

## Safe in an emergency

Health systems and facilities built and organized to withstand emergencies and natural disasters is the theme of this year's World Health Day on 7 April. Dr Mohammed R Al Kashif, director of the Palestinian Ministry of Health's hospital services, describes how he and his colleagues coordinated hospitals and facilities across Gaza during the recent violence. Teddy Boen, from Indonesia, and Tony Gibbs, from Barbados and Grenada, talk about building health facilities to withstand tsunamis, earthquakes and other disasters.



WHO

Dr Mohammad R Al Kashif

Dr Mohammad R Al Kashif started his career in 1982 working as ophthalmologist with the Ministry of Health of Saudi Arabia. In 1996, he joined the Palestinian Ministry of Health ophthalmic hospital for two years before becoming consultant ophthalmic surgeon and later ophthalmic hospital director. He has also taught ophthalmology at the Faculty of Medicine at the Islamic University of Gaza, the Palestinian Ministry of Health's ophthalmic hospital and Al-Azhar University in Cairo, Egypt.

*Q: How was Gaza prepared for the recent emergency?*

A: When hostilities broke out on 27 December, we received more than 350 dead and injured. Our medical teams could not cope, so we activated our Ministry of Health emergency response plan. We called in additional staff and within two hours had more than 600 doctors, nurses, paramedics and operating-room technicians. We opened six operating rooms in Al-Shifa Hospital (main hospital in Gaza City) and added five others soon after. All 11 rooms were working 24 hours a day during the three-week conflict: each had two operating tables, but in some they operated on the floor. Despite that, many died waiting for surgery. Our philosophy was to make maximum use of resources. Our medical teams triaged cases. We kept the ones we could treat more easily or who couldn't be moved, while patients needing care for extended periods or types of surgery we could not provide were evacuated to other countries. Our medical teams divided into three shifts for the 24 hour-period: one on call, one sleeping and one working.

*Q: What factors contributed to your success?*

A: The dedication of the staff. They left their homes and families to work in

our hospitals. They refused to go home for more than 48 hours and displayed great courage and unity. Staff working for nongovernmental organizations (NGOs) and the private sector also made a good contribution. Retired doctors offered their services. Our teams were experienced as they had worked during the first and second *intifadas* (Palestinian uprisings). Our emergency plan was finalized a week before the violence started. Every member of staff had a schedule. Our health workers went out to fetch the injured and evacuate them. I am sorry that they were attacked. During the conflict, at least 16 medical personnel, including doctors, nurses and paramedics, were killed in the Gaza Strip. Another 24 were injured and 17 ambulances were damaged. About 20 international organizations supported the Ministry of Health response to the crisis, mainly the World Health Organization, the International Committee of the Red Cross, the United Nations Relief and Works Agency and the Arab Medical Union and Turkish Aid.

*Q: What was your role during the emergency?*

A: I led the management of the hospitals in the Gaza Strip from Al-Shifa Hospital for three weeks; I went home for 30 to 60 minutes most days. For

four days I couldn't go home because it was not safe. My flat was completely burned down. Many of our staff had similar experiences. One doctor's house was hit and two of his children were injured. He was working and could not go home, and saw his own children being brought in to the hospital. Many staff, whose relatives died during the conflict, could not even arrange their burials.

*Q: What did you learn from the crisis?*

A: We need to have more room in emergencies. The intensive care unit in Al-Shifa Hospital has 12 beds. We need to be able to increase that number to 50 in an emergency. We need one or two months' supply of drugs for operating rooms, more equipment for intensive care and surgery and more ambulances. Our health system was already badly affected by the 18-month blockade of Gaza. We were short of equipment, including laboratory materials and spare parts for X-ray machines. Electricity was cut for 12 days and we had to use generators without backups. Now we plan to get additional generators. Mobile telephone networks weren't working, but it helped having 300 wireless handsets.

*Q: How would you advise other countries to maintain health care in a complex emergency?*

A: The Ministry of Health should be the main health-service provider, and its staff should work with NGOs, community groups and private-sector providers as one team. Countries need well trained personnel, an independent communications system and an emergency response plan for which staff are trained. They need good intensive and ambulance care, good transportation, and staff specialized in treating orthopaedic and bone injuries. ■