

MENTAL HEALTH AND BEHAVIORAL GUIDELINES FOR PREPAREDNESS AND RESPONSE TO CORONAVIRUS AND OTHER EMERGING INFECTIOUS OUTBREAKS

Several global infectious disease outbreaks, such as Coronavirus (COVID-19), can help inform psychological and behavioral responses to these events as well as appropriate interventions. Since the highly lethal pandemic outbreak of influenza in 1918, there have been few global threats from infectious agents. SARS outbreaks in Asia and Canada, as well as H1N1, MERS, Ebola virus, and Zika virus have provided important lessons to inform preparedness and response.

Like many crisis and disaster events, pandemics result in a predictable range of distress reactions (insomnia, decreased perceptions of safety, anxiety), health risk behaviors (increased use of alcohol and tobacco, work/life imbalance manifested by extreme over-dedication in the workplace to alleviate distress), and may also result in psychiatric disorders, such as PTSD, depression, and anxiety.

Infectious outbreaks have unique characteristics that increase fear and uncertainty, due to the imperceptibility of the infectious agent, uncertainty about infection, and early stage symptoms that are often easily mistaken for more well-known, benign illnesses. As a result, pandemics manifest unique individual and community responses, including scapegoating and blaming, fear of infection, and high levels of somatic (physical) symptoms.

Community response to outbreaks is governed by perception of risk (not actual risk) with a variety of factors impacting community distress.

These factors include: fear of infection, concerns about adequate supplies, efficacy of prophylactic and treatment medications, and the emergence of pathogens.

In particular, new pathogens may be difficult to detect or treat, can spread in novel ways, or can cause unfamiliar or extreme symptoms. All of which will increase community distress.

Most large-scale community disasters result in predictable phases of community behavior that unfold over time. After an event such as an earthquake or hurricane, community

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members typically come together to help with rescue efforts and bond over the shared adversity caused by the catastrophe. This “honeymoon” phase is often helpful for people to begin the process of recovery. In contrast, recommendations during infectious outbreaks include

avoiding public places, social distancing, limiting contact with potentially infected individuals and other measures that diminish social connections and amplify feelings of isolation. In some cases, the requirement for quarantine furthers feelings of isolation for individuals directly affected as well as their families, friends, and community members.

Front-line health workers are particularly vulnerable to negative mental health effects of treating outbreak victims, and may experience high levels of traumatic stress reactions, including depression, anxiety, hostility, and somatization symptoms. They are directly exposed to the illness and resultant community distress, typically working long hours due to high rates of patients presenting compounded by illness in some providers, and the need to balance the duty to care for patients with concerns about their own well-being and that of their family and friends.

Effective public mental health measures will address numerous areas of potential distress, health risk behaviors, and psychiatric disease. In anticipation of significant disruption and loss, promoting health protective behaviors and health response behaviors will be imperative. Areas of special attention include: (1) the role of risk communication; (2) the role of safety communication through public/private collaboration; (3) psychological, emotional, and behavioral responses to public education, public health surveillance, and early detection efforts; (4) psychological responses to community containment strategies (quarantine, movement restrictions, school/work/other community closures); (5) health care service surge and continuity; and (6) responses to mass prophylaxis strategies using vaccines and antiviral medication.

The first step in preventing undesirable psychological,

emotional, and behavioral response is an effective public health program of risk assessment and communication, public health prevention, and consequence management. These are necessarily premised on having effective political and community leadership, appropriate pre-event organization, staffing, and funding.

Being alert to the interrelationship between psychological, emotional, and behavioral responses and their effect on other elements of the response plan must also be emphasized. While planning can be based on assumptions that public health efforts to stop an outbreak will be successful, ability to manage consequences of failure, including subsequent behavioral response(s) to failure, is crucial. This can extend from failure to deliver support and services, to failure of a vaccine to prevent illness, to failure of therapies to work.

Recommended steps in response to a pandemic or infectious disease outbreak are divided into four phases: preparedness, early outbreak response, later response and recovery, and mental health intervention planning.

PREPAREDNESS

1. **Education.** Public education must begin immediately, before a pandemic occurs, and be embed into existing disaster public education campaigns, resources, and initiatives (e.g. HLS's www.ready.gov, Red Cross, CDC public education and preparedness <https://www.cdc.gov/flu/pandemic-resources/planning-preparedness/national-strategy-planning.html>, and HHS <https://www.cdc.gov/flu/pandemic-resources/index.htm>). This should focus on facts, include what is known, what is not known, and how individuals, communities, and organizations can prepare for a potential outbreak. As we know from the SARS and other outbreaks, public education impacts threat awareness, threat assessment, and preparedness behaviors in every phase of an event. Public education in advance of an outbreak should be inclusive of the varying degree of threats, to include those of reasonably low threat potential to those with the highest potential.
2. **Leadership preparation.** Leadership preparation includes ensuring that public officials understand which members of the population will be most vulnerable and who will need the highest level of health services, including mental health services. This includes identification of those groups who may be at greatest risk for problems related to contagion, such as those with psychiatric illness, children, elderly, homeless, and those dealing with grief or loss. Ongoing negative life events also increase one's risk for mental health problems and may place certain people at higher risk for negative mental health impact of an outbreak. In addition, health risk behaviors such as smoking, drug use, and alcohol use may increase in times of stress, putting some people at increased risk.
3. **Sustaining preparedness measures.** Maintenance of motivation, capital assets, equipment, and funding to continue preparedness efforts over the long term must be considered, not just to focus on immediate needs. It is

also important to remember that if responses are under-supported and fail, the community anger and lowered morale may complicate the ability of a community to respond to an outbreak, as well as the recovery process once an outbreak has ended.

4. **Leadership functions.** Leadership functions require identification of community leaders, spokespersons, and natural emergent leaders who can affect community and individual behaviors and who can endorse and model protective health behaviors. Special attention to the workplace is imperative as corporations have public education resources to potentially reach large populations. The media and celebrity groups constitute important leaders in most modern societies and have a critical role in providing leadership in communication.

EARLY PANDEMIC RESPONSE

1. **Communication.** Wide dissemination of uncomplicated, empathically informed information on normal stress reactions can serve to normalize reactions and emphasize hope, resilience, and natural recovery. Recommendations to prevent exposure, infection, or halt disease transmission will be met with skepticism, hope, and fear. These responses will vary based on the individuals' and the local community's past experiences with government agencies. In addition, compliance with recommendations for vaccination or medication treatment or prophylaxis will vary greatly and will not be complete. The media can either amplify skepticism or promote a collaborative approach. Interactions with the media will be both challenging and critical. The public must clearly and repeatedly be informed about the rationale and mechanism for distribution of limited supplies (e.g., prophylactic or treatment medications). Leadership must adhere to policies regarding such distribution, as abuses of policy will undercut public safety and public adherence to other government risk reduction recommendations.
2. **Tipping points.** Certain events, known as 'tipping points', will occur that can dramatically increase or decrease fear and helpful or health risk behaviors. Deaths of important or particularly vulnerable individuals (e.g., children), new unexpected and unknown risk factors, and shortages of treatments are typical tipping points. The behavioral importance of community rituals (e.g. speeches, memorial services, funerals, collection campaigns, television specials) are important tools for managing the community wide distress and loss.
3. **Surges in demands for health care.** Those who believe they have been exposed (but have not actually been) may outnumber those exposed and may quickly overwhelm a community's medical response capacity. Planning for the psychological and behavioral responses of the health demand surge, the community responses to shortages, and the early behavioral interventions after identification of the pandemic and prior to availability of vaccines are important public health preparedness activities.

LATER RESPONSE AND RECOVERY

1. **Community structure.** Maintenance of community is important. Community social supports — formal and informal — will remain important. In-person social supports may be hampered by the need to limit movement or contact due to concerns of contagion. Virtual contact — via phone, web, and other remote resources — will be particularly important at these times. At other times local gathering places — places of worship, schools, post offices, and grocery stores — could be points of access for education, training, and distribution. In as much as allowed, instilling a sense of normalcy could be effective in fostering resiliency. In addition, observing rituals and engaging in regular activities (such as school and work) might manage community and organizational distress and untoward behaviors. Providing tasks for community action can supplement needed work resources, decrease helplessness, and instill optimism. Maintenance and organization in order to keep families and members of a community together is important (especially in event of relocation).
2. **Stigma and discrimination.** Under conditions of continuing threat, the management of ongoing racial and social conflicts in the immediate response period and during recovery takes on added significance. Stigma and discrimination may marginalize and isolate certain groups, thereby impeding recovery.
3. **Management of fatalities.** Mass fatality and management of bodies, as well as community responses to this, must be planned for. Containment measures related to bodies may also be in conflict with religious beliefs, rituals of burial, and the usual process of grieving. Local officials should be aware of the potential negative impact of disrupting normal funeral rituals and processes of grieving in order to take safety precautions. Public health announcements should include (if known) how long the virus remains in the corpse and what should be done with the bodies. In a pandemic, funeral resources can be overwhelmed and mortuaries may not want to handle contaminated bodies. Careful identification of bodies must be ensured and appropriate, and accurate records maintained.

MENTAL HEALTH INTERVENTION PLANNING

1. **Efforts to increase health protective behaviors and response behaviors.** Individuals under stress will need reminders to take care of their own health and limit potentially harmful behaviors. This will include taking medication, giving medications to elderly and children, infection prevention measures, and when to go for vaccination.
2. **Good risk communication following risk**

communication principles. The media can either amplify skepticism or promote a collaborative approach. Interactions with the media will be both critical and challenging.

3. **Good safety communication.** Promoting clear, simple, and easy-to-do measures can be effective in helping individuals protect themselves and their families.
4. **Public education.** Educating the public not only informs and prepares, it enlists them as partners in the process and plan. Education and communications will need to address fears of contagion, danger to family and pets, and mistrust of authority and government. The tendency to expect or act as if these are not present can delay community-wide health protective behaviors.
5. **Facilitating community directed efforts.** Organizing communal needs and directing action toward tangible goals will help foster the inherent community resiliency toward recovery.
6. **Utilizing evidence-informed principles of psychological first aid.** These basic principles include:
 - » Establish safety and identify safe areas and behaviors. Provide accurate and updated information.
 - » Maximize individuals' ability to care for self and family and provide measures that allow individuals and families to be successful in their efforts.
 - » Teach calming skills and maintenance of natural body rhythms (e.g., nutrition, sleep, rest, exercise). Limit exposure to traditional and social media as increased use enhances distress.
 - » Maximize and facilitate connectedness to family and other social supports to the extent possible (this may require electronic rather than physical presence).
 - » Foster hope and optimism while not denying risk. Encourage activities that restore a sense of normalcy.
7. **Care for responders and healthcare workers to maintain their function and workplace presence.** This will require assistance to ensure the safety and care of their families. First responders will be comprised of a diverse population, to include medically trained personnel to bystanders with no experience. Healthcare personnel will experience increased stress while having to manage concerns about their own safety and, potentially, stigma from family, friends, and neighbors.
8. **Mental health surveillance.** Ongoing population-level estimates of mental health problems in order to direct services and funding. Surveillance should address PTSD, depression, and altered substance use as well as psychosocial needs (e.g., housing, transportation, schools, employment) and loss of critical infrastructure necessary to sustaining community function.