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Title: Explosions, fire outbreaks, burn injuries, and burn care in Ghana: where do we go from here?

Within a space of 36 hours, Ghana recorded two major explosions leading to extensive damage to property, flattening of an entire community, injuries to several persons, and death to others. The explosion in the Apiate community was associated with a head-on collision between a truck conveying mining explosives and a motorcycle; - the explosion at Kaase was associated with illegal siphoning of fuel. This is not the first time Ghana has experienced such devastating occurrence, but it begs the question “what do we learn from past occurrences and where do we go from here”? In this blog, the author seeks to highlight key issues regarding the phenomenon in the country and offer suggestions.

Like other developing countries, Ghana bears a significant burden of explosions and fire outbreaks. In 2015, Ghana recorded one of its worst tragedies in the form of an explosion which caused the death of more than 200 persons and injured several hundred ([Dozens killed in Ghana petrol station explosion | Ghana | The Guardian](#)). In 2017, another gas station explosion claimed the lives of at least 7 persons and injured over 100 persons ([Gas Station Explosion in Ghana Kills at Least 7 and Injures Over 100 - The New York Times \(nytimes.com\)](#)). Other episodes of explosion involving liquified petroleum gas (LPG) cylinders have been reported across Ghana. Additionally, electrical problems resulting from faulty wiring, power fluctuations, and misuse of electrical gadgets remain a major cause of fire outbreaks. These explosions and fire outbreaks remain a significant issue not just in Ghana, but globally with adverse impact on economies, societies, and geographies and enormous costs to businesses, people, and the environment.

The consequences of these explosions and fire outbreaks are often dire. Varying degrees of injuries are sustained requiring urgent care. However, the sudden occurrences of these explosions and outbreaks often lead to poor pre-hospital care when the injured persons encounter untrained personnel whose intent may be harmless, but the process of assisting can introduce wound stressors or other sources of infection. The use of household items such as toothpaste and eggs to ‘soothe’ burn wounds have been reported ([The trend of acute burns pre-hospital management \(oaji.net\)](#)). Depending on the location of the explosion, the first healthcare facility may not be well equipped to handle severe burns and delay in transporting severely injured persons can affect survival outcomes. Delay in referring to the teaching hospitals may occur which increases the rehabilitative needs of burn patients. The phenomenon of ‘no-bed syndrome’ often limits the capacity of inpatients at the teaching hospitals in Ghana implying that most burn patients may spend more time at the peripheral healthcare facilities before being transferred or even remain till discharge. Some severely burned persons may also die at the scene of the incident or before reaching the healthcare facility. Yet, the chances of receiving palliative care in such instances is often little to nothing. Psychological support for family members or persons who witness the incident is often minimal, if at all available. Beyond the emergent and acute phases of care, is the need to prepare burned survivors and their families for long-term care considering the protracted nature of recovery following burn injuries. Long-term rehabilitative support however remains another concern

as the services may be limited. Taken together, it is evident that significant systemic challenges exist from the scene of the injury to the long-term rehabilitation phase warranting further attention. In addition to the challenges associated with clinical care is the damage to property which can be equally devastating.

Considering the identified issues, the following are suggested. The need for emergency preparedness in the country, including the timely arrival of support services such as the fire and ambulance services to deliver professional onsite support is critical. A context-specific triage system is also required to help practitioners to classify patients based on their acuity levels. To support staff at the peripheral facilities, it may be essential to consider innovative ways of knowledge sharing such as through telemedicine or other applicable channels to facilitate diagnosis and treatment in a comprehensive manner. More avenues to train burn care practitioners, particularly nurses are also warranted. Currently, the only burns nursing specialist training available in Ghana is the course delivered by Interburns which is still be limited. This is an area that the Ghana College of Nurses and Midwives can take up to support the development of burn care nurse specialists. Mental health support strategies such as counseling are also required to support family members. Implementing preventive measures and enforcing policies are urgently needed in the country to avert future occurrences. This is particularly essential in the second explosion which was associated with illegal fuel siphoning. In fact, it may seem as though we have a long way to go, but little steps in the right direction can prevent future occurrences, save lives and improve survival outcomes in the long term.