

## War wounds caused by explosive weapons in Gaza: data from a 2024 study by Médecins Sans Frontières

As of July 23, 2025, Israel's military assault on Gaza has killed over 59 219 Palestinians, wounded an additional 143 045, and displaced nearly all of the 2.1 million people who live there.<sup>1</sup> Triangulation and modelling of different data sources estimate even higher mortality estimates.<sup>2,3</sup> As of July 31, 2025, almost no humanitarian aid has been allowed to enter Gaza since March 2, 2025—with a total blockade of humanitarian aid from March 2 to May 19, 2025. The state of Israel has resumed using explosive weapons in its attacks on Gaza and its people since breaking the ceasefire agreement on March 18, 2025.<sup>4</sup>

Following the attacks carried out by Hamas and other armed militant groups on Oct 7, 2023, in which approximately 1200 people were killed and 251 people taken hostage,<sup>4</sup> Israeli forces have responded by exerting collective punishment that is perpetuating a campaign consistent with patterns of genocide.<sup>5</sup> In a report published by Médecins Sans Frontières (MSF) in December, 2024, we describe how the violence unleashed by the Israeli forces has caused physical and mental damage on a scale that would overwhelm even the best functioning health systems in the world, let alone one already decimated by a continuous offensive and a blockade that has been in place for decades.<sup>4,6</sup>

In this Correspondence, building on the December, 2024 report,<sup>6</sup> we present descriptive results from routinely collected medical data from six of the MSF Operational Centre Brussels supported health facilities in Gaza (Al Aqsa Hospital, Al Mawasi Primary Healthcare Centre [PHC], Al Najar Hospital, Deir el Balah PHC, Khan Younis PHC, and MSF Field Hospital)

from Jan 1 to Dec 31, 2024. Routine medical data were collected under tremendously challenging conditions, including the frequent displacement of patients and health-care staff, widespread destruction of medical and data infrastructure, and limited access to electricity to support digital infrastructure and paper to print tally sheets and patient files. Data were collected in a central database originating from different sources (digital and paper) and encoded at a health-facility level. Standard clinical case definitions based on MSF and the Gaza Ministry of Health medical guidelines were used that adhere to international classifications.

In 2024, 207 942 general outpatient department (OPD) consultations were conducted. MSF also supported other health-care services such as operating theatres, emergency rooms, mental health, and antenatal care. 114 368 (55.0%) OPD consultations were for women and 41 588 (20.0%) were for children younger than 5 years. Wound care accounted for 44.8% of all consultations (93 254 of 207 942) which were conducted for 22 637 patients across included health facilities. Almost a third of wound care-related consultations were for women (29 841 [32.0%]) and 27 655 (29.7%) were for children younger than 15 years, of which 9179 (9.8%) were for children younger than 5 years. Violent trauma, including physical violence and directly targeted violence against a person or group of people, presented in nearly half of wound care-related consultations (39 700 [42.6%]; range 13–66% across facilities; [table](#)). The remaining wound care-related conditions were injuries due to unsafe living conditions, domestic-related accidents, and road-related accidents.

Most wound care-related consultations caused by violent trauma were for wounds caused by bombs and shells (32 951 [83.0%]), followed by gunshot-related (4486 [11.3%]) and burn-related injuries (1496 [3.8%];

[table](#)). Explosive weapons are designed to be used in open battlefields, but are increasingly being used in urban areas.<sup>7</sup> The makeshift shelters in which people live following frequent displacement offer almost no protection against explosive weapons, and especially their secondary effects such as blast, shrapnel, and incendiary impact.<sup>8</sup> In two hospitals, we observed that nearly 60% of lower-limb wounds were related to explosive weapons, often with open injuries to bone, muscle, or skin. These injuries are consistent with the wide-area effects of explosive weapons as reported by our clinical staff.<sup>8</sup> Most immediate fatalities occur at the scene of impact and thus are not captured in our data. Under-reporting

	Number of patients (n=22 637)*
Total wound care-related consultations	93 254 (100.0%)
Sex	
Female	29 841 (32.0%)
Male	63 413 (68.0%)
Age, years	
<5	9179 (9.8%)
5–15	18 476 (19.8%)
>15	65 599 (70.3%)
Wound care-related consultations due to violent trauma†	39 700 (42.6%)
Bombs and shelling	32 951 (83.0%)
Gunshots	4486 (11.3%)
Burns	1496 (3.8%)
Assault	606 (1.5%)
Stabbing	160 (0.4%)

Data are n (%). Data originates from six MSF-OCB supported health facilities: Al Aqsa Hospital, Al Mawasi PHC, Al Najar Hospital, Deir el Balah PHC, Khan Younis PHC, and MSF Field Hospital. Due to the contextual circumstances, data were incomplete and based on routine medical data collected across the six partially functioning health facilities. \*Number of individual patients who accessed care at any MSF-OCB-supported health facility in Gaza. The number of consultations exceeds the number of patients as number of consultations includes new and follow-up consultations. †As proportion of wound care-related consultations due to violent trauma. MSF= Médecins Sans Frontières. MSF-OCB= Médecins Sans Frontières Operational Centre Brussels. PHC=Primary Healthcare Centre.

**Table: Wound care-related injuries data from six MSF-supported health facilities in Gaza**

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of both injuries and deaths could be prevalent in vulnerable populations who are often not able to move away from sites of impact such as infants, children, people with disabilities, and older adults.<sup>8</sup>

MSF teams report that health-care staff do not have the crucial supplies and equipment necessary to treat these complex wounds, resulting in suboptimal care delivery and earlier than required discharge of patients. We observed high percentages of wound infections; on average 18.3% (4143 of 22 637) of patients coming to health facilities for the first time have infected wounds, which is especially concerning considering the high prevalence of antimicrobial resistance in the region and lack of fully functional microbiology laboratories or suitable antibiotics.<sup>9</sup> In one MSF-supported health facility, wound infections were as high as 28%.

Other morbidities included upper respiratory tract infections, diarrhoea, and skin diseases (eg, scabies). There was an increase of upper respiratory tract infections between September and December, 2024, accounting for 25% of all consultations. This increase can be explained due to seasonality and crowding in makeshift shelters, enhancing conditions for transmission. These shelters offer limited protection against fine dust, debris, and pollutants, which are other factors associated with respiratory conditions and longer-term health effects.<sup>10,11</sup>

Since Oct 7, 2023, over 1580 health-care workers (including 12 MSF colleagues) have been killed.<sup>12</sup> Not a single hospital in Gaza is fully functional.<sup>13</sup> From Feb 27 to May 22, 2025, no entry was granted for our (bio)medical and life-saving supplies into Gaza. Restrictions continue on the importation of what Israeli officials consider dual-use items (items that can be used for both civilian and military purposes), which includes essential biomedical equipment. These restrictions reduce our ability to support trauma surgery

activities. Consequently, we will be facing critical shortages of essential medical supplies in the weeks to come. We are currently rationing food for patients in our inpatient departments, and are only able to provide one or two meals a day. It is likely we will not be able to offer any food for our patients in the coming weeks.

MSF reiterates our call for an immediate and standing ceasefire, for the protection of civilians, and respect for essential medical and humanitarian work. We urge the Israeli Government to directly allow and protect impartial and unrestricted medical aid into Gaza.

All authors contributed equally to this work. We declare no competing interests. Data reported in this Correspondence are MSF data from health-care facilities in Gaza and are not publicly available. All authors had full access to all the data in this Correspondence and had final responsibility for the decision to submit for publication. Providing health care is one of the most apolitical acts, but today carries unacceptable life-threatening risks. As a medical humanitarian organisation, we express our heartfelt solidarity to colleagues who provide life-saving care in some of the most challenging contexts across the globe. We dedicate this writing to our colleagues whose lives were taken and to all health-care staff held in detention without cause and due process.

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