Psychological first aid
Rapid proliferation and the search for evidence

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Psychological first aid (PFA) has become the flagship early intervention for disaster survivors, with recent adaptations for disaster responders, in the post-9/11 era. PFA is broadly endorsed by expert consensus and integrated into guidelines for mental health and psychosocial support in disasters and extreme events. PFA frameworks are proliferating, with increasing numbers of models developed for delivery by a range of providers for use with an expanding array of target populations. Despite popularity and promotion, there remains a dearth of evidence for effectiveness and recent independent reviews of PFA have highlighted this important gap. This commentary juxtaposes the current propagation of PFA against the compelling need to produce evidence for effectiveness and suggests a series of actions to prioritize and expedite real-time, real-event field evaluation of PFA.

Rapid Adoption and Proliferation of Psychological First Aid

“Psychological first aid” was first introduced conceptually in the mid-Twentieth Century;1-3 in the post-9/11 era, psychological first aid has emerged as a mainstay for early psychological intervention with survivors of disasters and extreme events.4-10 Dating from the 2001 National Institute on Mental Health conference on mass violence,11 psychological first aid is now the first, and most favored, early intervention approach.4-6,9,10 Psychological first aid has been broadly endorsed and widely promulgated by disaster mental health experts in reports from a series of consensus conferences and in peer-reviewed disaster behavioral health literature.7,8,11-20 Psychological first aid is also consistently recommended in international treatment guidelines for post-traumatic stress disorder (PTSD) and as an early intervention for disaster survivors.7,12,14-21

Since 9/11, numerous psychological first aid frameworks have been introduced for use by an ever-growing range of providers whose work encompasses an enlarging array of target populations.22-48 Frameworks and models are variously labeled as psychological first aid, community-based psychosocial support, disaster behavioral health first aid, mental health first aid, and stress first aid. For ease and brevity, we will use the term, “psychological first aid,” and the generic abbreviation, “PFA,” throughout this commentary. A sampling of PFA models is listed in chronological order, based on year of release, in Table 1.

In recent years, the psychosocial consequences of disaster exposure have been deftly researched and widely accepted,49-52 with a resultant demand from the broader community for early intervention strategies to ameliorate the negative impacts and to facilitate healthy recovery. Psychological debriefing initially sought to address the psychological needs of professional emergency responders returning from stressful missions and subsequently, debriefing techniques were extended for use with civilian disaster survivors. A body of controlled research, however, has raised serious questions regarding the beneficial effects of this approach in terms of long-term recovery. Of more critical concern was a suggestion that, for a minority of recipients, psychological debriefing may actually result in worse adjustment.53,54 PFA emerged in this context as an intervention that would “first, do no harm” by retaining the elements of other models most likely to assist recovery, while avoiding those elements (notably expectations for a detailed incident review) that may be iatrogenic.8

PFA is not a new intervention. Rather, it is better conceptualized as documenting and operationalizing good common sense—those activities that sensible, caring human beings would do for each other anyway.8 It is underpinned by five “essential elements” generated from the available research literature by a consensus conference of disaster mental health experts convened in 2004 and later summarized in a landmark publication by Hobfoll and 19 co-authors.55 These five elements are: safety, calming, connectedness, self-efficacy, and hope. The various PFA models adhere to varying degrees to these elements. In simple terms, PFA includes the provision of information, comfort, emotional care, and instrumental support to those exposed to an extreme event, with assistance provided in a step-wise fashion tailored to the person’s needs.8 As a front-line strategy, PFA is not intended for delivery by mental health specialists; rather, it is designed to
Table 1. A chronological sample of psychological first aid courses and materials introduced in the post-9/11 era—ordered by year of publication

| Year | Title                                                                 | Source                                                                 | Target Audience                      | Ref. |
|------|-----------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------|------|
| 2005 | Nebraska Psychological First Aid Curriculum                           | University of Nebraska Public Policy Center                            | disaster survivors                    | 22   |
| 2005 | Psychological First Aid: Field Operations Guide, 1st Edition           | National Child Traumatic Stress Network, National Center for PTSD       | disaster survivors                    | 23   |
| 2005 | B-FAST: Disaster Behavioral Health First Aid Specialist Training      | Florida Center for Public Health Preparedness, University of South Florida | disaster survivors                    | 24   |
| 2005 | Psychological First Aid – A Guide for Emergency and Disaster Response Workers (Fact Sheet) | Substance Abuse and Mental Health Services Administration (SAMHSA) | disaster responders                   | 25   |
| 2006 | Psychological First Aid: Field Operations Guide, 2nd Edition           | National Child Traumatic Stress Network, National Center for PTSD       | disaster survivors                    | 26   |
| 2006 | Listen, Protect, Connect                                              | The Advertising Council, US Department of Homeland Security, The National Center for School Crisis and Bereavement | parents of young children             | 27   |
| 2006 | C-FAST: Disaster Behavioral Health First Aid Specialist Training with Children | Florida Center for Public Health Preparedness, University of South Florida | children                              | 28   |
| 2006 | Psychological First Aid Competencies for Public Health Workers        | Johns Hopkins Center for Public Health Preparedness                    | public health workforce               | 29   |
| 2006 | Psychological First Aid: How You Can Support Well-being in Disaster Victims (Fact Sheet) | Center for the Study of Traumatic Stress, Uniformed Services University of the Health Sciences | disaster responders                   | 30   |
| 2007 | B-FAST + SN: Disaster Behavioral Health First Aid Specialist Training with Special Needs Populations | Florida Center for Public Health Preparedness, University of South Florida | special needs populations             | 31   |
| 2007 | Psychological First Aid: Field Operations Guide: Medical Reserve Corps | Medical Reserve Corps National Child Traumatic Stress Network, National Center for PTSD | disaster survivors served by: Medical Reserve Corps responders | 32   |
| 2007 | Psychological First Aid for Healthcare Professionals                 | New York State Office of Mental Health and University of Rochester      | public health and healthcare professionals | 33   |
| 2008 | R-FAST: Disaster Behavioral Health First Aid Specialist Training for Responders | Florida Center for Public Health Preparedness, University of South Florida | disaster first responders             | 34   |
| 2008 | Psychological First Aid: Field Operations Guide for Nursing Homes,    | Florida Mental Health Institute, University of South Florida, National Child Traumatic Stress Network | nursing home residents and personnel | 35   |
| 2009 | Psychological First Aid: Response to Pandemic Influenza               | Minnesota Department of Health                                         | public health and healthcare workers  | 36   |
| 2009 | Psychosocial Interventions: A Handbook                               | International Federation of Red Cross and Red Crescent Societies: Reference Centre for Psychosocial Support | disaster/humanitarian crisis survivors/refugees/IDPs | 37   |
| 2009 | Community-Based Psychosocial Support: Trainer's Book: A Training Kit | International Federation of Red Cross and Red Crescent Societies: Reference Centre for Psychosocial Support | disaster/humanitarian crisis survivors/refugees/IDPs | 38   |
| 2009 | Community-Based Psychosocial Support: Participant's Book             | International Federation of Red Cross and Red Crescent Societies: Reference Centre for Psychosocial Support | disaster/humanitarian crisis survivors/refugees/IDPs | 39   |
| 2010 | Coping in Today's World: Psychological First Aid and Resilience for Families, Friends and Neighbors: Instructor's Manual | American Red Cross | disaster survivors | 40   |
| 2010 | Coping in Today's World: Psychological First Aid and Resilience for Families, Friends and Neighbors: Participant's Manual | American Red Cross | disaster survivors | 41   |
| 2010 | Psychological First Aid: An Australian Guide.                         | Australian Red Cross Australian Psychological Society | disaster survivors | 42   |
be administered by a multiplicity of lay providers, ranging from professional disaster responders (emergency services personnel, medical emergency teams) through to teachers, clergy, and PFA-trained disaster volunteers.

PFA frameworks are now broadly accessible and available in a global spectrum of languages. Education on PFA is offered through a range of live, online, mobile, and mediated training modalities. Although PFA was initially designed for use with civilian disaster survivors, several “stress first aid (“SFA”)” variations have been recently introduced for use with emergency response personnel, active duty military combat units, and other high-risk occupational groups.25,29,32-34,36,43,44,47,48 In short, PFA/SFA in its various forms has rapidly become the universally-accepted early intervention of choice for disaster and trauma affected populations.

Table 1. A chronological sample of psychological first aid courses and materials Introduced in the post-9/11 era—ordered by year of publication (continued)

| Year | Course Title | Provider | Target Audience | Year |
|------|--------------|----------|----------------|------|
| 2010 | Combat and Operational Stress First Aid (COSFA) Field Operations Manual. | Bureau of Medicine and Surgery, Department of the Navy, in cooperation with the Combat and Operational Stress Control, Manpower and Reserve Affairs, Headquarters Marine Corps, the Navy Operational Stress Control, Chief of Naval Personnel, TotalForce N1, and the National Center for PTSD, Department of Veterans Affairs | military personnel on combat assignments | 43 |
| 2010 | Psychological First Aid for First Responders – Tips for Emergency and Disaster Response Workers (Fact Sheet) | Substance Abuse and Mental Health Services Administration (SAMHSA) | disaster responders | 44 |
| 2011 | Psychological First Aid: Guide for Field Workers | World Health Organization | disaster survivors (especially low and middle income countries) | 45 |
| 2012 | Psychological First Aid for Schools: Field Operations Guide | National Child Traumatic Stress Network | children and teachers in schools | 46 |
| 2013 | Curbside Manner: Stress First Aid for the Street Student Manual | National Fallen Firefighters Association | firefighters first responders | 47 |
| 2013 | Stress First Aid for Firefighters and Emergency Medical Services Personnel Student Manual | National Fallen Firefighters Association | firefighters first responders | 48 |

What Evidence Currently Exists for PFA Effectiveness?

The alacrity with which PFA has been adopted as the first line approach in psychosocial recovery following disasters is surprising. This is, perhaps, an indication of the powerful need to feel knowledgeable and “in control” when dealing with distressed survivors—to know what to do and how to best respond to diminish distress and promote recovery. The simplicity and step-by-step approach of PFA is very appealing in addressing these needs.

Unfortunately, however, PFA’s popularity, promotion, and proliferation have not been matched with a commensurate pursuit of evidence demonstrating its effectiveness. Not only is there a dearth of data regarding the benefits of PFA, but there is limited demonstration of widespread commitment to generate such data. There are considerable complexities in the design and implementation of PFA evaluation in the post-disaster context. These complexities may be perceived as potentially so daunting that PFA approaches are routinely launched without prioritizing, designing, and implementing robust evaluation strategies. While the lack of field evaluations and a credible evidence base has been raised at professional meetings, and occasionally in press,6,8,56-59 progress toward addressing this issue continues to be slow.

It was, therefore, not surprising that in late 2012, a warning shot across the bow was delivered in the form of a published systematic review of the literature on the effectiveness of PFA.60 The review was commissioned by the American Red Cross as part of that organization’s routine process of continuously updating the evidence-based literature on the techniques, procedures, and interventions that are trained and delivered by Red Cross personnel. Most of these reviews focus on medical interventions, but PFA was included because the American Red Cross has introduced its own version (Fig. 1). This systematic review represents an independent assessment of the effectiveness of PFA; members of the review committee were experts in disaster response but none was a co-author or contributor to any PFA model, nor a participant in the multiple consensus conferences that endorsed PFA. The review process therefore provided a high degree of objective scrutiny of PFA using a well-developed and meticulous examination of the literature from 1990 through 2010, graded against standardized levels of evidence.

The results demonstrated the absence of any solid evidence for PFA effectiveness.60 The reviewers were unable to find any randomized trials, nor any non-randomized or even large descriptive studies. Thus, the best available “evidence” is currently restricted to peer-reviewed consensus statements and guidelines. Based on the literature review process, the authors recommend supporting the use of PFA but note that PFA is “evidence informed but without proof of effectiveness” (p.251).60 Interestingly, even the
authors of the review stretch beyond the data in their conclusion by stating (for people who have experienced a traumatic event) “PFA is a vital first step in ensuring basic care, comfort, and support” (p.251).

The current situation juxtaposes a high level of promotion and advocacy for PFA against a low level of evidence of its effectiveness. Importantly, of course, lack of extant evidence does not mean that PFA is not effective; rather, that effectiveness has not yet been demonstrated. It is, however, clear that there is an urgent need to demonstrate the effectiveness—or otherwise—of this widely used early intervention.

**Who Should Advocate for Evaluation of PFA Effectiveness?**

Ideally, disaster mental health experts should continue to raise a chorus of strong voices for expedited, systematic evaluation of PFA effectiveness. It is incumbent upon leaders in the field of disaster recovery to adopt this as a high priority and to maintain a proactive stance. Government funders of PFA and non-governmental organizations that have developed and implemented PFA models should be encouraged to provide financial support for field evaluation and evidence review. As with testing of all new interventions, however, it is important that researchers who are independent of the development and advocacy of a specific PFA model conduct at least some of the evaluation. For example, the American Red Cross evidence review is likely to be updated regularly, providing one source of impetus for disaster mental health experts to champion rigorous evaluation.

**What Methodologies Could be Applied to Seek Evidence for PFA Effectiveness?**

What might be done to begin to gather the evidence? We propose the following steps for consideration, but in doing so, as outlined above, we acknowledge the considerable complexities in the design and implementation of evaluation of PFA when delivered in a post-disaster context. A detailed discussion of the methodological issues is beyond the scope of this commentary and only a few of the more obvious points will be noted here. The highly flexible nature of PFA, for example, underscores the need to document as conscientiously as possible what is, and is not, delivered, and to whom. It is difficult, if not impossible, to find adequate control or comparison groups against which to judge the benefits of the intervention. In some disaster events where there is advance warning, pre-post designs may be possible; in others, it may be possible to use comparison disaster-affected communities that did not receive PFA.

The goals of PFA are vague and difficult to operationalize, such as: “PFA is designed to reduce the initial distress caused by traumatic events, and to foster short- and long-term adaptive functioning.” If these are accepted goals, then presumably a repeated measures design with simple assessments of psychological wellbeing, as well as social and occupational functioning, would be appropriate. As part of this process, it will be incumbent upon research teams to design operationalized versions of PFA that maintain consistency with the existing manuals while incorporating clearer decision rules that allow ratings of fidelity to the model and adequacy of implementation of the intervention. Nevertheless, conducting such a longitudinal design in an uncontrolled setting, and maintaining participation over multiple waves, pose particular challenges.

Perhaps most importantly, a large majority of disaster survivors will recover relatively quickly with the support of family members and friends; PFA is likely to have most impact for a small minority who would otherwise not recover. Thus, it is important to use designs that do not simply aggregate all the data into single means, since that is likely to obscure any effects.

It is also important to use measures of outcome that are sufficiently sensitive to identify benefits where they occur. As such, selection of outcome measures needs to consider not only domains of symptomatology and wellbeing, such as quality of life, alcohol or other substance consumption, depression and traumatic stress, but also the broader range of knowledge.

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**Figure 1.** Cover for *Coping in Today’s World: Psychological First Aid and Resilience for Families, Friends and Neighbors*, the psychological first aid curriculum developed by the American Red Cross. The American Red Cross commissioned the review of psychological first aid effectiveness.
Attitudinal, and behavioral outcomes that PFA is intended to influence. These broader outcomes include rates of self-referral for mental health treatment, use of coping strategies, amount and quality of social connections/support, knowledge of disaster-related psychological reactions, and stigma related attitudinal variables.

What is PFA? Content Analysis and a Link to the “Five Essential Elements”

With the rapid-fire introduction of multiple, and non-equivalent, models of PFA/SFA, it would be beneficial to catalog what is being offered. Effective evaluation is not possible unless an intervention can be defined and replicated. One step in the process would be to compare the content of the various PFA models.

Actually this process has been utilized by the creators of several recently-released PFA curricula who reviewed both the available literature on PFA and the predecessor models in the field. For example, the World Health Organization (WHO), War Trauma Foundation (WTF), and World Vision International (WVI) joined forces to produce a PFA model that was released in 2011 for use in humanitarian crises worldwide (Fig. 2). In the process, the WHO commissioned a “Systematic Review of Psychological First Aid” and the partner organizations (WTF, WVI) created an “Anthology of Resources” on PFA for low and middle income countries. Furthermore, prior to public release,
this PFA model was pilot tested in Haiti and refined. Recently, in the 2013 inaugural edition of the “Curbside Manner” Stress First Aid (SFA) program for firefighters and first responders, the bibliography presents an extensive listing of currently-available PFA models that were perused by the SFA developers. Comparison of the content of PFA models is useful for describing commonalities across models and for identifying PFA versions that provide additional or distinctive content. For example, some PFA programs bring strong focus to personal or community resilience. As a departure from the stand-alone PFA products, The International Federation of Red Cross/Red Crescent Societies, has embedded and integrated a very simple, brief PFA module within a comprehensive multi-faceted approach to “community-based psychosocial support” that encompasses the entire post-disaster period. Given these distinctions, defining the scope of PFA content is important in any attempt at evaluation.

The “five essential elements” identified by Hobfoll and colleagues (safety, calming, connectedness, self-efficacy, and hope) might be considered the best “standard” available for assessing the coverage of various PFA frameworks. Researchers are currently conducting a content and components analysis of PFA models and, as part of the process, they are examining the manner and extent to which each of the “five essentials” is addressed. Preliminary findings indicate that “calming” and “connectedness” are elements that are prominently and consistently emphasized. Furthermore, these elements appear to be the most amenable for evaluation and quantification of psychological effect. In contrast, “safety” is less developed in most PFA models; PFA providers typically arrive on-scene after disaster survivors have evacuated away from the epicenter of disaster (the “ground zero” or “hot zone” scene of high risk and imminent danger) to safer environments (with the notable exception of humanitarian crises involving ongoing armed conflict). Likewise, the final two essential elements, “self-efficacy” and “hope,” are more challenging to measure and to relate to the PFA intervention. Despite the difficulties, however, it would be worth making every effort to include these five elements in any PFA evaluation, since they have been so central to the model development.

Which Aspects Work Best? Conducting Components Analysis of PFA Models

Each PFA model organizes its contents around a set of “core actions” or “core principles” that identify the major components of the intervention. There is notable variability in the enumeration and “packaging” of these skills sets. At a minimum, the manner in which the core actions are labeled, organized, and presented is likely to affect the ease of teaching, acquisition, retention, and especially, in-the-field application of the corresponding knowledge and skills on the part of PFA providers.

The components that appear to be “best candidates” for developing data on effectiveness are those that are “psychological” in nature and measurable. Various models label these components with names such as: comfort, connection, competence, confidence, coping, and social support. It is apparent that such components closely align with the Hobfoll et al. essential elements of “calming” and “connectedness.”

In contrast, some components will not contribute strongly to demonstrating the effectiveness of PFA. For example, some PFA programs provide explicit guidance to the PFA provider on how to initiate the encounter with the recipient, counting this “first contact” as a separate core action. Indeed, instructing the PFA practitioner on the appropriate way to approach the survivor and effective “opening lines,” is critical teaching; the success of any subsequent intervention pivots on these first moments. However, in practice, this brief phase of the provider/recipient interaction is not likely to provide sufficient substance to be evaluated separately.

Other components cannot be cleanly “isolated” as a psychosocial intervention. Consider that several PFA frameworks elevate “practical assistance” to the level of a core principle. Disaster survivors receive practical help from family, friends, neighbors, disaster response professionals, and volunteers. Most of the persons who provide such help are neither trained nor familiar with PFA. In most instances, practical help is, by its very nature, intentionally “practical” and “helpful” and only incidentally psychologically beneficial.

Practical assistance is therefore problematic in terms of evaluation. Certainly it would be overreach to subsume practical assistance from all sources as part of PFA. However, it should be possible to measure the impact of the quantum of practical assistance that is provided by PFA providers. This would be worthwhile because practical assistance is closely related to problem-solving, a much tested intervention for depression, and practical assistance is one of the most important elements across multiple models of PFA.

In summary, components analysis assists the PFA evaluation process by 1) contrasting models in terms of the types and packaging of core actions provided, and 2) identifying those core actions that can be measured in a manner that contributes toward real-time/real-event evaluation of the effectiveness of PFA.

What is the Context of PFA? Exposures, Target Populations, and PFA Providers

Any evaluation strategy for PFA must recognize and document the context in which it is provided: what is the nature of the potentially traumatizing event, who was affected, and who is delivering the PFA intervention? Defining the disaster setting and traumatic exposures, the target population, and the PFA providers is essential for examining the possible differential effects of PFA and determining when and where it is most effective.

Exposure to potentially traumatizing events

It is possible that PFA may be more effective following some disaster and trauma types than others. Different combinations and intensities of PFA components may be applied in events characterized by acts of human malevolence compared with those resulting from natural forces; or for events that pose ongoing and prolonged threat to life (armed conflict situations, natural disasters with widespread devastation) compared with those where
danger is time-limited and transient (school shooting, tornado). By documenting the exposures during a disaster mental health assessment, it may be possible to better tailor PFA to the specific needs of the affected population.

**Target population**

Following on from exposure type and severity, the evaluation should clarify the target population. Early PFA models were originally developed for use with diverse populations of disaster survivors. Some models have been modified for special applications with children, older adults, and special needs survivor populations. Other PFA frameworks have been developed to build resilience among first responders, and public health and hospital-based professionals, engaged in disaster response. Stress First Aid (“SFA”) models have been designed specifically for use with emergency responder personnel or combat military units exposed to potentially-traumatizing missions. Any evaluation needs to clearly define the target population, with a view to selecting—or adapting—the PFA/SFA model to suit their specific needs.

**PFA provider**

The PFA provider is another key consideration for documentation in the evaluation process. Indeed, several versions of PFA have been tailored for use with a specific type of provider. The international network of Red Cross/Red Crescent societies, for example, have developed PFA versions for delivery by their own trained and credentialed disaster mental health services volunteers in a specific nation (e.g., American Red Cross PFA, Australian Red Cross PFA) (Fig. 3). Similarly, a PFA model has been designed for use by US. Medical Reserve Corps personnel. It is reasonable to assume that some provider types may be more appropriate than others, depending on the disaster context.

**Where to From Here? The Way Forward**

In this article, we have argued for the importance of evaluating the effectiveness of PFA and some of the key questions to be addressed in an evaluation process. We have also acknowledged the difficulties inherent in designing and implementing a rigorous evaluation protocol for PFA in real world settings. We conclude with five suggestions as to how the challenge of evaluating PFA may be achieved.

First, recognizing the difficulties of evaluating the use of PFA with disaster survivors in a disaster context, it has been suggested that an evaluation within the organizational context of first responders may be a good place to start. Here the focus would be the first responders themselves as the affected population. The application of PFA (or more appropriately, the SFA models that are now available specifically for responders), in an organizational setting with known and predictable ongoing exposures allows for the development of a phased approach. By undertaking this work, it may be possible to identify ways to strengthen the implementation of PFA in less controlled disaster settings. Forbes and colleagues outline a phased approach to evaluation, including components to be initiated and measured pre-event. The first of these phases is the development of PFA-consistent organizational policies and procedures. As the effectiveness of PFA will be influenced by the environment in which the exposure occurs and in which the PFA intervention is delivered, the first step of a Phased PFA model should address organizational policies and procedures dealing with psychological trauma. The second pre-event phase involves PFA promotion and staff training, that is, promoting and embedding the policy. Once policies and procedures are in place to delineate responsibilities for core PFA actions to various role positions across the organization, this information must be communicated consistently and regularly to staff at all levels.

This includes education and training programs to the deliverers of PFA in the organizational context (supervisors, managers, peer supporters and health professionals where relevant) and the recipients (being the members themselves), with a view to “buddy to buddy” (“mate to mate”) PFA-consistent support. Preliminary evidence indicates shifts in knowledge, awareness and confidence in using PFA interventions by managers and peers following such training.

This approach facilitates relatively controlled testing of the elements of PFA within the ranks of first responders, but it must be clearly acknowledged that emergency response teams, trained...
to respond to potentially traumatizing events within the line of duty, differ from general civilian populations who are exposed to traumas often without warning or training. While advantageous for testing components of PFA, and of critical import for this trauma-affected population, results from PFA applications with responders have limited generalizability to civilian survivors of traumatic events.

Second, it is possible to test the implementation of PFA with civilians in controlled settings such as hospital emergency rooms in which large numbers of trauma survivors routinely present immediately following trauma exposure. Such environments offer systematic advantages for efficacy and effectiveness research. It is possible to quantify the type and severity of medical trauma—measures of trauma exposure—and to aggregate data over a series of similar trauma cases as PFA is tested with this population.

Third, there is a widely accepted need to test the effectiveness of PFA in real disaster situations with civilian populations in harm’s way. As previously mentioned, no amount of rigorous testing of PFA elements with responders will replace the need to examine effectiveness with disaster survivors. A frequent excuse for not conducting robust evaluation is the assertion that disasters are not predictable. While many disasters strike without warning, there are notable exceptions. For example, we have been working on community resilience projects with a river community that routinely engages in an annual “flood fight” when river levels rise rapidly during the spring thaw; the river has exceeded “flood stage” during 19 of the past 20 years. Other communities around the world regularly face the threat of floods, bushfires, cyclones, and other natural disasters. These communities present an ideal opportunity to test PFA using a pre-post design. In some scenarios where multiple communities are affected, there may be options to use comparisons in which one area is provided with PFA and the other with an alternative control condition. These relatively predictable disasters provide opportunities to test PFA in ecologically valid real world settings in communities that routinely experience disaster threats.

Fourth, evaluation of PFA will be most effective if it is coordinated internationally. Ideally we should strive to achieve agreement on the research questions, measures, and designs to achieve comparable methodologies for evaluation of PFA effectiveness when conducted for a variety of disaster events around the globe. Clearly, this is a significant challenge, but one that is worth striving to achieve. Only by collating and comparing similar studies across different populations will we be in a position to comment definitively about the effectiveness or otherwise of PFA.

Fifth, it is also important to consider the ongoing evolution of the field that will facilitate future enhancements that can be incorporated into PFA. Our current work with trauma signature (TSIG) analysis suggests that in the future, early intervention can be adapted to the nature of the disaster or extreme event. Trauma signature (TSIG) analysis is an evidence-based method that examines the interrelationship between population exposure to a disaster, extreme event, or complex emergency, and the interrelated physical and psychological consequences for the purpose of providing timely, actionable guidance for effective mental health and psychosocial support that is organically tailored and targeted to the defining features of the event.

TSIG analysis also holds promise for better preparing PFA practitioners for the likely disaster-specific stressors they will encounter when responding. PFA practitioners will benefit from training in disaster survival skills to elevate their field skills and self-sufficiency while on deployment.

Finally, remembering the recommendations of the NIMH consensus conference, it is advisable to "reintegrate" PFA within a multi-faceted disaster mental health response that includes validated mental health assessment of disaster survivors, identification of persons at high risk for progressing to psychopathology, inclusion of specialized mental health services referral, and monitoring the post-disaster recovery environment.

**Conclusion**

The widespread and relatively uncritical acceptance of PFA as the preferred approach to early intervention following disaster has brought with it concerning questions about its effectiveness. Although not clearly operationalized, the goals of PFA are broadly recognized as reducing immediate distress and optimizing short- and long-term functioning. Little evidence exists to demonstrate the effectiveness of PFA in achieving these goals. Having not been created with field evaluation in mind, researchers are now attempting to bootstrap evaluation strategies to PFA models that are frankly unwieldy to test for effectiveness. It is now incumbent upon the field to collaboratively design evaluation protocols to test specific aspects and applications of this popular and potentially valuable approach. In the final analysis, we must be able to demonstrate improved trajectories of recovery for people affected by disaster and trauma.

Note: Just as this commentary was published online, an important paper on mental health response to community disasters was published in a special issue of JAMA. Authors Carol North and Betty Pfefferbaum state, "Evidence-based treatments are available for patients with active psychiatric disorders, but psychosocial interventions such as psychological first aid, psychological debriefing, crisis counseling, and psychoeducation for individuals with distress have not been sufficiently evaluated to establish their benefit or harm in disaster settings." This review article reinforces key points made in this commentary.

**Disclosure of Potential Conflicts of Interest**

No potential conflicts of interest were disclosed.
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