**Roadmap for Rebuilding the Health System and Scenarios of Crisis Path in Gaza**

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***Abstract:*** The horrific attacks on Gaza have had a profound impact on Gaza’s health system, culminating in a multidimensional crisis. The deliberate destruction of vital infrastructure, such as hospitals, schools, housing, and public facilities, coupled with the deaths and injuries of medical personnel and support workers has only exacerbated the situation and further highlighted the existing gaps. This unprecedented catastrophe proves the criticality of adopting a new national inclusive integrated approach to meeting the immediate and long-term needs of the population. In this viewpoint, we explore the recovery roadmap features for rebuilding the health system in Gaza, specifically focusing on determining the primary challenges that might emerge, the trajectory of recovery, and the expected crisis scenarios. The existing evidence and stakeholders’ perspectives were synthesized. Despite some local and international initiatives undertaken to generate a concrete road to recovery, there remains a need for realistic, innovative, and comprehensive Marshall plans to rebuild Gaza’s health system. The analysis draws on insights and gaps in current efforts and underscores the urgent need to address the challenges of rebuilding the health system. The authors strive to offer an inclusive and realistic path with the potential scenarios toward recovery and resilience considering the mass levels of loss and damage, and ways to move forward for building back a resilient health system in Gaza.

**Keywords: Gaza crisis, health system recovery and rebuilding, crisis scenarios, Palestine**

**Highlights**

* During the ten months of the ongoing crisis in Gaza, the severely attacked and damaged health system leaves the majority of the population deprived of essential healthcare services and marginalized to huge health threats.
* Rethinking the health system and adopting a new and strategic national inclusive integrated approach with a clear national rebuilding health system to meet the immediate and long-term needs of the population is imperative.
* Tackling the profound humanitarian challenges and essential life-saving needs taking into account the scenarios of the crisis path is highly needed to effectively rebuild the health system.
* As the way forward, steadfast political commitment from all stakeholders backed by collaboration, transparency, and accountability is central with a focus on the restoration of population lasting health and dignity and realization of the rights-based and health-peace approaches and ending the lengthy injustice.

**Introduction**

The crisis in Gaza demonstrates the vast magnitude and immense lasting adverse effects on people’s lives and all social systems. To present, 1.7 million people are displaced several times and are on the move again due to military operations and Israeli evacuation orders, with at least 36,479 Palestinians have been reportedly killed since 7 October, another 82,777 injured, and hundreds were detained. This scene is exacerbated by the spread of diseases, starvation, and the vast level of destruction of all public facilities and residential buildings, which constituted more than 70%, in addition to the huge damage to vital infrastructure and systems, including the health system1. Following the imposition of a tight siege on Gaza in 2007, Israel’s systematic actions and policies have consistently damaged and overwhelmed the health system in Gaza as well as throughout the Palestinian territory2. Currently, the current Israeli aggressive and catastrophic military measures on Gaza have rendered the fragile health system inoperable; only 16 of Gaza’s 36 hospitals remain partially functional1. It is confusing where and how to begin examining and analyzing this unprecedented and compound disaster which may amount to a genocidal act. It is also highly uncertain to envision approaches and ways for recovery and rebuilding the health system in Gaza while its pillars are largely broken amidst the continuity of large-scale killing, damage, and scarcity.

This viewpoint explores innovative recovery approaches for rebuilding Gaza’s resilient and responsive health system. The anticipated insights from the viewpoint would aid local and international health and humanitarian actors and policymakers during and after the crisis. We focused on three critical questions to help envision the recovery and rebuilding roadmap and process. The first question is what the primary public health problems and challenges that health system rebuilding may face. The second question is what elements and trajectories of recovery need to be considered in Gaza's post-crisis rebuilding process. The third and final question is what a self-determined recovery process and scenarios might be anticipated for the health system in Gaza. These scenarios of the crisis path inform all local and international health policymakers and professionals about the recovery challenges and insights, allowing for better thinking, planning, and intervention.

***Challenges of Recovery***

The first step that must be a priority of all local and international state and non-state actors is to address the most pressing life-saving issues/needs that all Palestinians in Gaza profoundly lack. The immense concern is livability and survival, which may appear challenging in the little enclave. After the 2007 siege was imposed2, this enclave was called a “ghetto” and “the world's biggest open-air prison” surrounded by multilayered barriers. Unfortunately, with the emergence of the devastating crisis, it is now being referred to as “the world's biggest graveyard”3. It is not only a graveyard for people, but also for humanitarian laws and principles. Despite all the heartbreaking scenes and stories, history taught us that rights holders and freedom seekers can recover, rise, and stand up after extreme adversities. Indeed, we are confident that the Palestinians and Gazans, in particular, will recover and stand up again amidst annihilation, as they have always done for the past 75 years. All actors must direct their primary efforts on addressing the challenges of building shelters in safe areas for people, rebuilding their homes and infrastructure, and providing food, electricity, safe water, sanitation and roads. These challenges are deemed by the UN the most essential for survival and public health priorities4. However, there is a limitation in precisely recognizing the public health problems and challenges in this unique humanitarian setting as no systems or infrastructure are left in place. The mass destruction of the health system is the biggest problem in itself. Addressing this limitation through a thematic and exploratory analysis based on existing literature, experts’ perspectives, and authors’ insights is the most suitable approach.

An additional issue that Palestinians may face is using and applying similar conventional recovery models and approaches in the aftermath of Gaza’s crisis. There is now a golden opportunity to utilize new models and approaches to rebuild and re-design the entire health system from scratch, as the radical structural changes and destruction caused by the crisis have created the need for a fundamental transformation that goes beyond simply restoring the previous model. Gaza's healthcare system could be a pilot program for a future comprehensive healthcare system in Palestine. Enhancing the process or plans of recovery and rebuilding the health system and other social systems demands a strategy outlined into distinct stages, necessitating a blend of knowledge, expertise, comprehensive planning, and adequate funding and alignment with socio-political interests. The absence of any of these critical components poses formidable challenges to restoring the public health system and infrastructure. Undoubtedly, addressing the impact of the tragic disaster will take precedence before any reconstruction can begin. This process will be lengthy considering the extensive loss and damage throughout the restoration of healthcare operations, including service delivery.

Another key problematic component for recovery is a coordinating body or coordination mechanism that has not been sufficiently effective before the crisis. Such bodies and mechanisms should be representative, strong, and inclusive with representation from all stakeholders and disciplines relevant to recovery, primarily civil society. Additionally, skilled human resources and leaders are essential elements in healthcare, and this can be a problem that requires special consideration, especially considering the traumatic events healthcare leaders, workers, and other personnel have faced. Therefore, recovery efforts must include support for these individuals and the recruitment of an additional workforce to initiate the rebuilding process. In other words, recovery and rebuilding discourse and activities that do not consider the severity of human losses and the extent of damage afflicting the infrastructure of Gaza’s health system will undoubtedly be ineffective. Rebuilding all of Gaza’s systems, sectors, and facilities would require exuberant amounts of resources from human, financial, and material resources, which have essentially been destroyed or obliterated. Taking the health system as an example, the Israeli occupation forces have murdered at least 484 healthcare workers and conducted around 435 attacks on healthcare facilities, according to the most recent statistics by Medical Aid for Palestinians1.

As outlined earlier, the absence of the healthcare workforce, the murder of aid workers, the obliteration of basic infrastructure, and the scarcity of financial resources mean that it takes the Palestinians and Gaza's health system to restore the damaged infrastructure, depleted financial resources, and health workforce better than before. Accordingly, a comprehensive Marshall recovery and rebuilding plan that deals with this draconian situation and tragic crisis essentially requires a knowledge-based comprehensive assessment that guides all stakeholders' plans accordingly. Such robust and comprehensive assessments were not effectively carried out and their results were followed or translated in previous crises. The current catastrophe in Gaza is more than just health-related; it affects everything. This crisis has both direct impacts on health as well as a disastrous toll on public health, resulting in various demographics, including men, women, and individuals of different age groups being adversely affected5. The numerous casualties have resulted in a significant increase in traumatic injuries, such as amputations, further straining an already overwhelmed healthcare system6. As a result of performing this evaluation and prioritization procedure, we will clearly understand the extent of difficulties being faced. The assessment should take into account public health issues (such as inadequate healthcare infrastructure and resources, limited access to essential services, and a lack of resources for preventive care and mental health needs and trauma), environmental disruption, and long-term impact. It should also include basic needs, such as housing, food, and clean water, as previously stated. The absence of these comprehensive assessments hinders all prioritization, planning, and building activities, and all Palestinian sectors should be involved, including health, education, environment, and development to support the health system. Generally, various health/public health or health system-related problems/challenges that all stakeholders should consider in the discourse and plan for health system recovery and rebuilding.

The analysis identifies eight challenges and it informs the Palestinian and international actors and decision-makers on how they can address these challenges now and during the planning and implementation of the disaster recovery plan. These challenges are:

1. The Magnitude of human losses and damage to infrastructure.
2. The mental health crisis.
3. Outbreaks and mortality rates of communicable and non-communicable diseases
4. Shortage in the health workforce.
5. Collapse of the public health system and inaccessibility to sanitation and clean water, unhealthy living conditions, and preventive, promotive, and protective services.
6. Food insecurity, starvation, and malnutrition.
7. Shift from emergency to recovery with the politicization and securitization of humanitarian aid and recovery plans .
8. Disrupted governance structure and health system functions.

First, the magnitude of human losses and damage to infrastructure that resulted from mass interruptions of all public services, including healthcare, at all sectors for people in all Gaza areas7. The healthcare system in Gaza has sustained significant damage during the ongoing crisis, with hospitals, clinics, and medical equipment being destroyed7,8. Furthermore, essential public infrastructure such as roads, cities, villages, and community facilities supporting healthcare services, including water supply, wastewater management, sewage systems, solid waste management, and roads, have been damaged. Second, the mental health crisis leaves a significant number of the population suffering from trauma and psychological disorders (depression, anxiety, and post-traumatic stress disorder) as a result of intensive and aggressive violence5. Third, the noticeable rise in the outbreaks and mortality rates of communicable and non-communicable diseases emerged due to the destruction of water and sanitation systems, inadequate essential healthcare services, and overcrowding and lack of hygiene and equipment in both designated and scattered shelters6. Fourth, a shortage in the health workforce that is directly affected either through emigration, injury, displacement, evacuation outside Gaza, detention or loss of life, and interrupted education complicates the process of restoring health services. Rebuilding the health system requires efforts to recruit and train new health workforce, as well as support services to address the physical and emotional needs of existing staff. Fifth, public health-related problems such as insufficient sanitation leading to large amounts of solid waste, limited and difficulty accessing clean water, unhealthy living conditions, and collapse in most public health preventive, promotive, and protective services resulted from direct targeting and damage of all public health facilities. Sixth, food insecurity, starvation, and malnutrition have become prevalent among children, women, and the elderly, including cases of severe acute malnutrition due to the tied restrictions of international aid flow5,6,9. The seventh challenge that may be faced is the shift from emergency states to recovery including the politicization of humanitarian finances and relief, security issues, and the diversity of humanitarian actors. The exploitation of humanitarian aid, political interference, and the demands of impacted populations are expected to influence the recovery and rebuilding plans and also the politicization of aid and donations, which makes these plans impossible for Palestinian organizations to uphold humanitarian ideals, most notably independence. The eighth and final expected challenge is the disrupted governance structure and health system functions that were exacerbated by disturbances in control and leadership, communication, financing, and planning of all health system facilities, teams, and networks.

Even before the crisis, Gaza's healthcare system struggled to function properly due to long-standing blockades and transportation restrictions. However, the demolition of roads and houses in most governorates has further limited access to health facilities, exacerbating the already strained situation. Capacities of health authorities in Gaza, essentially, resilience, recovery, and preparedness were severely limited due to the continuous bombardment and wrecking of healthcare infrastructure. This has led to limiting the system's ability and essential services such as disaster response and disease surveillance as well as disruptions in communication and transportation. These governance and function-related challenges hindered the system from responding effectively to the escalating crisis, coordinating emergency efforts and the delivery of vital medical supplies, and tackling the population's vulnerability to health risks. As a result, Gaza's healthcare system remains ill-equipped to cope with the scale of the current humanitarian emergency, highlighting the urgent need for support and investment in rebuilding resilient health infrastructure and preparedness mechanisms.

***Trajectories of Recovery***

Building on the above-identified problems and referring to a plan for Europe’s economic recovery after World War II, a new national Marshall recovery plan that includes a health system recovery in Gaza with strategic and game-changing trajectories. The UNDP’s initial estimates for the reconstruction of Gaza surpass $30 billion and could reach up to $40 billion and it would take decades10. However, experts estimated that rebuilding the damaged infrastructure of the health system will take at least ten years and $15 billion during the current war11. The significance of this analysis stems from the urgent necessity of thinking of and framing this plan which can already begin, even amid ongoing war conflict to identify the pressing needs and priorities. The proposed financing facility for the Marshall Plan for Gaza is expected to establish a mixture but unified and integrated local and international financing mechanisms managed by an executive and advisory well-representative board of this facility. Overall, this plan that includes a health system rebuilding plan should compass three stages: 1) immediate comprehensive needs assessment and humanitarian aid and medical supplies and support, 2) rebuilding the livability and survival of people, and 3) rebuilding all public social systems, including rebuilding a comprehensive health system and services.

This plan might be sustained for at least 10 years and reconstructing the healthcare system in Gaza should be aligned with WHO standards, and integrated into other sectors' national recovery efforts.

In the first stage of the plan, which might last one to 2 years, must begin by conducting a national comprehensive needs assessment and prioritization. Health system actors must execute this exercise immediately to identify the actual health system and population’s public health needs, which include capacities and resources for the health system and injuries, malnutrition, infectious disease, and mental health issues for the population. WHO along with international bodies including the World Bank, UN agencies, Oxfam, Save the Children, MSF, and MAP-UK can provide support to Palestinians in carrying out this assessment through international and local Joint External Evaluation (JEE) and apply various useful tools such as the WHO’s Strategic Tool for Assessing Risks (STAR) and the World Bank’s Crisis Preparedness and Response Toolkit12,13.

This is supposed to be followed by carrying out a technical health system analysis that covers the following elements health policy and planning, governance, workforce, financing, infrastructure and logistics (buildings, supplies), and healthcare and public health services (primary, secondary, tertiary, disease control, sanitation). Moreover, mobilizing both international humanitarian and medical support should be urgently supplied in Gaza. The immediate humanitarian and relief needs such as food, water, shelter, fuel, and medical and hygienic supplies are enormous and require secure corridors and coordinated actions that go well beyond the health sector. Importantly, specialized medical teams and medical supplies are necessary, especially now and in the early phases of the recovery plan. This support would guarantee the availability of medicine and medical supplies and the sufficiency of the healthcare workforce that covers all medical needs. Addressing the depletion of the healthcare workforce by providing training and support for existing staff, attracting healthcare workers back to the area, and prioritizing the psychosocial well-being of healthcare professionals who may have been traumatized is a priority. An international and regional network of hospitals can be established to evacuate the huge number of wounded people to neighboring countries. This action has to be part of the recovery plan during the current crisis and post-crisis with full consideration of main medical and surgical subspecialties.

The subsequent immediate and mid-term actions that the recovery plan must also receive greater attention is providing primary health care through mobile clinics and outreach health teams in certain areas. In the secondary healthcare provision, field hospitals with large bed capacity should be deployed in all of Gaza’s Governorates with the importance of effective and unified referral mechanisms for patients outside or inside Gaza. Re-engineering, re-designing, and re-allocating the primary, secondary, and tertiary healthcare services may provide an opportunity to rebuild stronger healthcare delivery models. However, the long-term reconstruction phase will require rebuilding and rehabilitation of entirely and partially the damaged health system and its infrastructure and facilities such as the main hospitals, primary health centers, laboratories, and other public health facilities, and equipping them with the necessary equipment and capacity. Immediate actions will also focus on public health through vaccinations, communicable and non-communicable diseases, maternal and child health, nutrition, mental health, supply of water, and environmental health services. The recovery plan would ensure access of all populations, especially patients and groups at risk to essential medical and public health services to stop and control health complications, high morbidity and death rates, and environmental threats.

The second immediate and short-term action is the provision of the basics for the livability and survival of people. This action is essential action for the sake of guaranteeing people's survival, health security and protection and then rebuilding the health system. Rebuilding or restoration of people’s resilience and normality through immediate first aid and support are key and should proceed with rebuilding the health system and its facilities and services which are gradually built based on the highest priorities and in a comprehensive and integrated recovery plan. Rebuilding the public health system and healthcare services entails more than just reconstructing hospitals, health centers, and services, it goes beyond that. This approach is helpful, and it must first begin with the modest restoration of people’s daily living conditions and going back to normal lives such as going back to work, school, and so on. Utilizing and combining both approaches, with a focus on building back normal life and vital social systems and the health system simultaneously is essential. This integration of recovery and rebuilding approaches could make impacts in the short and long-term. However, the integrative plan would take at least 10 years because it is a matter of rebuilding other vital systems and sectors such as the energy, communication, economy, water and sanitation, housing, agriculture, education and academic systems including health. For instance, the education system can support bridging the workforce shortage gap by resourcing the health system with trained physicians, nurses, and allied health professionals. The recovery and rebuilding plan of the health system requires a consolidated strategy and intersectoral implementation.

Furthermore, in this second stage, psychological and social support is central and demanded. Rebuilding the liveability and survivability of the population and the society restores the psychosocial patterns and social lives, assisting those affected, particularly children, the elderly, and women, in resuming their everyday lives as soon as possible. Since health is an integral part of the social paradigm, a recovery plan should also pay more attention to particular populations such as children who have lost parents, grandparents, or all family members, and people with disabilities. These issues are important and local and international actors need to design long-term, inclusive, and integrated social and rehabilitation programs that target those populations and wounded Palestinians transferred abroad for special treatment. In general, there is a need for a comprehensive approach toward addressing the root causes of health issues such as poverty, unemployment, and food insecurity through evidence-based interventions.

The third stage of the recovery plan which is rebuilding the central systems including the health system could be the toughest task. The reason behind this difficult task is because rebuilding all public social systems, including rebuilding a comprehensive health system and services is a strategic and collective exercise and it entails long-term actions and immense resources and capacities. In this stage, there will also be chances to add components that were not available before. Setting priorities and following a certain order are therefore essential components in rebuilding the health system in Gaza, especially as choices made during the transition phase will frequently dictate the system's long-term course of development. Among these rebuilding priorities are limited financing, a shortage of main subspecialties and human resources, and a broken health information system to enhance the monitoring of performance and outcome indicators. However, the recovery of the health system after the crisis needs to be defined and contextualized to match the local context. The WHO building blocks model, for example, is broad and places more emphasis on the supply than the demand side of the health system11. Prioritizing patient-centered measures in health system reintegration should involve considering factors including acceptability, security, accessibility, and geography—particularly in situations where there has been widespread relocation. However, since non-state organizations and community-based organizations have a lot of power, it is equally important to guarantee community engagement [14, 15].

The resiliency of the health system should be considered in this recovery stage of rebuilding the health system. Recovery initiatives, which are associated with the resilience of the health system, usually start during the emergency period and build upon humanitarian successes to launch sustainable development processes. Furthermore, the plan requires embracing the "build back better" concept, which calls for reconstructing the system in a way that leads to it being more sophisticated than it was before the catastrophe15. Most importantly, the sustainability factor is imperative in the recovery plan to rebuild a sustainable health system that can function in the long term. This can be achieved in this plan by building local capacity, developing a funding mechanism supported by the local economy, and addressing pre-existing weaknesses in the healthcare system that may have been exacerbated by the disaster.

The third stage of the recovery and rebuilding plan of the health system should also consider strengthening emergency preparedness and institutionalizing intersectoral partnerships and integration with governmental, NGOs, and other sectors during and post-crisis. Better preparedness and integration across sectors support rebuilding and implementing effective and consolidated health strategies that secure, for instance, essential drugs and medical supplies, prevention and control of emerging diseases, and WASH programs.

All stakeholders involved in this stage such as Palestinian Ministries, civil society, private sectors, and international actors should take into account another critical trajectory there is related to the management of the rubble and debris from the destruction in Gaza and its long-term dangerous effects on the environment, animal, and human. It is also important that the stakeholders consider handling unburied bodies and collective graves. Post-conflict demolition waste management processes must include access to debris for collection and transportation to remove and recycle the materials that comprise the majority of rubble concrete. It is critical to thoroughly separate the various waste items, such as hazardous elements, to efficiently and effectively be able to recycle and reuse those materials that could be reused in the rebuilding process. Concerning the sensitive issue of handling the unburied bodies and mass graves stuck in the destruction, careful documentation, identification, and respectful treatment would be imperative. As part of the plan, it is crucial to stress that multidisciplinary committees and teams including public health, legal, and religious, are required to manage both the debris and the unburied bodies from the disaster.

On top of all the trajectories of recovery outlined, community engagement is the final but the most important driving force for the successful implementation of the recovery and rebuilding plan for the health system in Gaza. Engaging community leaders and representatives, initiating constant dialogues with residents to gather feedback and active involvement of community-based organizations in decision-making processes make this plan feasible and real15,16. More importantly, emphasizing the importance of decolonizing the Gaza context and Palestinians' self-determination and autonomy, the processes of this recovery and rebuilding plan should be managed and controlled by both Palestinian institutions and community and civil society with the support of international actors and without external influence. It is crucial to stress that a robust, representative, and inclusive coordinating body or mechanism is required. Ensuring ownership and stewardship of Palestinian institutions as a part of this plan would help to establish a culturally acceptable and respectful approach that facilitates seamless implementation of the plan13. Generally, to ensure all these stages are properly done, pre-requite political factors such as agenda, interest, and priorities alignment, an independent, transparent, and accountable governance body that involves all stakeholders, especially the civil society organization, and a fair monitoring mechanism should be established. Technically, national coordinated, integrated, and collaborative implementation plans across Palestinian sectors, international organizations, NGOs and the community are crucial to execute the plan and address such complex interrelated issues effectively.

***Possible Scenarios***

With Gaza in ruins, millions displaced, and an uncertain future looming, the pressing question of what lies ahead remains outstanding. The implementation of this recovery plan for the health system depends on three possible scenarios. These scenarios can be analyzed to better comprehend and navigate the rebuilding of Gaza’s health system. Firstly, the examination of the potential outcomes if the current situation persists. Secondly, the ramifications of the implementation of a temporary ceasefire. Thirdly, the most favourable scenario is the exploration of the potential impact of a permanent lasting ceasefire. In shaping these scenarios, it is imperative to acknowledge the increasing significance of governance and politics, as these variables will without a doubt influence the course of Gaza’s health system recovery.

The proposed scenarios align closely with those outlined in the Scenario-based Health Impact Projections Report, emphasizing the urgent need for a comprehensive health response. To conclude, across all scenarios, there is a notable increase in mortality rates. Using the widely recognized crude death rate metric among humanitarian actors, mortality is projected to escalate to 0.34, 1.70, and 2.16 deaths per 10,000 person-days under the ceasefire, status quo, and escalation scenarios, respectively6.

**Scenario 1: The current situation persists**

In this scenario, the health system in Gaza will deteriorate further, exacerbating the humanitarian catastrophe and making it increasingly challenging to provide the necessary services and needs of the population. Should the conflict persist, whatever little existing infrastructure and capacity, almost 30%, that remains standing will undoubtedly be further implicated. This is especially true in the north governorates of Gaza. If this scenario happens, it will make it extremely difficult to rebuild the health system and adopt effective and sustainable restoration solutions due to the continued systematic and large-scale destruction and vast casualties. People will continue to lack access to clean water, sanitation, and hygiene facilities due to Inadequate shelter and WASH facilities. Food security and nutritional status will also continue to be compromised, which will exacerbate malnutrition and related health issues. Furthermore, the healthcare system will be severely overburdened as a result of the rising rates of trauma, injuries, infectious disease, and casualties. The Palestinian population will continue to suffer substantially from physical and psychological trauma.

To address these challenges, immediate international support and advocacy efforts are essential to seek a permanent ceasefire and facilitate access to aid. Establishing a safe, sustainable and seamless supply mechanism of medical and humanitarian assistance is imperative to maintain the minimum functionality of the health system and to address immediate needs such as food, water, and shelter. This mechanism supposed to be managed by the UN agencies is essential and it is supported by other local and international efforts to protect the remaining healthcare facilities and ensure the provision of emergency medical services. This scenario is characterized by more uncertainty and higher levels of deterioration and escalations. It imposes the necessity of sustaining and mobilizing all resources and coordinating interventions among stakeholders with a focus on the protection measures for healthcare workers. More importantly, strengthening public health surveillance must also be taken into consideration. This action aids health institutions in monitoring, responding, and detecting the expected waves of disease outbreaks. However, the global health community, especially powerful countries and actors of the G7 and G20 along with the UN bodies, are required to use their power and diplomacy to pressure towards immediate sustainable solutions to end this local crisis that is becoming a worrying global health issue.

**Scenario 2: The implementation of a temporary ceasefire**

In this scenario, a temporary ceasefire would open up a brief window of opportunity for humanitarian relief and the delivery of critical supplies to Gaza’s affected populations. However, this would only be contingent on the terms and conditions that relate to the ceasefire agreement. While this scenario would likely lead to a reduction in casualties and impairments, it would not address the underlying causes of the conflict, leaving Gaza's health system at risk of future disruptions. Displacement and overcrowding will somewhat decrease, but the underlying issues will not be resolved. People will still be unable to obtain clean water, sanitary conditions, and hygiene supplies due to Inadequate shelter and WASH facilities. Although there will be a minor improvement in food security and nutritional status, the blockade will nonetheless restrict access to essential goods. A ceasefire will reduce the number of casualties, however insufficient medical supplies and equipment will continue to result in a high number of casualties and infectious diseases and physical and psychological trauma will continue to negatively impact the population.

Immediate action is vital to mitigate potential disruptions and minimize the impact when the ceasefire ends, while simultaneously negotiating a permanent ceasefire remains imperative. Short-term planning should prioritize stabilizing healthcare, securing sustained safe aid routes, and stockpiling supplies for post-ceasefire challenges. Meanwhile, long-term planning should concentrate on infrastructure rebuilding and fostering resilience, with a focus on collaboration and community engagement.

**Scenario 3: The implementation of a permanent ceasefire**

In this scenario, implementing a permanent ceasefire would be the most beneficial to the population and public health’s future. With the opportunity for long-term recovery and rebuilding as well as the opening of borders for the free flow of goods and people, sustainability and resilience can be achieved, provided that all parties involved demonstrate political will and commitment, as well as external assistance from global communities. Significant improvements will be made in terms of displacement and overcrowding will significantly improve, allowing people to be able to their place of origin and regain access to shelter and basic services, such as inadequate shelters and WASH facilities, will be restored. Malnutrition and associated health problems will be addressed by restoring food security and nutritional status. Medical facilities will have access to essential medical supplies to equipment, restoring healthcare services and trauma and injuries will cease. There will be a marked decrease in the number of casualties, control of infectious diseases, and the onset of recovery for psychological trauma and mental health issues. Implementing a permanent ceasefire would be the most beneficial to the population and public health’s future. With the opportunity for long-term recovery and rebuilding, sustainability and resilience can be achieved, provided that all parties involved demonstrate political will and commitment, as well as external assistance from global communities.

Given the dire and complex context in Gaza, a multifaceted and comprehensive approach is imperative. Immediate actions include conducting a comprehensive needs assessment and technical analysis of the main priorities in all sectors. It is crucial to acknowledge that addressing the health system cannot be done in isolation; all infrastructure and basic services must be provided. As such, swift provision of essential services including primary healthcare and field hospitals, supported by international aid for basic supplies and workforce recruitment, is crucial. All available resources must be utilized, and international intervention, especially in the initial stage, is essential. It is vital to recognize that this scenario represents the only opportunity to effectively work towards rebuilding the healthcare system in Gaza, highlighting the urgency and importance of the proposed actions within the context of a lasting ceasefire, community involvement, and the proposed roadmap for recovery that can be set into motion

***Conclusion***

In light of this unprecedented dire crisis in Gaza, an urgent recovery strategy that entails three immediate, medium, and long-term stages is key to addressing the profound humanitarian challenges and essential life-saving needs. Even in the best-case scenario of a permanent ceasefire, significant innovative and consolidated local and international efforts represented in a national Marshall recovery plan will be highly needed to rebuild the health system. The proposed roadmap for recovery offers a comprehensive approach, but its success relies heavily on achieving a ceasefire and long-lasting stability. However, regardless of the scenario, continuous efforts are imperative. Immediate humanitarian relief, stabilization of healthcare services, and long-term recovery efforts must proceed without delay. As we navigate these challenges, steadfast political commitment from all stakeholders is crucial. By working together with determination, collaboration, transparency, and accountability using new recovery approaches, we can strive towards restoring the health system in Gaza. Most importantly, restoring lasting health and dignity to the people of Gaza by realizing the rights-based and health-peace approaches and ending the lengthy injustice.

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**Ethical approval**

NA

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