Meeting Mental Health Needs After the Gulf Oil Spill

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This column describes an integrated behavioral health initiative in primary care clinics in Louisiana parishes affected by the Deepwater Horizon oil spill. The Louisiana Mental and Behavioral Health Capacity Project is an integral part of the Gulf Region Health Outreach Program and is funded from the Deepwater Horizon Medical Benefits Class Action Settlement. Using a public health approach, the Department of Psychiatry of the Louisiana State University Health Sciences Center developed an interprofessional collaboration model of care to provide culturally tailored and time-sensitive on-site and telemedicine services to adults and children affected by the disaster. Results indicate a high level of acceptance of the services and reductions in both mental health symptoms and general medical symptoms. Primary care clinic staff also report increased confidence and resilience to meet future disasters. The approach could be used by communities at risk of disasters and by rural communities with limited mental health resources. (*Psychiatric Services* 65:280–283, 2014; doi: 10.1176/appi.ps.201300470)

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The Deepwater Horizon oil rig exploded on April 20, 2010, and 4.9 million barrels of oil spilled into the Gulf of Mexico—the largest technological disaster in U.S. history. As the oil continued to flow into the Gulf for 87 days, the level of anxiety, worry, and anger among residents increased, with a growing sense of uncertainty among those whose livelihood depends on both fishing and the oil industry. Mental health surveillance carried out by the Centers for Disease Control (CDC) (1) showed increases in symptoms of mental disorders. In the fall of 2010, the Department of Psychiatry of Louisiana State University Health Sciences Center (LSUHSC) began mental health surveillance in communities highly affected by the oil spill (2,3). The surveillance, which continued in 2011 and 2012, demonstrated even greater increases in psychiatric symptoms than indicated by the CDC, including posttraumatic stress disorder (PTSD), depression, and generalized anxiety disorder. In addition to persistent increases in such symptoms, residents reported increases in somatic symptoms. Of interest, most of those screened also reported a sense of self-efficacy, indicating the ability to cope with difficulties. Further, the higher the reported self-efficacy, the fewer the reported symptoms.

The Gulf Region Health Outreach Program (GRHOP) was funded from the Deepwater Horizon Medical Benefits Class Action Settlement, which was approved by the U.S. District Court in New Orleans on January 11, 2013. GRHOP projects include the Primary Care Capacity Project; the Mental and Behavioral Health Capacity Projects (MBHCP) in Louisiana, Alabama, Mississippi, and Florida; the Environmental Health Capacity and Literacy Project; and the Community Health Workers Training Project. These projects are designed to increase knowledge and provide sustainable evidence-based services in communities highly affected by the Gulf oil spill. These communities had been affected by previous disasters and had limited resources, which resulted in disparities in care. A public health approach was taken in order to build sustainable general medical and mental health care and promote community resilience. It was recognized in the settlement that mental health is an important component of public health as well as an independent area that would require considerable emphasis if recovery and sustainability of services were to be accomplished.

In recent decades, there has been growing recognition of the short- and long-term impacts on the mental health of individuals, families, and communities after natural and technological disasters and mass violence (4). Adults experience symptoms of depression, anxiety, and posttraumatic stress, often compounded by substance abuse and economic hardship (4). Children and adolescents demonstrate age-related symptoms. Older children are more likely to

exhibit behavioral and mental health problems and gender-specific responses, and younger children are more likely to show regression and dysregulation (5). Individual differences in family and community support can affect both responses and the fostering of resilience (6,7). There has been increasing recognition of the importance of mental health knowledge and leadership in combination with interprofessional integration of responses with public health, primary care, and other systems of care (6,7).

To describe the acute and longer-term mental health concerns in Louisiana after the Gulf oil spill, it is important to understand the context. Louisiana is a poor state with limited resources. Hurricane Katrina devastated both heavily populated and rural areas and destroyed a significant portion of the general medical and mental health infrastructure. Given its geographic location bordering on the Gulf of Mexico, Louisiana has been subjected to many disasters before and after Hurricane Katrina, resulting in erosion of the wetlands and of environmental protective factors. Between 1980 and 2012, residents have experienced 11 tropical storms and hurricanes, flooding of the Mississippi River, and repeated technological incidents. The mental health concerns that followed Hurricane Katrina in 2005 were exacerbated by the Gulf Oil Spill in 2010. The recovery has been progressive but incomplete. Symptoms of mental disorders are persistent or easily reawakened (5), and residents express continuing concerns about what will happen to the local economy and cultural traditions (3), particularly if the recovery is partial.

Although less is known about technological disasters, studies of oil spills requiring cleanup of ecosystems indicate an increase in stress responses among affected individuals. For example, lessons learned from the Exxon Valdez oil spill (8) suggest that the vulnerability of children, families, and communities to psychological, social, economic, and ecological consequences of technological disasters can extend well into the future. The impact depends on the degree of exposure, which is related to proximity and qualities of the recovery environment, including community cohesion and availability of mental health, general medical, social, economic, and spiritual support. Community preparedness, adequacy of response, and availability of services immediately after the disaster and in the long term are key influences.

MBHCP in Louisiana

In developing overall behavioral health recovery efforts for the state, MBHCP in Louisiana (MBHCP-LA) drew heavily on national models utilizing federal, state, and community leadership, with emphasis on community engagement and provider and stakeholder collaborations. The programmatic design for MBHCP-LA is adapted from the evaluation framework model developed by the CDC (9). In Louisiana, most of the affected and designated communities in MBHCP had little access to behavioral health services before our program began. If individuals or families needed care, they had to drive long distances, often to a metropolitan area, to access specialty care at already overtaxed clinics. The symptoms of behavioral health problems often affect a person's willingness or ability to seek treatment. Therefore, it can be assumed that most of the individuals with mental health problems identified by LSUHSC clinicians in the integrated care program were receiving limited interventions.

In designing a working model for integrating behavioral health care into primary care clinics, the team researched existing national and international programs, with special focus on communities lacking local mental health resources (10,11). Such programs generally reflect one of two designs: a colocated psychiatrist who provides traditional mental health services within primary care clinics, with varying degrees of direct collaboration with primary care providers; or a centralized consultation-oriented model, with trained clinicians or case managers and with clinical and educational consultations provided at a distance by a psychiatrist who oversees several clinics. Both of these models have strengths; however, the MBHCP-LA team determined that neither approach alone was fully adaptable to the postdisaster needs in close-knit, largely rural communities that also faced successive disasters, cycles of economic concerns, and limited availability of general medical and mental health resources.

In establishing a program of behavioral health integration in primary care clinics, MBHCP-LA sought support and guidance from community stakeholders, community providers, and the five primary care clinics closest to the affected communities in parishes identified in the class action settlement. MBHCP-LA clinicians met with administrative and provider staff at the clinics to identify the current resources, patient loads, projected mental health concerns, and specific needs of each clinic. On the basis of these discussions, it appeared beneficial to have psychiatrists and psychologists directly embedded in the clinics, working collaboratively and fostering trust among primary care providers and patients. Considering the geographical distances and illness burden of the patient populations, MBHCP-LA developed a team-based approach with centralized care management to coordinate the field efforts of the mental health specialists. It was also decided to carefully integrate telemedicine into the project, taking care not to sacrifice the trust that direct face-to-face communication builds. This approach allowed the team to establish a network of care tailored to the individual needs of each clinic and provider. The network includes several levels of care: universal behavioral health screening, acute and emergency supportive care, and ongoing treatment.

The program model that the MBHCP-LA team developed and implemented is an interprofessional stepped-care collaborative—one which allows mental health clinicians to provide high-quality care for the greatest number of patients in an efficient, time-sensitive manner without sacrificing the level of care. Regular collaborative and consultation meetings with the primary care and mental health providers are essential to increase primary care providers' effectiveness in handling behavioral health issues. In this way, patients can be treated adequately by the primary

care provider, with clinical decision support from the psychiatrist or psychologist. If the behavioral health problem is complex or outside the level of comfort of the primary care provider, direct assessment of the patient is provided, and the patient's treatment is managed within the primary health care clinic by utilizing both on-site and telemedicine services. Emergency consultations are available 24 hours a day, seven days a week via telephone and telemedicine; in addition, patients are triaged to be seen in person or by telemedicine within a week. This level of consultation has been successful in preventing two or three emergency room evaluations weekly and ensures that patients who require hospitalization are thoroughly evaluated through consultation with specialists before activation of emergency transport.

The care management component of the collaborative program provides ongoing support services for all behavioral health patients. Care management allows the specialist's services to be utilized in the most efficient manner and ensures a high level of continuity during treatment. Care managers monitor progress, concerns, adverse reactions, and adherence to the treatment plan. They alert the specialist or primary care provider in a timely, sensitive manner in regard to patient concerns when remediation and further planning are needed. Care managers also manage interprofessional communication and assist in scheduling appointments for patients with primary care or mental health clinicians. The five primary care clinics currently being served refer a total of 50 to 75 new patients a week to the team; the numbers will increase in 2014 with the addition of three clinics that are being rebuilt in affected areas.

The MBHCP-LA interprofessional collaborative program is training adult and child psychiatrists, psychologists, social workers, and adult and child psychiatry residents in a later stage of their training, under supervision, to participate in the provision of services. All components of the model are being evaluated, and initial results are promising. Staff have noted that symptoms of mental disorders were previously underreported and undertreated.

Since early 2013, a total of 355 adult patients have been screened for symptoms of mental disorders at intake to services at the five primary care clinics. Beginning in May 2013, follow up evaluations that include the same measures have been carried out by MBHCP-LA clinicians and research associates. Of this group, 146 (41%) received follow-up evaluations by one month and 95 (27%) by three months. PTSD symptoms are measured with the PTSD Checklist, civilian version (12), depression symptoms with the nine-item Patient Health Questionnaire (PHQ-9) (13), and anxiety symptoms with the seven-item Generalized Anxiety Disorder Scale (14). Significant decreases in psychiatric symptoms were found at the one-month follow-up, with further declines at the three-month follow-up. [A table showing changes in scores over time is available as an online data supplement to this column.] Somatic symptoms are assessed with the PHQ-15 (15) and have also shown significant improvement.

Anecdotally, clinic staff have reported appreciation of the collaborative program and satisfaction with services provided. Staff also describe an increased sense of confidence and competence in their ability to evaluate and treat mental health symptoms. They also report increased resilience if and when another disaster occurs, given their improved knowledge as well as their ability to call on mental health partners at any time.

Conclusions

Under the MBHCP-LA, an interprofessional collaborative program was designed to provide critical integrated behavioral health care services in primary care clinics for populations most affected by the Gulf oil spill. These communities have been affected by repeated disasters, and they are also faced with disparities in care, including few, if any, locally available mental health providers. Under the MBHCP-LA, care is provided intensively by an interprofessional team effort that includes primary care providers, psychiatrists, psychologists, social workers, and care managers. Services are provided directly in local clinics, as well as by telemedicine. Real-time emergency evaluations of patients are conducted during clinic hours, and telemedicine consultations are conducted 24 hours a day, seven days a week.

These efforts have resulted in fewer hospitalizations and barriers to care, and they provide the highest-quality mental health care, with continuity between primary care providers and specialist mental health clinicians. Many patients have been referred for mental health interventions, and follow-up data show significant improvement in symptoms of depression, anxiety, and PTSD. Of note, a related decrease has been seen in somatic symptoms. The approach could be used by other communities at risk of disasters to develop more effective responses to aid recovery and build sustainable services. The collaborative approach also provides a model for rural communities that experience disparities in care and for communities with few or no locally available mental health clinicians to build better and sustainable mental health consultation and services in primary care clinics.

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