World Health Organization
occupied Palestinian territory

Gaza: Trauma, Emergency & Surgical Care

Rapid Assessment Report

May 26th, 2021

Introduction

An escalation in hostilities in the occupied Palestinian territory since April 2021 has caused many deaths and casualties.

Some of Gaza's health care buildings, facilities and essential infrastructure were damaged. Extensive damage to roads obstructs ambulance access and movement. Lack of electricity, high fuel costs, and the destruction of water and sanitation structures place strain on an already overwhelmed health system that is still responding to COVID-19.

WHO Trauma specialists held field visits immediately after the ceasefire, from May 21st till May 24th. This document summarises a rapid qualitative and quantitative assessment of the emergency departments and surgical services of seven Ministry of Health hospitals in the Gaza Strip.

Health authorities in Gaza reported at the end of June that **2,211** people were injured during the 11-day war, and **258** people were killed. **46** people were left with a disability, and **6** patients underwent amputation.

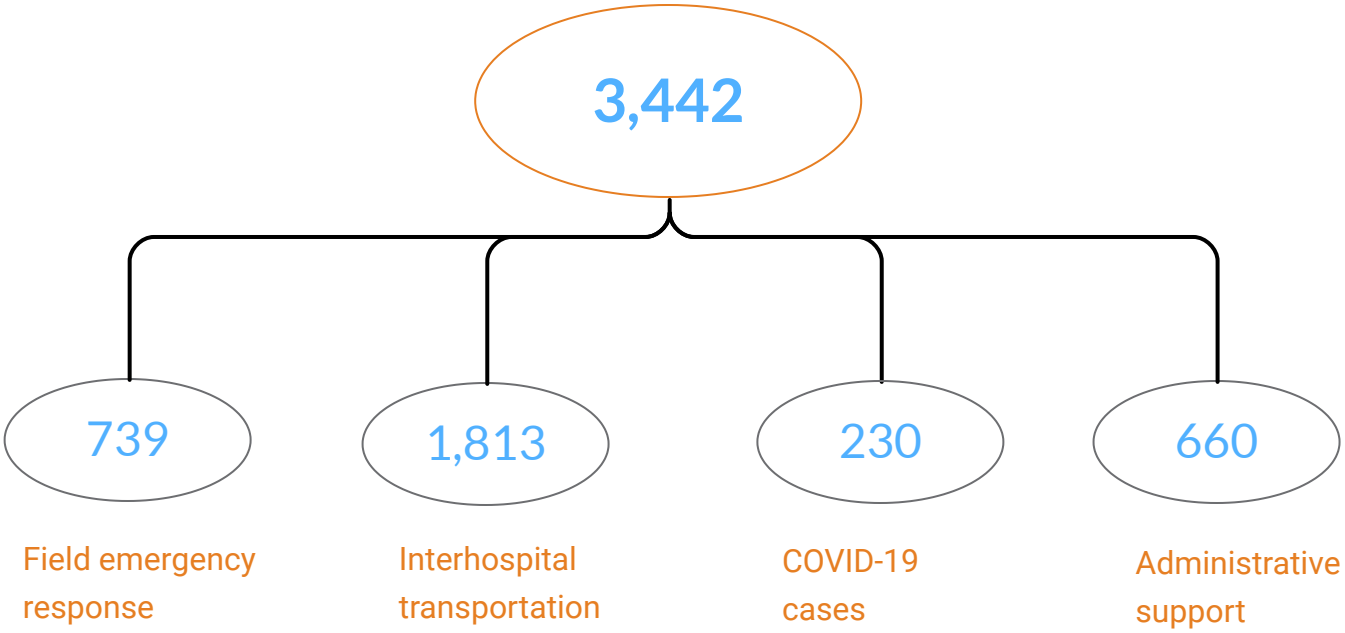
Pre-Hospital Level Of Care

MoH/EMS - Ambulance Services

Gaza's Ministry of Health ambulances are mainly used to transport patients in between hospitals. During a crisis, they work as first responders and support the Palestine Red Crescent Society to evacuate and transport patients from the field. During the recent hostilities, they evacuated casualties from the field to emergency departments. There are around **122** Ministry of Health staff working in the ambulances.

72 Ministry of Health ambulances in 5 governorates

Missions by EMS from May 9th to May 21st:



PRCS/EMS - Ambulance Services

- Palestine Red Crescent Society/Emergency Medical Services is the first responder in Gaza. It is the leading humanitarian organisation that provides pre-hospital emergency medical services across occupied Palestinian territory.

- Palestine Red Crescent Society provides ambulance services, emergency advanced medical posts and Trauma Stabilisation Points. It has two hospitals in Gaza that offer all levels of care.

5 main PRCS ambulance stations in 5 governorates

4 sub-stations

44 PRCS ambulances:
8 in each governorate
and 12 in Jabalia station.

May 7th - May 20th:

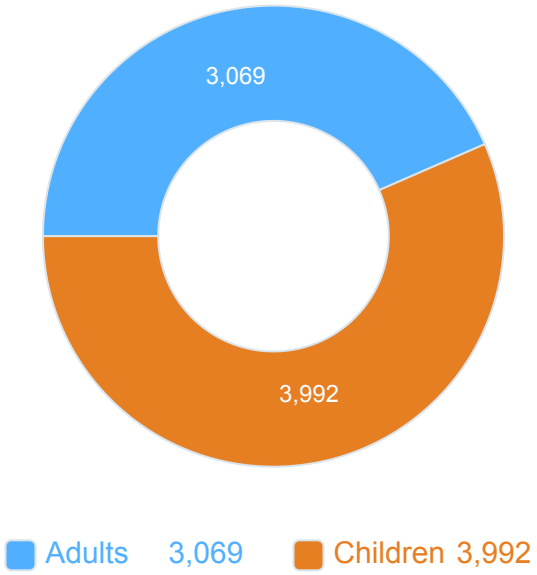
PRCS provided first aid services to **899** wounded and evacuated **82** killed. **95** trauma patients were referred to PRCS's Al-Quds hospital and Al-Amal hospital.

May 15th - May 26th:

950 displaced families in the Gaza Strip received non-food items in a specially prepared parcel. Palestine Red Crescent Society also distributed food parcels to **946** families.

PRCS/EMS - Ambulance Services

- Since May 10th, four Palestine Red Crescent Society centres and facilities sustained partial damage, affecting their operations. One ambulance was damaged in Beit Hanoun.
- Palestine Red Crescent Society's radios and equipment are old and obsolete affecting communication efficiency.



PRCS provides prehospital health care services, including psychosocial support.

PRCS has provided **psychosocial first aid support** to **7,061** people.

Primary Level Of Care

PHCC

- The central lab at Al-Rimal clinic has not resumed regular operations until May 30th because it was damaged in the recent hostilities.
- **25** Primary Health Care Centres worked from **May 16th to 20th** to manage conflict and non-conflict cases, including patients with non-communicable diseases.
- **25** Primary Health Care Centres received conflict-related trauma patients for follow up and dressings.
- **130** people were vaccinated against COVID-19 in two days.

Secondary-Tertiary Level Of Care

MoH hospitals - Findings

- The **seven** major hospitals in Gaza did not sustain significant damage. There was minor damage to the Indonesian Hospital (broken windowpanes and a roof fell off).
- Streets leading to Al-Shifa Hospital were shelled, making access difficult.
- The seven hospitals are Beit Hanoun Hospital, Indonesian Hospital, Al-Shifa Hospital, Al-Aqsa Hospital, Nasser Hospital, European Gaza Hospital, and Al-Najar Hospital.
- The seven health facilities activated their contingency plans to manage the casualties. They put triage points outside emergency departments, keeping walking patients separate from non-walking patients.
- All hospitals adopted a four-colour triage system and had pre-positioned some equipment, supplies, drugs, and consumables from hospital stock. **Six** hospitals used tents provided by WHO.
- All hospitals supported one-way patient flow and coordinated with the Ministry of Health emergency committee to standardise their response. The Emergency Medical Teams Coordination Cell played a vital role.
- Health providers trained in Mass Casualty Management by WHO and NYCMedics showed exceptional performance compared to those not trained.
- The referral process from emergency departments to other hospital departments was smooth and coordinated, despite not having enough porters. Referral from the Ministry of Health to Ministry of Health facilities was smooth and well-coordinated.
- Non-governmental hospitals accepted referrals of acute and non-conflict related patients, leaving space for trauma cases at Ministry of Health hospitals.
- Clinical staff worked despite heavy shelling and concerns about insecurity.

Challenges

- Poor coordination between the Ministry of Health and pre-hospital ambulance services increases the burden on emergency departments. In addition, the lack of radio communication between ambulances and emergency departments means that hospitals do not know how many casualties are arriving or their severity.

- Hospitals say they do not have enough security staff, leading to several crowd management issues.

- Some Ministry of Health hospital administrative managers are reluctant to adopt the emergency department expansion, even though the Ministry of Health dictates it.

- Almost every hospital had incomplete contingency plans, missing things such as evacuation plans, re-purposing of spaces and triage criteria. Only Al-Najar Hospital has an inclusive facility evacuation plan.

- One common complaint was that the design of emergency departments is ineffective. The Ministry of Health says it needs an upgrade of the existing infrastructure to meet Mass Casualty Management needs.

- The tents used to expand emergency departments were were not protecting health workers and patients against debris and shelling.

- Access to emergency departments was problematic because of shelling, fear, and damage to streets.

Drugs, Disposables And Medical Equipment

WHO supported the pre-positioning of equipment and supplies. But they were not stored in emergency departments as a “no-touch stock” for lack of space.

Some drugs and disposables were missing from all Ministry of Health hospitals that the WHO Trauma Specialists visited.

Standard Operating Procedures & Protocols

- The four-colour triage system is not a standardised part of hospitals' contingency plans. Each hospital needs a senior clinician to perform triage, and it seems that its implementation is empiric, not based on SOPs.
- Facilities do not use the WHO Trauma Checklist after a trauma patient is discharged.
- Physicians talked about the need for an enhanced quality of care during times of surge, and the improvement of the patients' data management.

MHPSS

Lack of Mental Health Psychosocial Support Services in all emergency departments. MHPSS trained health personnel were scared to go to work during the shelling.

Clinical staff displayed increased levels of stress and fear.

Additional Findings

- Acute non-conflict surgical cases were referred from the Ministry of Health to NGO hospitals such as Al-Awda Hospital in the north, Al-Quds in Gaza City, and Al-Ahli Arab Hospital.

- Hospitals re-purposed available emergency department spaces to address triage and patient management needs. In addition, available rooms were used for walking patients and family spaces.

- In previous escalations, ICRC coordinated with the Israeli forces to secure ambulance movement, which was impossible this time. This severely limited the work of the Palestine Red Crescent Society.

- Transportation problems meant hospital staff worked longer shifts.

- Patients' data registration: The conflict highlighted well-known issues related to lack of electronic registration and paper records used in emergency departments.

- **Until May 21st**, one patient needing limb reconstruction was referred to a Ministry of Health hospital. **By May 25th**, the ministry estimates that at least 100 more patients require limb reconstruction. They will be referred to the Limb Reconstruction Centre in Nasser Medical Complex after the initial treatment.

Recommendations

- Preparedness should be enhanced further.
- Put dedicated staff in emergency departments.
- Integrate trauma and emergency care services at the primary health care level and develop a model facility.
- Improve coordination between the Ministry of Health and NGO health facilities, acting as backup for trauma cases and acute surgical cases.
- Improve coordination with rehabilitation partners to track patients' progress post-discharge.
- Emergency Medical Teams Coordination Cell was invaluable. Its role within the Ministry of Health should be streamlined and institutionalised to complement other actors' activities.
- The Ministry of Health Limb Reconstruction Centre is proving its value to Gaza's health system. Other partners should be encouraged to support its activities.
- Hospital contingency plans must be updated to include all information needed to manage mass casualty incidents.
- Standardised triage in emergency department for Mass Casualty incidents is crucial. WHO - ICRC - MSF suggest the Interagency Triage Tool.
- Adopt a medical equipment maintenance policy.
- Proper documentation of patients entering the emergency department and ensure a follow up if needed after discharge.
- Intensify Infection Prevention & Control policies, and encourage infrastructure changes to support an increased number of washing stations within the emergency departments.
- Standardise inter-facility referral pathway.
- Identify preparedness policies to provide drugs, equipment and supplies.

Recommendations (...)

- Standardise first aid training for Palestine Red Crescent Society volunteers.
- Capacity building for Palestine Red Crescent Society and Ministry of Health paramedics to standardise their clinical management of trauma.
- Capacity building for Primary Health Care Centres personnel: to improve their response during mass casualty incidents and improve postoperative wound management for patients.
- Refresher training for emergency clinical staff in treating lightly injured patients to free up space for incoming casualties.
- Surgical training to teach nurses and surgeons how to treat war injuries.
- Trauma anaesthesia training. Intensive training to better treat war injuries, including regional anaesthesia, for specialist surgeons.
- Preposition material, equipment, and consumables for optimal Mass Casualty Management, to be available immediately in a crisis.
- Procure surgical tools, anaesthesia supplies and appropriate equipment.
- Close follow-up and tracking of the Ministry of Health central warehouse deliveries and ensure the delivery of these items to emergency department personnel and surgical departments.
- The Ministry of Health says hospitals do not have a “no-touch” stock of drugs, disposables, and equipment for crises. We highly encourage the Ministry of Health to find storage facilities for these items.
- Communication devices during emergency response ensure the safe handling of casualties between emergency care providers.

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