

When electricity infrastructure is targeted, health is targeted too

Attacks on electricity infrastructure also harm clinical care, public health, and patient survival, write Mohammad Reza Farzanegan and Reza Majdzadeh

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Recent events in Iran, Cuba, and Gaza show that targeting the electricity supply is increasingly being used as a weapon of war and coercion. US attacks on Iran's energy facilities and warnings of reciprocal strikes against Israeli electricity infrastructure and power plants supplying US bases in regional countries show how quickly power systems can become targets for escalation.^{1,2} In Cuba, fuel restrictions have contributed to blackouts, and in Gaza, the electricity supply has been deliberately cut. These acts point to the same public health reality: targeting electricity impedes medical treatment, affects the supply of medicines and safe water, and puts patients at risk.^{3,4}

The harm caused by electricity disruption is often treated as a secondary concern in conflict settings. But for patients who depend on continuous care, power outages can be life threatening.⁵⁻⁷

Power cuts prevent dialysis services from operating and interrupt oxygen delivery. Intensive care units face cascading failures when back-up systems are inadequate. The cold delivery and storage of insulin, vaccines, and other temperature sensitive medicines are jeopardised within hours of electricity being cut.^{5,6} Evidence shows that large scale power outages are linked to excess morbidity and mortality through failures in clinical care, water and sanitation systems, and temperature control.⁵⁻⁷

The risks are amplified at population level. Power outages compromise water treatment, food storage, sanitation, and communication systems.^{5,6} Studies link outages to increased hospital admissions, delayed care, disrupted vaccination and outbreak response, and nutritional stress.⁶ The effects are most severe where health systems are already operating under strain, deepening existing health emergencies.⁵⁻⁷

Iran offers a clear example of why attacks on electricity demand attention. Iran's health system is already weakened by economic pressure,^{8,9} and studies report gaps in emergency power preparedness and safety measures in hospitals. This raises concerns about how long healthcare facilities could maintain operations during prolonged grid failure.^{10,11} Back-up systems are fragile and dependent on adequate maintenance, fuel supply, and load management.^{8,10,11}

In Cuba, fuel shortages and prolonged blackouts have disrupted operations, imaging, ambulance services, and treatment for chronic illness.³ Electricity cuts and fuel blockades in Gaza have directly threatened neonatal intensive care, oxygen support, water desalination, and the operation of hospitals already under extreme strain.^{3,4,7}

The deliberate targeting of electricity infrastructure, or the use of fuel and electricity blockades to undermine health systems, must be recognised as a direct threat to health and a matter of international accountability.⁴ Responses limited to official statements of concern are inadequate; what is needed is a rights based approach. This includes transparent reporting, independent scrutiny, and enforceable accountability.¹³

In conflict settings, this means documenting how power cuts contribute to harms to medical treatment, water, sanitation, and medicines supply. Attacks and blockades affecting power systems must be independently documented. The harms must be treated as threats to civilian health.

The international healthcare community has a practical role in prevention and a professional role in accountability.¹³ Hospitals and health systems should strengthen facility preparedness through reliable back-up power, fuel continuity, and contingency planning for essential services.^{10,11} In conflict settings, solar powered oxygen systems and other decentralised energy solutions can help sustain access to essential care when attacks, blockades, or prolonged disruption compromise the grid.¹² Clinicians, hospital leaders, and public health researchers should also document excess deaths, treatment interruptions, cold chain failures, and outbreaks associated with electricity shortages.⁶

Reliable electricity infrastructure is a core determinant of health system functioning—targeting it endangers health far beyond the strike itself.

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