Foreword

After the Tsunami: Mental Health Challenges to the Community for Today and Tomorrow

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On December 26, 2004, a powerful earthquake rocked the ocean floor off the coast of northern Indonesia, abruptly displacing a 15,600 square mile area of the floor some 50 to 70 feet upward. The earthquake, measuring 9.0 on the Richter scale, triggered a massive tsunami that propagated across the ocean's surface at speeds of up to 500 mph, reaching the nearest shores in a matter of minutes and arriving up to 8 hours later at coastlines some 4,000 miles distant from the epicenter. Devastation was massive as waves measuring 10 to 40 feet in height enveloped shores and surged up beaches, leveling vegetation, buildings, and entire villages before receding back into the ocean. In the minutes, hours, and days after it struck, the tsunami caused more casualties than any other in recorded history, killing over 280,000 people in Indonesia, Thailand, Malaysia, Myanmar, India, Sri Lanka, and many other countries located on the rim of the Indian Ocean and the Bay of Bengal. Notable for its scale of devastation, for the sheer numbers of people caught up in the resulting chaos, and for the global humanitarian response that followed, the Asian tsunami is an extreme example of disaster.

During the days and weeks following the tsunami, the intensive global media coverage vividly documented the physical consequences of the tsunami's destructive power. From the air, we saw turbulent, sullied shorelines, aerial views of entire villages leveled, and acres of bare land stripped of vegetation. At eye level, close-ups of bloated and twisted corpses trapped among the debris fought for new airtime with images of bulletin boards of missing persons and makeshift morgues. News reports of the harried and urgent activities of medical teams, morgue workers, and relief operators reinforced the world's perception of the physical costs of the tsunami and society's best efforts to address them.

By comparison, the psychological and psychosocial effects of the tsunami went relatively unnoticed. Identifying these effects presents a far more subtle challenge, but one that must be met if their long-term consequences are to be adequately recognized and mitigated. Thus, in the postdisaster setting, comprehensive programs of recovery and rehabilitation need to address such difficult questions as How has the tsunami affected the mental health of survivors? What psychiatric and psychosocial resources are available? How should they best be used? What are the ongoing needs of affected communities? Who is especially vulnerable? and What needs to be done in the future by way of disaster planning and mitigation for mental health?

Acknowledging the dreadful devastation inflicted by the Asian tsunami, this disaster nevertheless presents an opportunity to characterize the destructiveness of mass trauma for individuals and societies not as a function of the physical consequences but as a function of the psychosocial effects. If left unchecked, the social scars and instability that are inevitable outcomes of disaster have the potential to cause a human toll that is in many ways more substantial than the physical disfigurement that is apparent to all. Long after the dead have been buried, villages and towns rebuilt, and infrastructure replaced, psychiatric distress and psychopathologies developed as a consequence of initial exposure and loss, and exacerbated through everyday stressors encountered in the postdisaster environment, have the potential to reduce quality of life and unnecessarily prolong human suffering with a resultant delay in community recovery.

FACILITATING REHABILITATION AND AWARENESS

The First World Conference "After the Tsunami: Mental Health Challenges to the Community for Today and Tomorrow" and ensuing monograph were supported by an unrestricted grant from Pfizer Inc. The conference was convened in Bangkok, Thailand, on February 2–3, 2005, to facilitate an increased awareness of the impact of mental health problems arising from the tsunami in the South-Asia region. The meeting delegates were psychiatrists, clinical psychologists, and other mental health workers from Thailand, Sri Lanka, India, and Indonesia. An internationally renowned faculty was invited to share with the delegates their extensive knowledge and experience in managing posttrauma mental health. In addition to assisting local health care workers in dealing with the impending rise in mental health problems in the affected communities, the forum was an opportunity

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Figure 1. Map of the Tsunami-Affected Aceh and North Sumatra Provinces in Indonesia[a]

[a]Adapted with permission from the United Nations Office for the Coordination of Humanitarian Affairs-Relief Web (www.reliefweb.int). Inset reference map courtesy of the University of Texas Libraries, The University of Texas at Austin.

for the delegates and faculty to establish collaborative projects with the goal of facilitating the rehabilitation of community mental health.

TSUNAMI IMPACT AND REHABILITATION EFFORTS DURING THE ACUTE PERIOD

During the conference, delegates from the 4 most affected countries—Indonesia, Thailand, India, and Sri Lanka—provided accounts of the physical and psychological damage inflicted on their countries by the tsunami and an update on measures being taken to address the impact of the disaster. These presentations are summarized below.

Indonesia

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Nanggroe Aceh Darussalam (Aceh) and North Sumatra were the worst affected provinces in Indonesia (Figure 1). People along a 127-mile west coastal area of Aceh, including Banda Aceh, the capital city of Nanggroe Aceh Darussalam province, barely had a moment to react to the earthquake before the tsunami struck. Almost all buildings and infrastructure in this area were leveled, more than 110 bridges were destroyed, and parts of the main road in western areas of Aceh were under water. One hundred and thirty thousand people were killed in the first 15 minutes of the disaster, many more went missing, and half a million were forced to live in temporary shelters. There were no telecommunications, electricity, clean water, or food.

All inhabitants of Aceh were affected directly or indirectly by the disaster. In the immediate aftermath, an advance mental health team and other professional volunteers reported many acute psychiatric cases among the survivors. Psychological problems were widespread, with many survivors facing unimaginable traumatic experiences and loss of family members, possessions, and their communities. These psychological problems were exacerbated when the survivors were faced with having to live in camps for months, a lack of security, and an uncertain future.

Massive psychosocial support is still needed. Unfortunately, local mental health resources are limited. Before the disaster, there were just 5 psychiatrists for the 4 million inhabitants of Aceh. The only specialist mental health hospital in Banda Aceh was affected by the tsunami and was not operational for the first month after the tsunami. There were no specialist facilities in other areas, and many primary health clinics and district hospitals were destroyed. Many health care professionals were themselves survivors or missing persons.

Immediate humanitarian efforts, including psychosocial support, poured into Aceh following the tsunami. Local

Figure 2. Map of the Tsunami-Affected Coastal Provinces of Thailand[a]

[a]Based on map courtesy of the University of Texas Libraries, The University of Texas at Austin.

and international nongovernmental organizations, mental health professionals and volunteer mental health workers, and many others went to Aceh to give assistance, providing much needed relief for some of the survivors. However, these spontaneous and unorganized efforts were largely ineffective and contributed to the chaos in the first few days of the disaster. Most psychosocial support during the acute phase provided only entertainment, the methods used were often unreliable, and most forms of support lasted for only a short term. These efforts were arguably inappropriate if the intention was to provide optimal psychological help and rehabilitation for the tsunami's victims.

Ministry of Health and World Health Organization (WHO) officials in Jakarta, assisted by mental health professionals, recognized this unfortunate situation and subsequently implemented more structured psychosocial interventions with a long-term perspective. Interventions included the restarting of Aceh Mental Hospital to function in a referral capacity, providing psychological care to trauma survivors in community health centers, supporting other points of service delivery such as the military hospital and the general hospital, integrating mental health with other health services, providing training for volunteers and training for trainers in basic counseling to strengthen community health services, and creating an education program to increase community awareness.

Thailand

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The Andaman Sea of the Indian Ocean, renowned for its crystal clear water, white fine-grained sand, and a multitude of corals and islands, made a lasting impression upon visitors who named it The Pearl of Andaman. Each year, tourists from within and outside of Thailand flocked to provinces in the region, including Phuket, Phang Nga, Ranong, and Trang, for their seaside vacation. All of that changed at 8:00 a.m. on Sunday, December 26, 2004, when 40- to 50-foot waves crashed ashore over a 250-mile stretch of Thailand's western coastline (Figure 2). More than 5000 people were killed, over 10,000 injured, and more than 100,000 affected either directly or indirectly. Homes throughout 490 fishing villages were left in ruins, 2400 large and small fishing boats were lost, and 5000 houses and 3700 other buildings were destroyed.

Following early reports of casualties in Phuket, the Ministry of Public Health immediately sent a team of more than 100 doctors by plane. Once the scale of the disaster became apparent, health officials convened an emergency meeting and a command center was established in Phuket to coordinate health services for all 6 affected provinces. However, communication failure meant that little was known about the damage and losses suffered from the Phang Nga province.

Within a day of the tsunami, the Department of Mental Health convened an emergency meeting to assess the disaster's impact on the population. The Mental Health Center for Thai Tsunami Disaster (MHCT) was established with clinics in Bangkok and at Suan Saranrom Hospital in Surat Thani, which is centrally located between Krabi, Phang Nga, and Phuket provinces. The purpose of MHCT was to collaborate with other health providers in the delivery of medical and psychosocial services and the rehabilitation of survivors with physical and/or psychological problems. Live videoconferencing was subsequently established to link the Bangkok center with the local center at Suan Saranrom Hospital.

The Mental Health Center for Thai Tsunami Disaster formed 8 mobile mental health teams to evaluate mental health status of the affected population and to deliver appropriate interventions, including counseling and referrals to specialist facilities. Three teams were immediately dispatched to Phang Nga, and 1 team each to Krabi, Ranong, Phuket, Trang, and Satun. Each team consisted of 1 or 2 psychiatrists, 2 or 3 psychologists, 1 social worker, 2 or 3 psychiatric nurses, a pharmacist, a patient caregiver, and a driver. Teams reported daily to MHCT in order to facilitate needs analysis and planning.

The Department of Mental Health helped to increase awareness of MHCT activities by promoting its activities through different media channels, including television, Internet, and print media. The Mental Health Technical Development Bureau organized training sessions to deliver basic psychological education to teachers, parents, public health staff, and volunteers. Currently, the Department of Mental Health is planning long-term strategies for the rehabilitation of tsunami survivors.

India

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Coastal fishing communities along the eastern coastline of India bore the brunt of the tsunami (Figure 3). The few assets that these economically self-sufficient communities possessed before the disaster, such as fishing boats, schools, and villages, were largely destroyed. In the immediate aftermath, inadequate roads and lack of basic infrastructure hampered access to these areas, and telecommunications were also severely compromised.

Children were the most affected sector of the population, with many losing both parents and needing immediate support from surviving relatives such as grandparents. People with a prior psychiatric history were also vulnerable, with many experiencing exacerbations due to loss of medicines. In the postdisaster environment, voluntary health services offered some relief to the affected population. The Schizophrenia Research Foundation (SCARF) in Chennai conducted training programs for mental health volunteers in psychological symptoms and intervention techniques for managing psychological distress. Regular follow-up of affected villages was conducted with the assistance of nongovernmental organizations. Psychiatric clinics were held in severely affected areas and were bolstered by permanent field staff that conducted house visits and collected survey data for future planning initiatives.

A leading suicide prevention center, SNEHA, was established in Srinivasapuram, one of the coastal areas of Chennai. Two professional psychologists and a volunteer began daily visits to screen survivors for posttraumatic stress disorder, depression, substance abuse, and other psychiatric and psychosocial problems. Those diagnosed with mental illness were referred to voluntary health services in Chennai for psychotropic medication and hospitalization if needed. The Institute of Mental Health in Chennai organized psychiatric camps to screen for mental illness and provide treatment for people in the Tamil Nadu region.

Following the acute phase of the disaster response, the incidence of posttraumatic stress disorder has been slowly increasing, not only among people living in coastal areas of India but also among members of the wider community who were exposed to graphic images of the disaster in the media. Nonavailability of psychotropic medications, including antidepressants and antipsychotics, continues to compound the difficulties experienced by disaster survivors. Uneven distribution of relief supplies has resulted in considerable resentment and frustration among those affected, while migration of people from the tsunami-affected areas has resulted in overcrowding, epidemic and isolated infectious disease outbreaks, and psychosocial problems. Many survivors continue to experience fear and are unable to reclaim their old lives due to ongoing fear of a repeat event.

Sri Lanka

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In the aftermath of the tsunami that struck the eastern and southern coastlines of Sri Lanka (Figure 4), an estimated 50,000 people were dead or missing, more than 1 million people were displaced, and property damage was massive and widespread. During the first 2 days, most people were overwhelmed with the shock and enormity of the tsunami's impact. While efforts were made to assist those in need, such efforts were not coordinated and made little real difference. Affected areas were cut off from the rest of the country due to disruption of communication systems and roads, limiting the supply of outside support.

Within days, governmental and nongovernmental organizations as well as volunteers began attending to emergency needs: rescue and recovery; giving medical attention to the sick and injured; providing shelter, food, and other basic needs; collecting, identifying, and storing bodies; restoring communication systems; implementing disease-

Figure 3. Map of the Tsunami-Affected Coastal Provinces of India[a]

[a]Adapted with permission from Compare Infobase Pvt. Ltd. (www.infobase.co.in).

prevention measures; and facilitating access to affected areas to allow the delivery of relief supplies. At the same time, health authorities and mental health professionals began to identify the psychosocial needs of the affected population and initiated psychosocial support services.

During the acute phase of the disaster recovery, immediate mental health needs included resources for early detection of acute psychoses, the provision of drugs for relapse prevention among individuals with preexisting mental health disorders, and the training of mental health workers and volunteers in basic psychological first aid in order to extend existing mental health services. Typical barriers to service delivery included loss of patient medical files, lack of awareness among patients of their medications, lack of an efficient central record keeping system, and inadequate numbers of trained mental health professionals.

The acute phase of recovery was a problem-solving exercise. Drug display cards were developed to assist patients and mental health outreach services. Training programs were conducted for mental health workers providing different levels of care, and psychiatrists from unaffected areas were recruited to assist with demands on mental health services. Information leaflets were prepared and distributed in order to educate the public about typical psychological and behavioral responses, and media personnel were briefed about the appropriate use of disaster images and public education initiatives. Religious leaders and traditional health care practitioners were encouraged to become involved in psychosocial support, while trainee doctors were called in to strengthen primary health care services. Volunteers were given training and sent out into the communities to assist with resettlement issues. In training programs for psychosocial support workers, special attention was given to the needs of children. Special referral systems were initiated to address psychological and psychiatric problems detected by support workers in the community.

Beyond the pressing acute needs of mental health service delivery, the provision of psychosocial support at a community level and prevention of staff burnout were identified as intermediate needs. Before the disaster, community-based mental health services were limited and primary health care personnel had little training in mental health. Many were themselves victims of the tsunami and

Figure 4. Map of the Tsunami-Affected Coastal Divisions of Sri Lanka[a]

[a]Adapted with permission from the Cartography Division, Department of Census and Statistics–Sri Lanka (www.statistics.gov.lk).

were burdened with childcare and care-giving activities, necessitating the training of new mental health workers.

Long-term needs include the prevention of late-onset psychological problems, the strengthening of mental health and other community-based services, the provision of ongoing supervision and training of staff in all sectors, and research. Future planning activities need to reflect key issues of human resource and infrastructural adequacy in mental health and the coordination of psychosocial activities.

SUMMARY

The Asian tsunami serves as a potent reminder of the need to engage mental health services in a primary care setting before disaster occurs, in order to achieve the greatest benefit when disaster does strike. This approach requires the identification of resources and personnel, appropriate training and ongoing support, and strategies to safeguard these gains against health policy changes. The faculty anticipates that this supplementary publication of the proceedings will assist not only those addressing the long-term effects of the tsunami in affected countries of South Asia, but also those involved in planning for future disasters, irrespective of their location. It is hoped that the contents of this monograph may also be of relevance and benefit to those who are currently involved in assisting the recovery efforts following Hurricane Katrina, which produced such massive destruction in the southern United States.

Disclosure of off-label usage: The author has determined that, to the best of his knowledge, no investigational information about pharmaceutical agents that is outside U.S. Food and Drug Administration–approved labeling has been presented in this article.