

Pandemics: What can we learn from the literature?

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ABSTRACT

The coronavirus (COVID-19) situation is constantly evolving and forcing Governments, organisations and individuals around the world to quickly change the way we operate. The purpose of this literature review is to understand how previous pandemics have impacted individuals, communities, organisations and governments; and how we can best respond. The data suggests that, during a pandemic, already vulnerable sectors of society will become high risk; however, based on the particularities of the outbreak, other groups might also fall in this category. To support high risk sectors, and the community in general, connectedness, coordination and communication between government, health and community organisations is key. However, ad-hoc support is needed to support the individual needs of the high-risk population sectors. Identified risks during a pandemic include: increase of substance use; and increase of family violence incidents, among other social impacts. It is suggested that service providers have a central role to provide relevant support to our communities, in particular those in the high-risk groups and be advocates for those who might be neglected.

INTRODUCTION

We are currently living in an unprecedented situation due to the coronavirus (COVID-19) pandemic, as a result of the quick transmission of the virus and the global response and impact. During history, the world has experienced several pandemic situations. Valuable lessons can be learned from previous studies on the impact of previous pandemics such as the H1N1, Ebola, and SARS viruses.

METHODOLOGY

A search of peer reviewed articles was performed using the key words pandemic, crisis, and social services. Relevant and recent news or reports related to coronavirus (COVID-19) were added to incorporate data related to the current crisis. In total, thirteen articles were reviewed to understand: (1) who are the most vulnerable sectors of society during a pandemic; (2) what type of support is needed; (3) what are the risks and how can they best be managed; (4) what are the challenges and opportunities; and (5) what effective practice looks like during a pandemic. Data from the articles was extracted and synthesized to answer the above questions. When relevant, conclusions and/or recommendations were added.

¹ Family Life is a specialist family services provider working with vulnerable children, families and communities since 1970. At the core of our organization is our vision to build capable communities, strong families, and thriving children. Website: <u>https://www.familylife.com.au/</u>



KEY FINDINGS

The key findings identified in the literature were:

(1) Who are the most vulnerable sectors of society during a pandemic?

During a pandemic, some sectors of the population will become high risk based on their ability to cope with the impacts of the crisis; and their increased risk for poor health outcomes during or after an event. At-risk subpopulations should be identified and given additional information.

These might include:

- Already marginalized groups of people
- Immigrants who do not speak the language in which information is presented
- People who are deaf or hard of hearing
- Mental health patients (including children)
- Survivors and families of survivors and victims
- Healthcare providers
- Patients who are placed in isolation
- Young children and adolescents kept in isolation or quarantine (particularly without caregivers)
- Pregnant women
- People who experience a loss or disruption of employment and experience financial hardships (Falconi et al., 2012; Huremović, 2019a; Huremović, 2019a; Levin, 2019a; Rosoff, 2008)

Currently, in Australia, identified groups at risk during the COVID-19 pandemic include: people with weakened immune systems; older people; people with diagnosed chronic medical conditions such as lung conditions and kidney failure; people with diabetes; Aboriginal and Torres Strait Islander people, who have higher rates of chronic illness; and very young children and babies (Department of Health, 2020).

Family Life's Diversity and Inclusion group identified additional groups which could be further marginalized such as: illiterate clients (including digitally illiterate); families with a mediation process; migrant communities; people in a family violence situation; children who are not safe at home; people with disabilities; people with low income; people with limited internet data access.

Refer to Table 1 below for more detail.

(2) What type of support is needed?

While additional ad-hoc support is needed based on the particular needs of the high-risk population sectors and the local situation; the following was suggested in the literature:

- Formal partnerships between the government, health and community organisations need to be created during the pre-pandemic phase to streamline responses and minimize negative effects
- Connectedness, coordination and communication are essential and interrelated
- Effective coordination is essential in proper resource distribution to ensure high risk populations have access to them
- Communications should be translated to the local languages and dialects of at-risk communities, sign language interpreters should be utilized, signage at clinics should be improved, and staff members should be trained in cultural competence
- Managing the emotional contagion by addressing the concerns of the public while providing accurate information and reducing the gap between public attitudes and epidemiological facts
- The use of telecommunications to ensure the continuity of care, including assessment and psychotherapy
- Patients with disease-related anxieties and worries may require additional attention and services by mental health professionals
- Identify and prepare to address the psychosocial needs of families of survivors
- Prepare follow-up and support for healthcare providers who may fail to initially appreciate the severity of



psychological trauma they have been exposed to during the outbreak

- Efforts to educate the public about priority groups (including vaccination)
- Community group caring for people with functional limitation
- Children should be given special consideration, reminding their caregivers to limit their exposure to traumatic news stories and to only give them age-appropriate information
- Empowering individuals in quarantine and isolation by including them in the decision-making process for certain decisions as this helps restore dignity and sense of self-worth in difficult situations
- Families should be educated on the importance of self-care which involves rest, nutritious diet, soothing activities, and regular exercise (Falconi et al., 2012; Huremović, 2019a; Huremović, 2019a; Koller et al., 2010; Levin, 2019a; Rosoff, 2008)

Refer to Table 1 and Table 2 below for more detail.

(3) What are the risks and how can they best be managed?

- *Quarantine and isolation:* special mental health attention.
- *Mental health burden on health workers:* healthcare personnel should be offered periodic health assessments (and programs) to reassure them of their physical well-being.
- *Neuropsychiatric sequelae among survivors*: expansion in resources and expertise from more trauma-focused to include neuropsychiatric aspects of care in order to prevent and minimize long-term disabilities.
- *Behavioral contagion and emotional epidemiology:* disseminate facts and social evidence by relying on dependable public health and epidemiological data. Service providers may participate in public mental health activities by helping to formulate responses to alleviate public anxiety and concerns. Mental health professionals might need to understand

basic epidemiological concepts to understand the emotional impact of outbreaks and provide useful recommendations. Mental health professionals could act as a liaison between epidemiologists, public health officials, and the general public.

- *Prevailing and diverse cultural beliefs* could be a challenge for healthcare providers in communicating the causes and nature of epidemics to local communities: education and communication strategies need to address the cultural and social factors.
- Development of trauma-based disorders, including acute stress disorder and posttraumatic stress disorder (PTSD): increased psychiatric screening and surveillance is recommended to address acute stress disorder, post-traumatic stress disorder, depressive disorders, and substance abuse.
- Pre-existing anxiety and substance use disorders are likely to worsen in the face of constant fear and distress: A safety plan and communication strategy should be developed with patients and their families. When required, it may be prudent to prescribe additional supply of medications to be entrusted to a reliable family member. Interventions could focus on establishing a respectful, supportive rapport; triaging critical needs; normalizing stress and grief reactions; supporting positive thoughts about the future; and teaching mindfulness-based techniques to decrease the levels of stress and hyperarousal.
- Family Violence: Governments must provide immediate resources to ensure women and children's safety. Family violence specialist services need to be accessible and available remotely during this period as they will need to provide increased support for clients (Duan et al., 2019; Foster & Fletcher, 2020; Fitz-Gibbon & Meyer, 2020; Huremović, 2019c; Levin, 2019b; Victor & Amed, 2019).



Refer to Table 3 below for more detail.

(4) What are the challenges and opportunities?

The research has identified that during pandemics, there is potential for trauma in patients, survivors, caregivers, healthcare workers and vulnerable groups (e.g. undocumented immigrants, incarcerated prisoners, people of color, LGBTIQ people, and those with disabilities). However, during the current situation in which self-isolation and quarantine (in some places) is being extended to the whole population, this potential for trauma might apply to other groups (in particular vulnerable groups), if not the wider community.

Based on the above, service providers might have the opportunity to play a central role by providing mental health support and by serving as advocates for those who might be neglected. Relevant support (in particular for health workers) might include: resilience programs and self-care strategies; promoting well-being; incorporating mindfulness and relaxation techniques; psychosocial programs; providing access to technology to ensure ongoing communication within families and communities; access to psychiatric care, pharmacologic interventions. individual and group psychotherapy; and educational materials that outline what healthcare workers might expect in the course of their duties, including common reactions and stressors they may encounter from the public, patients, their friends and families, or from within themselves (Levin, 2019b; Rosoff, 2008).

Refer to Table 4 below for more detail.

(5) What does effective practice look like during a pandemic?

From an organisation perspective:

• Bring together stakeholders from different community sectors community members, parents, youth, policymakers, health and social service providers, funders, researchers—to develop coordinated community responses that can promote resilience.

- Provide training in resilience and trauma awareness to community stakeholders; establish trauma-informed service networks; share tips and resources for community development and coalition building; infuse community settings with the principles of trauma-informed practice; and advocate for specific trauma-responsive policies.
- Seek to fully engage community stakeholders in a participatory change process that infuses trauma-informed practices in all community sectors.

From a social worker (or similar) perspective:

- Undertake periodic assessments as the situation is constantly changing.
- After assessing clients' primary appraisals of their situations, assess the accuracy of their perceptions and thinking; as under intense stress people may err in their evaluation of personal and environmental resources.
- Assesses how the client has coped with the life situation. Coping measures include emotional, cognitive, and behavioral actions to change aspects of the stressful life situation such as oneself, the environment, exchanges between them, or all three.
- Since some formal and informal support systems may act as significant stressors rather than buffers, it is necessary to evaluate their responsiveness, just as personal resources are evaluated.
- Assesses relevant dimensions of the client's physical environment such as provisions for safety, privacy, crowding, accessibility of space, etc.
- Support could focus on helping to build protective factors and taking steps to cope with environmental challenges (Gitterman & Sideriadis, 2014; Matlin et al., 2019).



CONCLUSION

This literature review has identified the challenges and risks for communities and individuals during a pandemic outbreak and the best way to support them. It is clear through the article that a pandemic outbreak has considerable social impacts on mental health, substance use and family violence. Crises like this increase vulnerability to already vulnerable sectors of the society. However, the widespread impact of the current coronavirus situation, might exacerbate social impacts to the whole community. To best manage the challenges, it is important to develop strategies focused on (1)increasing connectedness and support for mental health services; (2) coordination between governments, health and community organisations; and (3) effective communication at different levels. This includes, for example, messages to the public to inform and contain emotional contagion considering vulnerable sectors (e.g. people who don't speak the language, people with disabilities, illiterate people, etc.); communication between organisations to better manage resources; and communication between clients and service providers to ensure continuity of care including constant assessments and interventions.

As previously mentioned, it is suggested that social service providers play a central role by providing relevant and ad-hoc support to our communities (during and after the outbreak), in particular those in the high-risk groups; and be advocates for those who might be neglected. A key continued consideration for responding to this pandemic will be how technology can mediate service provision and create connection and visibility for vulnerable community members. In Australia this provides scope to innovate services that can be adapted into the post Covid-19 service landscape.



Table 1.	Who are	the most	vulnerable	children	and families?

Source	Vulnerable groups	How to support them?
Falconi, et al (2012)	In any community crisis, some populations are more at-risk than others. High risk populations are defined as individuals who have functional limitations that influence their ability to cope with the impacts of a disaster, placing them at increased risk for poor health outcomes during or after an event. The barriers they face are propagated by the lack of inclusion and acknowledgement in pandemic planning. Immigrants who do not speak the language in which information is presented are at a disadvantage because the ability to understand risks and prevention techniques are critical in promoting preventive health behaviours. People who were deaf or hard of hearing had difficulty understanding the process. When vaccine supply is limited, essential health care personnel in close contact with patients are identified as a priority group.	To better protect and support high risk populations through the use of increased health sector involvement and a Whole of Society Approach. Pandemic plans should include sign language interpreters and improved signage at vaccination clinics to provide additional support for people with sensory limitations. Supportive partnerships that include community groups caring for people with functional limitations are key. Incorporate alternative communication for immigrants and individuals who are deaf or hard of hearing. Improved efforts to educate the public about priority groups for vaccination. Effective coordination is essential in proper resource distribution to ensure high risk populations have access to them.
Rosoff (2008)	<the usa=""> has a sad history of discriminating against marginalized groups of people based on morally arbitrary features, such as skin color, gender, age, and country of origin, to name but a few. This tendency is often amplified in times of national crisis.</the>	 Understand the special needs of marginalized groups and provide support accordingly. Within Family Life's Diversity and Inclusion group, it was identified how some of our clients could be further marginalized during the current situation: Illiterate clients - feel marginalized as they cannot access information Digital illiterate - accessing services online (e.g. Centrelink, etc.) Families with a mediation process - difficulties to see their children Migrant communities - language barriers, and extra stress for the situation in their country of origin (worries for families abroad, etc.) People in family violence and abusive space (including children who are not safe at home - how can we identify them if they are not at school?) Clients with disabilities - how to access NDIS support People with low income and people losing their jobs - difficulty to access food, medicines, etc. due to scarcity - can't afford to accumulate Clients with limited data - how are they going to access services and keep connected with their community
Huremović (2019a)	Mental health patients who are in the community are at risk for developing more anxiety about the arriving pandemic. This can lead to a worsening of existing mood disorders, such as depression.	The use of telecommunications is of paramount importance, as it can ensure the continuity of care, including assessment and psychotherapy. Tele-mental health checks can also be used to provide mental status and compliance monitoring, general health information, and other assistance.



Source	Vulnerable groups	How to support them?
	Children receiving mental health care and patients with neurotic and somatoform disorders may be particularly vulnerable to psychological effects of infectious disease epidemics. Patients who are seriously mentally ill and who are particularly concerned about the consequences of the outbreak may break with their compliance and risk relapses of serious mental illnesses. Patients may demonstrate impairment of judgment, become reckless and engage in risk-taking behaviors. The risk of such behaviors may be accentuated in the context of an outbreak. Mental health patients may have difficulties following general public instructions and orders and put themselves at risk. During and after the outbreak, survivors, families of survivors and victims, and healthcare providers will likely be the populations most exposed to psychosocial and traumatic stress. Those will be populations added to the already existing patient load of patients with mental health illnesses, including evacuation, if appropriate.	 The overall mental health picture is inevitably affected by the presence of preceding and/or ongoing traumatic events. Before and during the outbreak, a subset of patients with disease-related anxieties and worries may require additional attention and services by mental health professionals. At the community level, psychosocial needs during the preparation phase will focus on managing the emotional contagion, addressing the concerns of the public while providing accurate information and reducing the gap between public attitudes and epidemiological facts. To that end, mental health professionals can outline plans for the following: Prepare for a rapid reestablishment of mental health services for pre-existing patients. Ensure that existing mental health patients are provided with both useful information and emergency supplies in case of infrastructure disruptions. Identify and prepare to address the psychosocial needs of families of survivors who may be dealing with prolonged stress, exhaustion, survivors' disability, and public stigma. Identify and prepare to address the psychological first aid while providing medical care. Identify and prepare to address the psychosocial needs of families of victims who may be dealing with grief, existential loss of support or sustenance, post-traumatic stress, and public stigma. Identify psychosocial stress in the aftermath of an outbreak in previously healthy individuals and prepare supportive measures. Prepare follow-up and support for healthcare providers who may fail to initially appreciate the severity of psychological trauma they have been exposed to during the outbreak. Understand, if applicable, how significant trauma that either precedes or follows an outbreak (e.g., armed conflict, terrorism, and natural disasters) can further complicate the structure of psychological needs during and after the outbreak.
Huremović (2019b)	Patients who are placed in isolation are particularly vulnerable to neuropsychiatric complications, such as delirium, anxiety, depression, a sense of hopelessness and despair, psychological trauma (acute stress disorder or posttraumatic stress disorder [PTSD]), and cognitive impairment. Those affected by quarantine, regardless of their health status, are likely to report distress due to fear and risk perceptions. <i>Special populations</i>	Mental health Empowering individuals in quarantine and isolation by including them in the decision-making process for at least certain decisions helps restore dignity and sense of self-worth in difficult situations. Directing them to utilize healthy defenses, including humor, will help maintain mental health equilibrium. Anticipating the simple, nonclinical needs of persons under public health surveillance includes addressing potential concerns about housing, transportation, education, employment, food, and other household issues.



Source	Vulnerable groups	How to support them?
	 Young children may not be kept in isolation or quarantine without caregivers for any extended period of time. Adolescents may have difficulties adhering to quarantine and isolation rules and they are, with healthcare professionals, a subpopulation most likely to break quarantine. Pregnant women are another population that requires special attention in cases of isolation or quarantine. Expectant mothers may be particularly concerned about the well-being of their babies and the effect the infection may have on the fetus. As the duration of isolation extends and as the severity of symptoms increases, the psychological toll seems to increase. 	 If family members and friends are unable to visit patients in isolation, healthcare personnel will need to provide social contact, reorientation, and support. Substance use disorders Patients with active substance use disorders who find themselves sequestered in isolation or in the quarantine may require detoxification. Motivational interviewing (Miller and Rollnick) remains a well-known, scientifically tested method of counseling clients developed and viewed as a useful intervention strategy in the treatment of lifestyle problems and disease. Depending on the circumstances, it is conceivable that AA or NA meetings could also take place via telecom or internet. Cognitive Disorders Patients with cognitive disorders, including dementia or intellectual disability, require special attention in terms of care during quarantine and isolation. Cognitively impaired patients who reside individually may be unable to be quarantined by themselves, and they may depend on the care of other individuals to care for them during the isolation period. They may require frequent and simple reminders and reorientation regarding the isolation roitsual (written) form. Special populations Children of all ages and adolescents benefit from structured time activities and routine. Routine may be designed to resemble the pre-isolation routine or it may be an entirely new routine. If isolated or quarantined children are missing school, they should be allowed to attend classes virtually. The use of books, media, board, or electronic games can make the isolation less daunting. The use of the internet should be allowed and tolerated, but should be monitored for the dissemination of inaccurate, yet dramatic, attention-grabbing messages and postings. Pregnancy itself may come with some emotional lability and mood symptoms, and the introduction of already existing mood disorders. Performing screening and providing support and education can have a significantly positive effect o
Levin (2019a)	In the aftermath of a pandemic, family members of the afflicted both surviving and deceased will also require psychiatric support and care. For families whose loved ones have survived the illness, stressors will center around reintegrating into the family unit those patients who may be left with residual deficits and disabilities. For the bereaved families of those who perish in the pandemic, grief reactions are to be expected and may precipitate or worsen existing psychiatric disorders.	 Grief and loss counseling should be provided to the bereaved family members. Bereavement support groups for surviving relatives will also play a therapeutic role on a larger scale and enhance a sense of social support, assuming family members are amenable to a group modality. Attending support groups, seeing a trusted mentor or spiritual leader, or seeking support from a therapist can help such individuals feel understood. A therapist can help challenge thought distortions contributing to guilt, and painful feelings can be processed. Mental health providers should be aware of and sensitive to the needs of changed and broken families, providing empathy



Source	Vulnerable groups	How to support them?
	 Bereaved family members and loved ones of the deceased may also experience intense survivor's guilt which may manifest as dysphoria or questioning the meaning of life and why they were spared when their loved one was lost. People may experience a loss or disruption of employment and experience financial hardships which will affect families, as well as experiencing scarcity of basic necessities such as food and water. Schools and daycares may have delayed re-openings or become permanently closed. The fabric of a family may be irrevocably altered by human loss (e.g. social support, caretakers for dependent family members, parents of children who are left orphaned by the disease). In the face of tremendous adversity, communities can either rupture under relentless suffering, or they may band together in adaptive and prosocial ways to face the challenges that meet them. In the aftermath of a pandemic, some members of the community might experience a loss of faith in their health institutions, employers, or government leaders. 	 and support as families struggle to adjust to their new realities. Children should be given special consideration, reminding their caregivers to limit their exposure to traumatic news stories and to only give them age-appropriate information. Messages to older children should be targeted through schools, youth centers, and religious organizations Fundamental in containing public anxiety is a clear, transparent, and reliable system of communication. Frequent and accurate updates are the best way to reduce panic and rumors. Consistency is key from multiple trusted and expert sources; otherwise, people will develop a mistrust of the messages from multiple sources will increase the likelihood that the public will follow directions given by public health officials to reduce contagion. A well-staffed hotline should be implemented and its number widely distributed by the media. Staff should receive consistent messages and information to share with the public and should be equipped to handle the questions and concerns of callers. Communications should be translated to the local languages and dialects of at-risk communities, and staff members should be trained in cultural competence. At-risk subpopulations should be identified and given additional information. Recommendations should be provided for positive coping strategies, for example, by maintaining an updated website describing warning signs of pandemic-related mental health issues. Social media may play a useful role in helping to share and disseminate resources. It is important to be mindful of the legacy of mistrust and negative beliefs left behind by the pandemic. Ignoring these beliefs can lead to alienation, despair, and further stigmatization. Families should be educated on the importance of self-care which involves rest, nutritious diet, soothing activities, and regular exercise. Mental health providers should foster a sense of resilience in surviving family members. E



Table 2. What are the key support needs of communities, families and children during times of pandemics/global
crisis?

Source	Support needed	How to support	Strategies
Falconi, et al (2012)	To support high risk populations during pandemic, connectedness, coordination and communication are essential and inter-related. Formal partnerships between the government, health and community organizations need to be created during the pre- pandemic phase to streamline response and minimize negative effects.	 Connectedness includes both formal and informal relationships and partnerships. Communication focuses on public awareness (distribution of clear, concise information to facilitate awareness, to reduce anxiety and improve societal response), education, and dissemination of guidelines. Information needs to be accessible to support high risk populations. Coordination emphasizes adequate supply and appropriate allocation of resources, as well as policy development and prioritization of vaccines. 	 Information can be presented in various ways, including awareness building sessions. Health professionals can direct the public to credible websites that house accurate, updated information regarding the pandemic. More information on preventative behaviour. It is important for public health agencies to create relationships with community organisations that support high risk populations, to draw on the expertise of this sector and manage the multiple factors that exacerbate vulnerability.
Rosoff (2008)	The absolute need to ensure that we have adequate resources for supportive care, including mental health care for the ill, their families, and those that care for them. Integral importance of mental health services during times of medical crisis, particularly disasters that affect the lives of large numbers of people. Many of those involved in caring for the sick and dying later demonstrated symptoms indicative of posttraumatic stress disorder, emphasizing the secondary, long-lasting effects of an epidemic.	Mental health workers, and social workers in particular, will be called upon to an extraordinary degree to deal with both the crisis and its aftermath.	
Koller, et al (2010)	Although children are often identified as a vulnerable population with unique clinical and psychosocial needs, the discourse on pandemic planning primarily focuses on adult patient populations and the views of healthcare professionals. Children often respond differently to viruses than adults and this can include both physical symptoms and	 Presence and support of family and friends are a priority. Staff needed to minimize children's fears by maintaining a sense of normalcy despite their own concerns. Play and distraction as an important component of psychosocial care, particularly during a crisis. Engagement in play and other developmentally appropriate activities are therapeutic interventions for 	 Participants offered several recommendations to attenuate the emotional impact of social isolation: Staff schedules should be changed in order to accommodate the emotional needs of children. For example, by offering core nursing, children can get to know and trust consistent caregivers. Staff need to keep a balanced perspective and remain calm in



Source	Support needed	How to support	Strategies
	psychological responses. In addition, infection control practices that were unpleasant for adult patients had a devastating emotional impact on pediatric patients. The psychological responses to SARS were extensive, causing social and emotional difficulties for children.	 children isolated during an infectious outbreak. Children experienced a lack of information or discrepant messages about the nature, transmission and outcome of the disease. Much of the communication received by children produced anxiety, fear and confusion. Communication was undermined by having patients isolated in their rooms with a television as their only source of information. Televised news reports exacerbated their fears. Hospitalized children required a sufficient supply of toys and activities particularly when patients were isolated. 	 order to help children cope with the crisis. Need for patients to be viewed as 'children first' By having activities in their rooms, children can be distracted from what is happening around them. Health care providers need to take the time to listen to children's concerns and respond to questions. To improve communication with children: offer accurate information while using age-appropriate language in a clear and sensitive manner. Information should comprise the nature of the disease, its origins, the treatment protocol, transmission and infection control guidelines. Hospitals should be creative in their use of space during infectious outbreaks.

Table 3. What are the risks and how can they be best managed?

Source	Risks	How can they best be managed?
Huremović (2019c)	 Unique features of mental health responses in pandemic outbreaks include: Time lapse and disease modeling Mental health burden on health workers Quarantine Neuropsychiatric sequelae among survivors Behavioral contagion and emotional epidemiology 	Quarantine and isolation warrant special mental health attention in any infectious disease outbreak. Neuropsychiatric sequelae of surviving an infectious illness, its complications, and complications associated with treatment may warrant sustained mental health focus and attention. This set of sequelae may require an expansion in resources and expertise from more trauma-focused to include neuropsychiatric aspects of care in order to prevent and minimize long-term disabilities. Managing concerns, fears, and misconceptions at the local community and broader public level become as important as treating individual patients.
		Mental health providers may find themselves participating in public mental health activities, helping to formulate responses to alleviate public anxiety and concerns; basic understanding of emotional epidemiology can be helpful in such situations.
Duan, et al. (2019)	With an outbreak, the rapid spread of disease is heralded by a halo of public panic and mass hysteria. Contagion psychology could be subdivided into:	Leveraging social media for real-time reporting of infectious disease has been identified as one way to create an efficient public surveillance system for early detection and immediate response.



Source	Risks	How can they best be managed?
	 <i>Emotional contagion</i> is the spread of mood and affect through populations by simple exposures. <i>Behavioral contagion</i> is the propensity for certain behaviors exhibited by one person to be copied by others. It can be broken down into: hysterical contagions, deliberate self-harm contagions, contagions of aggression, rule violation contagions, consumer behavior contagions, and financial contagions. 	Utilizing and disseminating facts and solid evidence in cases of an outbreak by relying on dependable public health and epidemiological data is perhaps the best way of countering the anxiety-inducing uncertainties, rumors, and speculations. Mental health professionals should embrace their interdisciplinary role as both consultants and as a liaison between epidemiologists, public health officials, and the general public. Familiarizing themselves with basic epidemiological concepts will allow mental health professionals to understand the emotional impact of outbreaks and provide useful recommendations.
Victor & Amed (2019)	 Prevailing cultural beliefs sometimes represent a challenge for healthcare providers in communicating the causes and nature of epidemics to local communities in a meaningful way. Evidence-based public health methods are preferred to combat outbreaks of a highly infectious disease, but because of the critical role of traditional and cultural factors that play in addressing these outbreaks, a holistic approach must be considered in order to meaningfully influence the outcome. Failing to incorporate cultural and contextual factors may limit the degree of success in controlling the spread of diseases. The differences in the traditional cultures from country to country may have a role to play in the instability in that particular region. For example, in some cultures, people trust their elders, seeing them as the custodians of culture. They also depend on traditional healers and storytellers who guide them regarding the rules by which they live. 	Cultural preservation may constitute a protective factor in mental and physical health and promote social cohesion. Efforts to preserve the indigenous culture may result in a higher quality of life and improved health and sense of wellbeing. Programs creating professional and institutional opportunities to promote diversity of cultural expression, support cultural preservation and traditional rituals can serve as catalysts for the restoration of communities in grief after the devastation. There is also a need to enhance public awareness of the neuropsychiatric complications evolving from these outbreaks and offer the appropriate treatment and support, wherever necessary, and culturally appropriate, and whenever possible. Building trust with the affected community during an outbreak is the key to deliver an effective message. Experiences from responders show that psychosocial support interventions may play a critical role in response to such epidemics. According to UNESCO, education alone without close attention to cultural factors is insufficient in addressing the cultural and social factors that impact efforts to mitigate or manage an outbreak. Universal approaches need to be adjusted so local communities can effectively embrace the management of the outbreak.



Source	Risks	How can they best be managed?
Levin (2019b)	Proximity to and survival from life-threatening events (in this case illness) are known risk factors for the development of trauma-based disorders, including acute stress disorder and posttraumatic stress disorder (PTSD).	In the aftermath of pandemics, increased psychiatric screening and surveillance is recommended to address acute stress disorder, post-traumatic stress disorder, depressive disorders, and substance abuse.
	Pre-existing anxiety and substance use disorders are likely to worsen in the face of constant fear and distress.	In the short-term aftermath, interventions could focus on establishing a respectful, supportive rapport, triaging critical needs, normalizing stress and grief reactions, supporting positive thoughts about the future, and teaching mindfulness-based techniques to decrease the levels of stress and hyperarousal (i.e., deep breathing, progressive muscle relaxation, and guided imagery). Normalizing angry feelings while decreasing anger- driven behaviors can also play a therapeutic role. First-line treatment consists of trauma focused cognitive behavioral therapy (CBT) to help reduce pessimistic and catastrophic thoughts about the future. Exposure therapy and eye movement desensitization and reprocessing (EMDR) therapies may also be utilized.
		It is prudent to enlist these patients' families and social supports to warn them of the risk for psychiatric destabilization and provide them with specific examples of worsening psychiatric symptoms to be on the lookout for. A safety plan and communication strategy should be developed with the patient and their family in the aftermath of a pandemic, with attention paid to potential barriers imposed by the pandemic (i.e. pharmacy closures, difficulty accessing medications). When possible, it may be prudent to prescribe a few months' additional supply of medications to be entrusted to a reliable family member.
		Increased monitoring is prudent in the aftermath of a pandemic. For patients who are unable to access their usual providers, telepsychiatry can be a helpful substitute where available. Mental health professionals should be trained in the assessment of suicidality and safety concerns which may arise in the setting of acute anxiety, disability, bereavement, and multiple losses.
Fitz-Gibbon & Meyer (2020)	While it is still unknown how the coronavirus will affect family violence rates in Australia, evidence from the aftermath of other state and federal crises (e.g. bushfires and natural disasters) suggest there will be a	The Australian federal and state governments must devote immediate resources to ensure women and children's safety during and post the crisis.
Gearing (2020)	spike. Current measures to flatten the disease's spread curb, such as families being confined in their homes, increases the risk of harm for women and children. Victims who have escaped but who have children with	Family violence specialist services (men's services, community legal services and other relevant support services) need to be resourced to ensure they are accessible and available remotely during this period.
		Innovation will be required for new service delivery and design.
	the perpetrator, are reporting perpetrators who are using COVID-19 as a coercive control measure.	Need for emergency safe housing.



Source	Risks	How can they best be managed?
Foster & Fletcher (2020)	 Findings of a survey completed by 80 frontline workers (73) and service providers (7) across NSW, Australia, suggest that coronavirus is already having an impact on reports of domestic violence (41.7% of respondents reported an increase in clients in recent days; 70.8% mentioned that cases were more complicated, due in part to social isolation measures). The outbreak of COVID-19 complicates women and children's experience of DFV and poses challenges to the frontline services that respond to it. Identified key service gaps impeding the protection of women and children during COVID-19 include: Access to support/ case management to support them in their complex needs 	 Workers and services called for increased support for clients in the following areas: Assistance and support for women with children who are no longer attending school due to COVID-19. Additional resources to assist with child support. Improvement in the quality of police referrals. Increased transport options for women in need. Additional funding to assist women needing to access reproductive healthcare and pregnancy terminations, due to an expected spike in unplanned pregnancies.
	 Access to income and material needs Access to ongoing accommodation Inconsistent police responses Access to support through online means where it is not safe to make phone calls- e.g. through online chat forums Access to temporary accommodation Access to safe technology (a safe phone etc.) Access to information in language (for immigrant and refugee women) 	high risk or unable to receive support due to homelessness, being in isolation with an abuser, or unsafe technologies.

Tabla /	What can	wa laarn	from the	literature about	challenges a	nd opportunities?
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Source	Challenges	Opportunities
Rosoff (2008)	Potential for psychic trauma in patients and their survivors, as well as their caregivers.	The need for trained mental health workers will be both staggering and persistent.
	 Family members may not even be able to attend to their dying loved ones, as they may be affected by quarantine orders. We may not be able to bury people by custom, but may have to resort to mass cremation if storage sites and morgues become filled too quickly. Healthcare workers—doctors, nurses, and yes, social workers—will themselves be traumatized both from dealing with so many sick people who they often will not be able to cure and from the effects that the pandemic may be having on their personal lives. Undocumented immigrants, incarcerated prisoners, people of color, gays, and the disabled, to name but a few, will all be susceptible to our baser natures unless there are policies in place, nationally, locally, and institutionally, to prevent arbitrary and capricious bedside rationing of care on morally 	In all of these scenarios, social workers can, and must, play a central role by giving voices to the voiceless and serving as advocates. It is likely that social workers will be called upon to both serve and protect the most vulnerable.
	unjustifiable grounds.	
Levin (2019b)	Healthcare personnel who are charged with the responsibility of providing aid to the infected. Their burden is compounded by their high and persistent risk for exposure and death, separation from their loved ones which may be	• Healthcare personnel should be offered periodic health assessments to reassure them of their physical well-being.



either enforced or due to prolonged work shifts, seeing Programs promoting well-being incorporating • traumatic images, working during surge conditions in mindfulness and relaxation techniques can overburdened settings with chronically help healthcare workers develop self-help scarce supplies and medications/vaccines, experiencing skills during times of increased stress; once hopelessness due to massive human losses in spite of their learned, they may also be able to pass such best efforts to provide care, managing human remains, skills on to their patients. experiencing workforce quarantine, witnessing the death of Workforce resilience programs and self-care • their colleagues, lack of reinforcements and replacements. strategies should be promoted. and their own fatigue and burnout, to name a few of the Psychosocial programs that are mindful of ٠ many traumas they must endure in the course of their providing services for the families of service. healthcare workers can go a long way in supporting staff and protecting morale. Lending cellular phones, laptops, or tablets to • healthcare workers and their families to ensure they are able to maintain ongoing communication, as well as providing updates on websites and hotlines, can help healthcare workers feel they are still interconnected and may alleviate some of the real pressures that are felt. Healthcare workers should have ready access • to psychiatric care, pharmacologic interventions, and both individual and group psychotherapy. They should be reassured that their families will receive the same. Educational materials should be developed • and provided. This can outline what healthcare workers might expect in the course of their duties, including common reactions and stressors they may encounter from the public, patients, their friends and families, or from within themselves.

Source	Model	Action	Strategy
Matlin, et al (2019)	 Three-dimensional model of trauma- informed practice (Tebes et al., 2017): (a) Risk prevention and health promotion alongside treatment or healing: Approaches focus on reducing individual, family, or community signs and symptoms of psychological, behavioral, social, or spiritual disruption in the aftermath of a traumatic event. (b) The social-ecological level of trauma- informed practice— at which a practice is implemented: Effective approaches need to prioritize a broader array of interventions than the usual individual- level, clinically based trauma-informed practices. (c) The target—universal or trauma- specific —for implementation of a 	Bring together stakeholders from different community sectors— community members, parents, youth, policymakers, health and social service providers, funders, researchers—to develop coordinated community responses to ACEs that can promote resilience. Provide training in resilience and trauma awareness to community stakeholders, establish trauma- informed service networks, share tips and resources for community development and coalition building, infuse community settings with the principles of trauma-informed practice, and advocate for specific trauma-responsive policies.	The Pottstown Trauma- Informed Community Connection (PTICC) - case study. The logic model specified three SC workgroups: (a) education and training, (b) communications, and (c) networking. The Communications workgroup was foundational for the SC because it helped the group translate its shared vision about trauma and connection into specific messages that all members could embrace.

Table 5. What can we learn from the literature about effective practice?



Source	Model	Action	Strategy
	trauma-informed practice: Trauma- informed universal interventions are more likely to enhance population health because they target a greater proportion of the population, particularly if they include prevention, promotion, or policy approaches.	Seek to fully engage community stakeholders in a participatory change process that infuses trauma-informed practices in all community sectors. The PTICC case study offers a potential road map for other communities.	The Education and Training work group built on this foundation by infusing education and training about trauma, ACEs, and trauma- informed practices into all PTICC activities. The Networking group focused on building a network of trauma-trained professionals in the local service system.
Gitterman & Sideriadis (2014)	Protective factors that children use to negotiate high-risk situations are: related temperament, family patterns, external supports, and environmental resources. Temperament includes such factors as: (1) activity level, (2) coping skills, (3) self-esteem, and (4) attributions. Planning in making choices looms as a critical factor in turning-point decisions. Exercising foresight and taking active steps to cope with environmental challenges are critical factors. Factors in addition to planning in making choices are: (1) the idea of chance or spiritual beliefs may well enhance our understanding of and feeling for the human experience; (2) humor - laughter is essential to life. To be able to laugh in the face of adversity and suffering releases tension, provides hope; and (3) the processes of helping and giving to others.	In assessment (as well as in intervention), client(s) and social workers need to determine whether appraisals of stressor and resources are accurate and, if they are not, work on developing greater accuracy. Under intense stress people may err in their evaluation of personal and environmental resources. Clients may overestimate their resources for dealing with life stressors and fail to cope successfully, or underestimate their resources and believe that the situation is hopeless. The worker also assesses how the client has coped with the life situation. Coping measures include emotional, cognitive, and behavioral actions to change aspects of the stressful life situation such as oneself, the environment, exchanges between them, or all three. In assessing personal coping resources, the worker evaluates the client's motivation; problem-solving and relationship skills; outlook on life; self-confidence; ability to search for and use information from the environment; capacity to restrain rash or impulsive decisions and actions, and to regulate negative emotions aroused by the stressor; and ability to seek environmental resources and to use them effectively. Flexibility is also a personal coping resource. A personal resource such as optimism is also important in assessing environmental resources, the worker evaluates the availability and responsiveness of the client's formal service networks such as public and	Undertake periodic assessments as the situation is constantly changing. Focus on protective factors and taking steps to cope with environmental challenges.



Source	Model	Action	Strategy
		private agencies and institutions of many kinds.	
		Potential resources include the client's informal networks of relatives, friends, neighbors, workmates, coreligionists, etc., who may or may not provide emotional support, information, feedback, and advice. Since some formal and informal support systems may act as significant stressors rather than buffers, client and social workers must evaluate their responsiveness, just as personal resources are evaluated.	
		The worker also assesses relevant dimensions of the client's physical environment such as provisions for safety, privacy, crowding, accessibility of space, etc.	



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