From 05.08.2022 to 07.08.2022 of August 2022, the escalation of hostilities between Israel and Gaza resulted in a new surge of casualties: Gaza MoH confirms 49 fatalities, 383 casualties, 164 of them children, 59 women, and 21 elderly. These numbers include 20 patients treated in NGO hospitals. 1,761 residencies present various damages and at least 450 Palestinians have been internally displaced. More than 8500 people have been somehow affected by the damages.
WHO's Trauma and Emergency Care Programme offers a series of Mass Casualty Management (MCM) training sessions and targets personnel from the biggest Ministry of Health hospitals. The training focuses on the optimal management of the first minutes of a Mass Casualty Incident. We are adopting the WHO Academy training curriculum. We target directors, head nurses and head physicians of seven emergency departments in the Gaza Strip, using innovative learning strategies and tabletop exercises to simulate complex Emergency Mass Casualty Incidents.

During the MCM courses, 3 and 6 months goals were agreed. For the fulfilment of these goals, each hospital designated a team of specialists, out of the group of trainees. Moreover, participants had drafted their Hospital's MCM plans, based on the WHO Academy Baseline Preparedness Checklist. However, different hospitals show different progress, over time.

Indonesian Hospital, Beit Hanoun Hospital Al Shifa Hospital, Al Aqsa Hospital, Nasser Medical Complex, Abu Yusef Al Najjar Hospital have benefited from the WHO Mass Casualty Management training project. The facilities drafted the first version of their baseline preparedness checklist, and adapted their floorplans, to better manage any overwhelming surge of casualties.

WHO Country Office supports the materialisation of the agreed goals, through a mentorship process, where issues that are impeding the improvement of the hospital preparedness and response plan are faced and solved in a pragmatic approach one by one. Moreover, there is a peer support component, where focal persons from different hospitals share examples, lessons learned and best practices, to assist their peers to improve their MCM response capacity and the transition of the principles, from theory to solid action points.
On Friday of the 5 of August 2022 all seven major Gaza Hospitals (Indonesian, Beit Hanoun, Al Shifa, Al Aqsa, Nasser, European Gaza Hospital, and Abu Yusef Al Najjar Hospital) activated their emergency response plan.

Six out of these seven hospitals (Indonesian, Beit Hanoun, Al Shifa, Al Aqsa, Nasser, and Abu Yusef Al Najjar Hospital) adopted the WHO guidelines on Mass casualty management at the Emergency Unit to optimize their response.

They declared a state of Heightened Readiness on the morning of 05.08.2022, and shifted to phase 1 / Full Activation, on the evening of 05.08.2022. Moreover, per their Hospital operational plan, health workers were expected to work on 24hrs shifts, with 48hrs pause within, until informed otherwise. These hospitals shifted to phase 2 / De-escalation, upon the cease-fire, on 7 of August 2022, at 2330hrs.

A workshop took place on the 24 of August, where MCM focal teams from all six hospitals participated, to debrief their response during the recent escalation of hostilities.
This workshop's primary objective was to identify:
- What is the major issue faced during the escalation, regarding the application of the WHO MCM Guidelines
- What is the major advantage identified during the escalation, regarding the application of the WHO MCM Guidelines
- What are the steps forward.

This workshop was an MCM progress-sharing opportunity for the participants.

In July 2022 the Hospital plans were awaiting the official Gaza MoH validation. The next phase would be to disseminate and properly communicate them within their respective facilities.

In process of Gaza MoH validation were also:
- Action cards.
- The modified ED Hospital floorplan showing the modified spaces used to assist in the optimal management of the surge of casualties.

These spaces include:
- Step 1 Triage point.
- Non-Walking patients' zone.
- Walking patients' zone.
- Morgue extension.
- Family zone.
- Media zone.

Prepositioned equipment and supplies and medications, close to the Emergency Department itself, to address the immediate material needs for the optimal management of incoming trauma patients were there for some of the hospitals.

During this escalation, the above hospitals were in a position to put their plans into action and test them.
**FINDINGS I**

**INDONESIAN HOSPITAL**

Major issues:
- **Crowd control**, Step 1: Triage could not hold its place because of the surge, security was insufficient.
- **Infrastructural issues** that make difficult the one-way patients flow.
- **Insufficient MCM knowledge of Hospital colleagues** that rushed in the ED to assist, training of additional staff is needed on MCM.

Major advantages:
- The concept of having an **emergency plan for the ED** that can be communicated to others.

Steps forward:
- Communicate and **disseminate the Hospital MCM plan** to additional health workers within the facility.
- **Modification of the existing infrastructure** to better accommodate one-way patient flow.

**BEIT HANOUN HOSPITAL**

Major issues:
- **Crowd control**: Step 1 triage had to be reinforced by the police.
- **Insufficient MCM knowledge of their colleagues**, training of additional staff is needed on MCM.

Major advantages:
- The concept of having a **realistic ED plan** that can be communicated to others, without the need of people with previous experience is valuable.

Steps forward:
- Communicate with MoH the issue of crowd control.
- **Modify the outer space** of the Hospital to accommodate the expansion of the Walking patients’ zone.
AL SHIFA HOSPITAL

Major issues:
- **Crowd control** and security: Police had to come to support the Step 1 Triage point

Major advantages:
- The MCM plan’s response from heightened readiness to phase 1 / full activation happened by the sound of the nearby explosion, *ease of plan activation*.
- The *concept of Step 1 Triage point*, sorting patients as walking versus non-walking
- The *prepositioned equipment and supplies*.

Steps forward:
- **Communicate the crowd control issue** with the MoH and involve the police earlier.
- **Institutionalise** further the adoption of the *MCM preparedness planning*.

AL AQSA HOSPITAL

Major issues:
- **Activation lag**, the Step 1 Triage point was not in place upon transition from heightened readiness to phase 1 / Full Activation
- **Visibility of staff**, vests were not available.

Major advantages:
- The availability of *prepositioned equipment and supplies*. Al Aqsa Hospital is the only one that compiled the Walking patients zone kit and the Non-Walking patients zone kit adopting fully the WHO Checklist of items.
- Al Aqsa hospital requested and received support from the two Gaza National EMTs to expand their walking patients’ zone and received and deployed an inflatable tent with relevant equipment and supplies.

Steps forward:
- **Further endorsement of the WHO MCM principles**, with designated repurposed hospital spaces and **police to support crowd control**.
Nasser Medical Complex

Major issues:
- Crowd Control
- Plan activation lag, there was a delay in shifting the Emergency plan from Heightened Readiness to phase 1 /Full Activation.

Major advantages:
- The concept of Step 1 Triage, where patients are sorted in seconds as walking versus non-walking and they are referred accordingly is life-saving and promotes a calm working environment for the ED.

Steps forward:
- Institutionalise further the adoption of the MCM preparedness planning.

It is worthy to highlight that NMC is the only hospital out of the six that has benefited from the entire WHO Mass Casualty Management strategic planning:
  o A team of decision-making health workers participated in the WHO Academy training curriculum.
  o Middle-level managers and junior physicians and nurses participated in an NYCMedics training focusing on clinical considerations for Mass Casualty Incidents.

This series of activities have involved a bigger cohort of health workers, compared to other hospitals, and the result is evident: More NMC health workers are aware of the MCM plans of their own hospital, compared to the other hospitals.
FINDINGS IV

ABU YUSEF AL NAJJAR HOSPITAL

Abu Yusef Al Najjar Hospital requested and received support from the two Gaza National EMTs to expand their Walking patients zone and received and deployed an inflatable tent with relevant equipment and supplies.

Major issues:
- Crowd control
- Infrastructural issues impede the adoption of a walking patients’ zone within the facility itself

Major advantages:
- Step 1 Triage point concept and sorting patients into walking and non-walking. Walking patients were directed to an inflatable tent out of ED.

Steps forward:
- Remodel the infrastructure of the hospital to provide a sheltered place for the walking patients
- Institutionalise further the adoption of the MCM preparedness planning.

ADDITIONAL REMARKS

Beit Hanoun and Abu Yusef Al Najjar Hospitals for the Gaza MoH Health system play the role of extremely specialised Advanced Medical Posts: Patients are initially stabilised there, to be referred to facilities with larger inpatient capacities later on. With the adoption of MCM principles, this was achieved with a great success, according to both facilities.

All health workers participating in the workshop of 24.08.2022 clearly declared that even if their hospitals had not adapted themselves fully to the MCM concept, there was a massive improvement, if one compares the August 2022 response to the May 2021 response.
While action points had been agreed with the relevant MCM focal persons in the end of June 2022, progress has been slow, mostly for MoH bureaucratic reasons.

WHO MCM principles have to be institutionalised within the facilities that have already participated in the training. Gaza MoH identified this as pending issue and it is officially requesting support to organise one-day training for additional hospital personnel.

Gaza EGH Hospital must be included in the WHO MCM training. Findings show that the other public Gaza hospitals performed better than EGH in the management of the surge of casualties.

MoH will be sharing with WHO CO the finalised version of the MCM Action Cards in Arabic, to be printed and distributed.

The agreed STEP 1 Triage points have to be properly marked within each Hospital, as well as the direction toward the walking (Green) and non-walking (Red) patients zones.

MoH is expected to share with the WHO CO a finalised version of their current floorplan, with all zones marked appropriately:
- Step 1 triage point
- Non-walking patients' zone
- Walking patients' zone
- Staff pooling Area
- Family Area
- Media Area
- Prepositioned equipment and supplies
RECOMMENDATIONS - ACTION POINTS II

- **MCM kits, Triage kits,** and specialised non-walking patients’ zone, walking patients’ zone **kits** have to be compiled based on the WHO MCM checklists.

- WHO CO is committing to expedite the procurement of MCM relevant equipment and supplies: tendering has been finalised and suppliers are expected to deliver in the weeks to come.

- MoH should officially request support from the **Police for crowd control,** during MCI. **Crowd control insufficiency** was the most important common finding and has to be addressed from higher levels of administration, along with small-level infrastructural changes at the hospital level.

- Preparation of standard patient documents to be filled by the hospital and **to be pre-numbered for the optimal patients' documentation, based on the** shared drafts.

- MoH is expected to be sharing with WHO CO the finalised version of the **MCM Action Cards in Arabic,** to be printed and distributed.

- The **emergency department of Indonesian Hospital, Beit Hanoun Hospital and Al Najjar Hospital** do not support the one-way patient flow. Gaza MoH, along with the engineering department should address the issue with new plans, and partners to take over the **renovation** have to be identified.

- It is of paramount importance to **support and strengthen the essential surgical care services** at the Gaza MoH level. After each spike in the number of casualties, it is the surgical wards that struggle to manage the additional trauma burden and the postponed elective operations.
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