further bulk supply of medications has been delivered to Gaza. However, supplies of vaccination have been provided on a regular basis.

Shortages in Drugs:

- In July 2017, out of the 516 medications on the essential drug list, 183 drug items (35%) were at zero stock levels. In August the percentage of zero stock drugs increased to 40% with 204 items at zero stock in the Ministry of Health’s Gaza Central Drug Store (CDS). The last time the zero stock drugs reached 40% was at the end of 2014. Out of the 516 drugs on the essential drug list, the number of drugs that are completely depleted in August has increased to 180 items (35%) compared to July when 164 drug items were completely depleted (32%).

Chart 4 illustrates the increasing number of essential drugs at zero stock and completely depleted since the start of 2017 in Gaza.

![Chart 4](image-url)

**Chart 4**: DRUGS AVAILABLE AT ZERO STOCK AND DRUGS COMPLETELY DEPLETED AT THE CENTRAL DRUGS STORE IN GAZA
Out of the essential drugs list, the MoH categorizes the list of drugs into two categories – A and B. “Drug Category A” refers to the critical drugs that are immediately life-saving. If the patient does not have access to the drug, it may result in potential death or fatal complications within one month. This list of drugs includes emergency drugs, general anaesthesia, haemodialysis solutions, drugs used in transplants, drugs for patients suffering from haemophilia, thalassaemia drugs, drugs used for diagnostic tests including CT scans, MRI, and X-ray, and some selected antibiotics. “Drug Category B” refers to the drugs which are not immediately life-saving but shortages can lead to complications and/or become life threatening if the patient goes without access to the drug for more than one month.

In August, under “Drug Category A”, 190 drugs which are considered to be critical and life-saving are at less than one month’s supply in Gaza, out of which 46 drugs are completely depleted. Chart 5 below illustrates the levels of zero stock and depleted for Drug Category A.

Vulnerable groups
Examples of vulnerable groups affected in August and July from the depleted essential life-saving drugs include:

- 110 patients suffering from haemophilia
- 100 patients with leukaemia, out of which 70 patients have been denied permits to receive medical treatment outside of Gaza, 2 are children
- 250 thalassemia patients in need of medication. Without the required drug therapy, the levels of iron toxicity drastically increase, leading to potential organ damage and failure
- 550 patients suffering from Crohn’s Disease and Ulcerative colitis. At least 50 out of the 550 are in a critical condition and require medication that is not available in Gaza

**Shortages in Disposables:**

- In August, out of the 853 medical disposables on the essential disposables list, 293 items (34%) were reported at zero stock levels in the CDS in Gaza; in July 291 (34%) were reported at zero stock. Chart 6 below illustrates the level of essential disposables at zero stock.

- Without some essential disposables, patients in need of life-saving interventions will need to be referred outside or to the private sector. For example, items like “stents” are required for cardiac catheterization to reopen occluded coronary arteries are essential to provide life-saving treatment for approximately 250 patients every month.

According to the CDS representatives in Gaza, humanitarian contributions and local procurement from the MoH within Gaza contributed to preventing a further decline in drugs and disposables in August. The need for disposables per month is US $ 550,000 for all the public health facilities in Gaza, out of which $100,000 USD was locally procured by the MoH. The need for drugs per month is US $ 2.8million per month, out of which US $ 800,000 was locally procured by the MoH.
Human resource challenges

- The MoH is currently running its services through a network of 49 primary health care centres (PHCs) and 14 hospitals across the Gaza Strip with a total number of 9,532 MoH staff employed, consisting of staff employed by the de facto authorities in Gaza, and those employed by the Palestinian Authority (PA).

- The PA has confirmed that the compulsory early retirement for PA employed staff in Gaza will not be enforced. However, there are still growing concerns about the increasing demands for healthcare staff for the public health sector. It is projected that by 2020, Gaza would require almost 800 additional hospital beds; more than 1000 additional doctors and more than 2000 additional nurses.

### Total MOH Staff

Total number of MOH employees of all specialties is 9532

Number of PA Paid employees is 3679, out which:

- Doctors – 942 (25.6%)
- Nurses – 876 (23.8%)
- Admin Staff – 728 (19.7%)
- Others – 1133 (30.9%)

### Primary Healthcare in Gaza

#### Primary Healthcare centers operating in Gaza

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<th>Governorate</th>
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<th>Number of centers Third level</th>
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<tr>
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<td>1</td>
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<tr>
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<td>24</td>
<td>16</td>
<td>9</td>
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</table>

#### Primary Health Care Staff in Gaza

- PA Paid 63%
- Gaza Paid 37%
- Doctors 25%
- Nurses 24%
- Admin Staff 20%
- Others 31%

### Secondary Healthcare in Gaza

#### No. of hospitals and beds in Gaza

<table>
<thead>
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<th>Number of beds</th>
<th>Population</th>
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<td>Gaza</td>
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#### No. of patients admitted to the MOH hospitals in 2016

<table>
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<tr>
<td>Admission</td>
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<td>Outpatient Clinic</td>
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<tr>
<td>Total</td>
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</table>
Access to patients referred outside of Gaza

- In July 2017, there were 1,847 patient applications for permits to exit Gaza through Erez checkpoint. Out of these, 42.6% were denied or delayed (787 applications). 45 applications (2.4%) were denied outright, while 742 applications (40.2%) did not receive any response or were pending by the time of their hospital appointment, delaying appropriate treatment. 1060 applications (57%) were approved, approximately 10% increase from the previous month of May.
- In the same month, the number of financial coverage documents for Gaza patients issued by the Palestinian Central Service Purchasing Unit in Ramallah was 49%, a total of 1055 referral documents out of a total of 2,143 referral requests from hospitals. For further detailed information, please refer to the WHO Monthly Access Reports.

Health needs, priorities and gaps

- To ensure that hospitals and health facilities are equipped with fuel or solar energy system units in order to meet the basic energy requirements
- Provision of sufficient quantities of life-saving and essential drugs, disposables and medical equipment for health facilities
- Provision of primary healthcare services, particularly vaccination services
- Ensuring access for patients to their referral destination and advocacy for the right to health

WHO Response

- WHO has mobilized and provided resources for fuel supply for hospitals and key health facilities for over four weeks, from July to August to prevent the imminent collapse of health services. WHO also utilized internal funds to procure essential disposables for the pediatric dialysis unit in Gaza, reducing the need to refer patients outside of Gaza
- WHO has secured US $1 million from the Central Emergency Response Fund (CERF) to scale up and replenish essential life-saving medical equipment that has stopped functioning as a result of the electricity crisis
- WHO delivered Norway funded emergency health supplies (3 Surgical Supply Kits, pharmaceuticals from two Inter-Agency Emergency Health Kits) to Gaza
- WHO has submitted a request for additional funding from the Humanitarian Pooled Fund, for over US $ 360,000 in order to respond to the crisis
- Switzerland has pledged US $1 million towards WHO’s emergency appeal

Health Cluster Response

- The Health Cluster supported UNRWA in securing USD $2,000,000 for emergency fuel for Gaza’s hospitals and health facilities through the CERF. The fuel will be shared between health facilities and WASH. This will sustain the health services until the end of 2017
Group is to enhance emergency response planning, preparedness, and technical capabilities to respond to the crisis.

▪ MAP-UK has started the procurement of over US $140,000 for essential lifesaving items and infection control materials for the neonatal intensive care units in Gaza. In addition, MAP has continued to bridge the gap for essential drugs items that are at zero stock.

▪ Funded through USAID’s Humanitarian Assistance package, Gaza 2020: Health Matters (GHM) is a consortium led by International Medical Corps (IMC), with the partners CARE, Juzoor and Mercy Corps. As of August 2017, GHM has pre-positioned ready-to-use emergency medical supplies for 10 project-supported partners in primary healthcare and secondary healthcare as part of its emergency preparedness component. Additionally, the project has deployed stock management and patient-record keeping software to improve the capacity locally for both emergency and non-emergency scenarios. To date, under GHM, 59 participants have been trained on Emergency Response topics.

Partnerships & coordination

▪ Monthly Health Cluster meetings took place in Gaza to discuss and review the collective emergency response plan.

▪ The Health Cluster facilitated a number of meetings with the aim to improve the reporting mechanisms among partners. In addition, the revised version for the 4Ws (who is doing what, where and when) map has been produced and partners have been requested to input their data.

▪ WHO led the first Health Emergency Technical Working Group in Gaza, which took place on the 13th August.

▪ WHO, as Health Cluster lead agency, has initiated a number of key health assessments in Gaza, including a health needs assessment on the restricted access to health for communities living in the Buffer Zone in Gaza and produces monthly reports on health access restrictions.

Upcoming Activities

▪ The Humanitarian Needs Overview Workshop will take place in Gaza on the 12th September, followed by the Humanitarian Needs Overview Workshop in Ramallah on the 14th September.

▪ Humanitarian Response Plan Workshop will take place in Gaza on the 9th October, followed by the Humanitarian Response Plan Workshop in Ramallah on the 11th October.

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