

## Mental health in complex emergencies

*Lancet 2004; 364: 2058–67* R F Mollica, B Lopes Cardozo, H J Osofsky, B Raphael, A Ager, P Salama

Harvard Program in Refugee Trauma, Massachusetts General Hospital, Cambridge, MA, USA (Prof R F Mollica MD); International Emergency and Refugee Health Branch, Centers for Disease Control and Prevention, Atlanta, GA, USA (B Lopes Cardozo MD); Louisiana State University Health Sciences Center, LA, USA (H J Osofsky MD); Centre for Mental Health, New South Wales Health Department, Sydney, New South Wales, Australia (B Raphael FRCPsych); Centre for International Health Studies, Edinburgh, UK (A Ager PhD); and UNICEF, Kabul, Afghanistan (P Salama MBBS)

Correspondence to: Prof Richard F Mollica, Harvard Program in Refugee Trauma, 22 Putnam Avenue 2nd Floor, Cambridge, MA 02139, USA  
mollica@partners.org

Mental health is becoming a central issue for public health complex emergencies. In this review we present a culturally valid mental health action plan based on scientific evidence that is capable of addressing the mental health effects of complex emergencies. A mental health system of primary care providers, traditional healers, and relief workers, if properly trained and supported, can provide cost-effective, good mental health care. This plan emphasises the need for standardised approaches to the assessment, monitoring, and outcome of all related activities. Crucial to the improvement of outcomes during crises and the availability to future emergencies of lessons learned from earlier crises is the regular dissemination of the results achieved with the action plan. A research agenda is included that should, in time, fill knowledge gaps and reduce the negative mental health effects of complex emergencies.

Mental health is becoming a core public health area in complex emergencies.<sup>1</sup> Many historic milestones have contributed to this situation,<sup>2</sup> for example, studies in war veterans have revealed the serious mental health effects of conflict.<sup>3</sup> Psychological casualties exceeded physical casualties by two to one in World War I and in World War II 33% of all medical casualties were attributable to psychiatric causes. 10 years after the Vietnam war, 15% of US veterans were still affected by post-traumatic stress disorder.<sup>4</sup> These findings were eventually applied to war-affected civilian populations.

In the late 1980s, the humanitarian relief community acknowledged the mental health crisis in their efforts to help more than 300 000 Cambodian displaced people who had been living on the Thai-Cambodian border for over a decade after the Khmer Rouge genocide of 1975–79. Deteriorating social conditions in the camps led to a landmark meeting in July, 1988, of UN, Thai, and voluntary relief organisations to discuss the deteriorating mental health conditions in the camps.<sup>5</sup> The first on-site refugee mental health survey was undertaken in the largest Thai border camp, Site 2, in 1988,<sup>6</sup> followed by the UN's acceptance of a plan to relieve the mental health crisis.<sup>7</sup> The next milestone was the implementation by humanitarian relief workers of hundreds of psychosocial programmes during the Balkan conflict.<sup>8</sup> Mental health practices that are

vidence-based and culturally competent are needed for complex emergencies, and in this review we offer a mental health action plan and an agenda for future research.

### Conceptual framework

A complex emergency is a social catastrophe marked by the destruction of the affected population's political, economic, sociocultural, and health care infrastructures.<sup>9</sup> The figure illustrates the links between mass violence, mental health impairment and services, and the existing damage to economic development, social capital, and human rights. Although these macro-level forces create health and mental health impairments and barriers to mental health service delivery, they can also be used to foster resiliency and mental health recovery.

The economic collapse that characterises complex emergencies may be associated with the destruction of businesses and hospitals, and the displacement of populations to camps where work opportunities are few. The inability of the affected populations to be

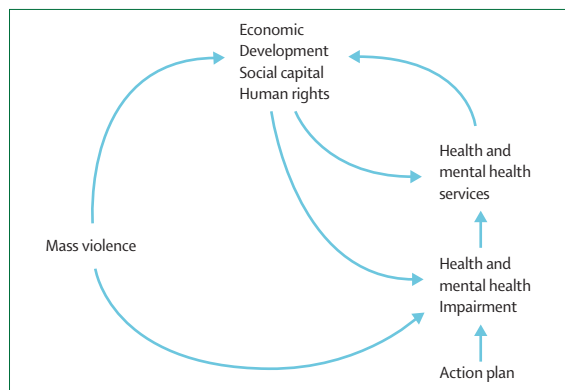


Figure: Macrolevel interactions and mental health during complex emergencies

### Search strategy and selection criteria

We identified relevant studies for possible inclusion by searching standard computer databases including the US National Library of Medicine, Ecommons (Harvard Medical School), PubMed, and OVID. For psychosocial-related research, a review of grey literature (work that is not widely published; for example, theses, government reports, and dissertations) was compiled through bibliographic and documentation development associated with the Psychosocial Working Group ([www.forcedmigration.org/psychosocial](http://www.forcedmigration.org/psychosocial)). Each author drew on his or her substantial expertise to contribute to this review. Keywords used were mental health, prevalence, trauma, traumatic event, refugee, war, mass violence, public health, complex emergency, complex humanitarian emergency, psychosocial, children, adolescents, Afghanistan, Bosnia, Kosovo, Rwanda, and Cambodia.

	Post-traumatic stress disorder	Depression	Screening method
<b>Complex emergency population</b>			
Cambodian refugees in Thailand <sup>21</sup>	37.2%	67.9%	HTQ
			HSCL-25
Bosnian refugees in Croatia <sup>27</sup>	26%	39%	HTQ
			HSCL-25
Kosovar Albanians in Kosovo <sup>32</sup>	17.1%	NA	HTQ
			GHQ-28
Karenni (Burmese) refugees in Thailand <sup>33</sup>	4.6%	41.8%	GHQ-28
			HSCL-25
			HTQ
			SF-36
			CIDI
Cambodia <sup>34</sup>	28.4%	NA	
<b>Baseline population</b>			
US population <sup>35,36</sup>	1%	6.4%	DIS
US population <sup>37,38</sup>	7.8%	16.2%	CIDI (modified)

Point prevalences in first four rows, lifetime prevalences thereafter. Different screening methods were used in these studies (see references for details). HTQ=Harvard trauma questionnaire. HSCL-25=Hopkins Symptom Checklist-25. GHQ-28=general health questionnaire-28. SF-36=short form-36. CIDI=composite international diagnostic interview. DIS=diagnostic interview schedule. NA=not measured.

**Table 1: Prevalence of mental health disorders in adult populations affected by complex emergencies**

economically self-sufficient has a major effect on psychological wellbeing.<sup>10</sup> Social capital refers to the “features of social organization, such as trust . . . and networks (of civil engagement), that can improve the efficiency of society by facilitating coordinated actions.”<sup>11,12</sup>

Restoring social capital, and reducing hatred and revenge, is central to post-conflict reconciliation.<sup>13</sup> A World Bank report<sup>14</sup> states: “The easy part of any Bank operation is reconstructing the bricks and mortar; the hard—but more essential—part is restoring the institutional societal bases of post conflict society.” Evidence is emerging that links the mental health sequelae of mass violence to the destruction of social capital.<sup>2</sup> Colletta and Cullen<sup>15</sup> have reported case studies illustrating how the rebuilding of social capital can provide a framework for recovery and economic development. Complex emergencies are accompanied by serious violations of rights.<sup>16</sup> Sex-based violence is common and has serious mental health effects.<sup>16</sup> There seems to be a dose-effect relation between cumulative trauma and psychiatric morbidity.<sup>17</sup>

The primary objective of a mental health action plan, therefore, is to address the human suffering associated with mental ill-health from the perspective of patient, community, and service provider.<sup>18,19</sup> Mental health symptoms, which are signs of emotional distress, should be distinguished from psychiatric illnesses and disabilities.<sup>20–23</sup> In resource-poor environments characterised by high levels of emotional distress, thresholds should be set for identifying those individuals in need of mental health services. Emotional distress

combined with impairment in social and physical functioning creates a reasonable clinical standard for eligibility, but input from the local community is necessary for determining the cultural norms needed for establishing the standard.

### Magnitude of the problem

The Global Burden of Disease Study<sup>24</sup> established for the first time the substantial burden of mortality and disability associated with mental illnesses. Depression, the fourth leading disease burden in 1990, is predicted to move to second place in 2020. Of the ten leading causes of disability worldwide, five were psychiatric conditions. The Global Burden of Disease Study did not focus on traumatised populations, and the mental health effects of psychiatric disorders might be much greater in complex emergencies. Despite the challenges of determining the prevalence of mental illness across cultures and in insecure environments, progress has been made in assessing the psychological and social effects of complex emergencies. The absence of accurate population estimates and culturally validated screening instruments needs to be overcome before culturally valid mental health assessments can be made.<sup>25,26</sup> However, validated measures of economic and social productivity and social capital in emergencies are still not available. Studies showing the prevalence of the mental health consequences of mass violence, depression, and post-traumatic stress disorder in adults are summarised in table 1. Some studies recorded non-specific psychiatric morbidity.

A longitudinal study of Bosnian refugees revealed, for the first time, the serious disability associated with the mental health effects of mass violence. 45% of the refugees studied met DSM-IV criteria for depression or post-traumatic stress disorder or both, and when both were diagnosed there was a high rate of physical disability (45.5%).<sup>27</sup> In 1999, psychiatric disability was unremitting and premature death was identified in elderly people in this population.<sup>28</sup> Other studies support these results, suggesting that suffering continues long after the crisis has ended.<sup>29,30</sup>

Scientists have recently focused on elaborating the mental health problems of children exposed to extreme violence.<sup>39–52</sup> Table 2 emphasises the high prevalence of post-traumatic stress disorder and depression in children and adolescents<sup>53–64</sup> affected by complex emergencies. Two studies revealed high rates of emotional distress in Cambodian refugee adolescents and Palestinian children, respectively.<sup>65,66</sup> In contrast to the studies in adults (table 1), the generalisability of these results is limited because few of the studies sampled a general population of children involved in a complex emergency,<sup>49</sup> or compared the findings with those in comparable, non-traumatised controls.<sup>50</sup>

	Post-traumatic stress disorder	Depression	Screening method
<b>Complex emergency populations</b>			
6-year follow-up of 30 young Khmer refugees <sup>53</sup>	50% in 1984 38% in 1990	41% in 1987 6% in 1990	
170 Cambodian adolescent refugees <sup>54</sup>	26.5% 12.9%		
480 Croatian refugee children <sup>55</sup>	NA	11.28%	CDI
59 young Cambodian-Americans <sup>56</sup>	Point: 24% Lifetime: 59%	19%	SCID-NP
209 Khmer adolescents <sup>57</sup>	12.9–41.2%	NA	SSADS SCID
99 Cambodian refugees <sup>58</sup>	Point: 31.3% Lifetime: 37.3%	Point: 68.4% Lifetime: 86%	SSADS Interview
12 Bosnian adolescents in US <sup>59</sup>	25%	17%	CTEI
147 Bosnian children refugees <sup>60</sup>	NA	25.90%	Self-report
492 Israeli children during Scud missile attacks <sup>61</sup>	24.9%	NA	SRQ
234 children in the Gaza Strip <sup>62</sup>	Point: 40.6% 1-Year: 10%	NA	CPTS-RI
Cambodian refugees in US <sup>62</sup>	Point: 28.6% Lifetime: 37.1%	Point: 17.1% Lifetime: 37.1%	SSADS Interview
<b>Baseline populations</b>			
Children (US) <sup>63</sup>	NA	Point: 2%	DSM-III-R Interview
9–17 year-olds (US) <sup>64</sup>	6-month: 2%	6-month: 6%	DISC-2.3

CDI=composite international diagnostic interview. SCID-NP=structured clinical interview for diagnosis of mental illness, non-patients version. SSADS=school children version schedule for affective disorders and schizophrenia. CTEI=communal traumatic experiences inventory. SRQ=stress reaction questionnaire. CPTS-RI=child post-traumatic stress reaction index. DSM-III-R=diagnostic and statistical manual of mental disorders, third edition, revised. DISC-2.3=diagnostic interview schedule for children version 2.3. NA=not measured.

**Table 2: Prevalence of mental health disorders in children and adolescents affected by complex emergencies**

### Mental health action plan

A mental health action plan for a complex emergency (panel) should be grounded in recommendations from landmark reports from the World Health Organisation<sup>67,68</sup> and the US Surgeon General.<sup>69</sup>

### Coordination of mental health care

Early intervention should focus on immediately establishing centralised coordination of mental health activities.<sup>70,71</sup> There is no evidence that this coordination has ever been undertaken; in most emergencies hundreds of organisations have implemented varying programmes (eg, in Bosnia and Kosovo<sup>8</sup>) and little information has been provided on monitoring and effectiveness. The experiences of relief and assistance organisations, including the US Federal Management Agency, offer insight into the role of coordination in responding to the mental health needs of disaster-affected populations.<sup>72,73</sup> Although the agency's model is not readily transferable to resource-poor environments, it does emphasise the value of coordinated services that are provided by trained mental health practitioners and community participation. Coordination can guarantee that steps in the action plan have their outcomes assessed and that they are integrated into and built on pre-existing mental health services, and also ensures that those most in need receive appropriate and effective intervention.

Sufficient evidence exists of the role of mental health in complex emergencies to argue that the planning of a

mental health response should be routinely incorporated into the activities of UN agencies, non-governmental organisations, and donors before these organisations become involved in complex emergencies.

### Assessment and monitoring

As soon as possible, a population-based assessment should be undertaken in complex emergencies to estimate the prevalence of mental health disorders, to identify vulnerable groups, and to find out what mental health support and clinical care is available. A major barrier to the implementation of action plans has been the absence of guidelines linked to a formal system of assessment and monitoring.<sup>1</sup> Indeed the absence of criteria for evidence-based best practice has led some public health authorities to doubt the contribution that mental health assistance can make in complex emergencies.<sup>74</sup> WHO recommendations<sup>68</sup> and the Sphere project<sup>75</sup> might fill this gap. Until culturally validated and standardised mental health needs assessments become available for use in complex emergencies, simple ethnographically informed quantitative measures will have to be generated for each emergency to provide the information needed for planning, monitoring, and assessment, and these measures should cover macro-level factors (economic opportunities, social capital, and human rights violations), mental health outcomes (symptoms and disability), and available mental health resources.

### Early intervention phase

Early mental health interventions should focus on supporting public health activities aimed at reducing mortality and morbidity; offering psychological first aid, identifying and triaging seriously ill patients who need specialised psychiatric care,<sup>68,71,76</sup> and mobilising community-based resiliency and adaptation to the new circumstances affecting people during the emergency.

Early interventions have usually been based on the premise that 90% of the affected population will not develop mental illness despite high rates of emotional distress related to the crisis.<sup>70,71</sup> This premise might be incorrect. Table 1 shows the prevalence of chronic psychiatric disorders and a study in Bosnian refugees shows that a higher percentage of individuals might be seriously affected by chronic mental illness than previously thought.<sup>28</sup> High-risk individuals will eventually be identified through early screening, and will be treated. For the general population, the action plan should support the normalisation of everyday life, through the reduction of physical diseases, re-establishment of normal sociocultural and economic activities, family reunification, and protection from violence. The most intensive intervention in this phase is psychological first aid, which consists of listening (not forcing talk), conveying compassion, ensuring basic

**Panel: Mental health action plan for complex emergencies****Coordination of mental health care**

Strong, centralised coordination established at beginning of complex emergency to organise, monitor, supervise, and assess all mental health activities

**Assessment and monitoring**

Early rapid baseline assessment of the population's resiliency and risk factors, and vulnerable group's mental health disorders and available mental health resources

Monitoring system established able to review changes in baseline status over time

**Early intervention phase**

Early interventions should support reduction in mortality and morbidity, offer population-wide psychological first aid, identify and triage seriously mentally ill to psychiatric treatment, and mobilise community-based resiliency and adaptation by facilitating restoration of normal community life.

**De-facto mental health system**

Build up and finance the de-facto mental health system of local primary health care practitioners, traditional healers, and local and international relief workers

Use culturally validated and scientifically established mental health interventions throughout the system

**Training and education**

Train all front-line responders in basic mental health principles such as psychological first aid

Build mental health capacity in the de-facto mental health care system through effective training that emphasises teaching of culturally effective evidence-based interventions

**Implement, manage, and monitor a culturally competent system of care**

All policies, practitioners, and organisational structures should actively use the cultural medical worldview of the population(s) served, and engage the local communities' participation in the action plan

**Ethics and community participation**

Informed consent should be followed. Patients and communities should participate in shared decision-making processes

Public awareness campaigns will improve community support of plan and improve outcomes

**Prevention of negative mental health consequences in mental health providers**

All mental health providers should be provided with a self-care programme that includes identification of risk factors and opportunities for resiliency to prevent negative mental health outcomes

Mental health treatment should be readily available to affected relief workers in a safe, non-punitive, and confidential setting

**Outcome assessment and research**

All mental health interventions should be assessed as to their overall benefit to individuals and community and to their cost-effectiveness

All mental health trainings should be assessed to identify at least an increase in skills and knowledge of evidence-based practices that are culturally valid

Scientific investigations including population studies and randomised controlled trials are not a luxury and should be incorporated into all mental health action plans

needs, mobilising support from family members or significant others, and protecting the survivor from further harm.<sup>73</sup>

**Existing mental health care system**

Local primary care practitioners, traditional healers, and relief workers can be organised into a culturally competent, effective mental health system during a complex emergency. The role of primary health care in the mental health care of resettled traumatised refugees has been well documented.<sup>77,78</sup> The integration of mental health services into primary care has been widely

promoted, especially in developing countries.<sup>79,80</sup> Primary care practitioners are able to help traumatised patients by identifying and treating medical and psychiatric disorders during complex emergencies.<sup>81</sup> Local doctors, nurses, social workers, and occasionally psychiatrists (eg, in Bosnia<sup>82,83</sup>) can be mobilised to deal with their community's mental health needs. Primary care is able to treat the mental health disorders of traumatised patients in a non-stigmatising environment since in most societies emotionally distressed individuals avoid psychiatric treatment. With little training, practitioners can obtain the patient's trauma history and identify

related physical and mental health sequelae and so provide culturally sensitive assistance.<sup>84</sup> They can also identify illnesses and disabilities resulting from human rights violations.

Randomised trials in non-traumatised populations point to an important potential role for mental health services in primary care during complex emergencies. The efficacy of primary care has been shown for the treatment of depression,<sup>85,86</sup> and effective interventions include psychotropic drugs and interpersonal and cognitive behavioural therapy. The most effective primary care treatment for post-traumatic stress disorder has yet to be established. Psychological treatments and psychotropic drugs might be effective.<sup>87</sup> Supportive counselling helps patients cope with the adversities of a complex emergency but there is no evidence that it prevents or ameliorates post-traumatic stress disorder; nor is there evidence that such counselling is harmful. Cognitive behavioural therapy can be helpful when a patient with post-traumatic stress disorder has not responded to counselling.<sup>88,89</sup>

Raphael and Wilson<sup>90</sup> conclude that stress debriefing, a structured interview that elicits traumatic experience and reactions, is not recommended for disaster-affected populations as it might be both ineffective and potentially harmful. A role for eye movement desensitisation and reprocessing, a treatment that relies on the desensitisation of traumatic thoughts through repetitive eye movements, has yet to be substantiated.<sup>91–93</sup> Art therapy, in which children relive their experience of violence, might have no harmful effects but this type of therapy has not been proved to be beneficial.<sup>94</sup>

Traditional medicine covers diverse health practices, approaches, knowledge, and beliefs incorporating plant-based, animal-based, or mineral-based medicines, spiritual therapies, massage techniques and exercises applied singularly or in combination to maintain the wellbeing of the patient, and to treat, diagnose, or prevent illness. Traditional medicine is widely accepted and practised as a valid form of treatment worldwide.<sup>95</sup> A traditional healer is often a religious healer, or family, or community, elder. Traditional medicine generally uses a local classification system for emotional distress consisting of folk diagnoses accepted by the community. The accessibility of these practitioners and confidence in their abilities to manage mental health disorders, combined with the reduced stigma and potential cost-effectiveness, mean that traditional healers should be supported in complex emergencies. Experience with traditional healing and mental health has been extensively described for the Cambodian refugee crisis of the 1990s.<sup>96–98</sup> The evidence base for such interventions is growing, and randomised trials in settings other than complex emergencies show the clinical effectiveness of herbal medicines, acupuncture, and non-medication therapies in reducing some forms of depression, anxiety, insomnia, and pain.

Mental health services provided by relief organisations are psychosocial interventions based on a primary concern for the psychological and social wellbeing of the individual, but extending to the repair of collective social structures.<sup>99,100</sup> The term psychosocial<sup>101</sup> emphasises the dynamic relations between psychological effects (eg, emotions, behaviours, and memory) and social effects (eg, altered relations as a result of death, separation, and family and community breakdown). Psychosocial interventions try to help survivors of mass violence to cope with the demands of a social world shattered by violence. The effect of a complex emergency on a population's ability to care for itself is not described by accepted psychopathological diseases.<sup>102</sup> The psychosocial approach suggests that although people are affected in many ways, three areas in particular are affected: human capacity (ie, skills, knowledge, and capabilities), social ecology (social connectedness and networks), and culture and values. People need support to enhance both their own and the community's psychosocial wellbeing by strengthening each of these areas.<sup>103</sup> Psychosocial approaches usually focus on vulnerable groups or those with "special needs".<sup>104</sup> These are individuals with specific characteristics that place them at risk of psychological distress and social disability and who might be neglected, abused, and stigmatised by their society, limiting their ability to access humanitarian relief. This emphasis on vulnerable groups should not preclude an appreciation of the effect of mass violence on the mental health of all members of an affected population.

The evidence base for specific psychosocial interventions is small. A study by Mollica and colleagues<sup>105</sup> of Cambodian refugees on the Thai-Cambodian border showed environmental conditions (eg, opportunity for economically productive activities) that could have been fostered by camp authorities, to reduce psychiatric morbidity in camp residents. In a study in Bosnia-Herzegovina and Croatia, Agger and Mimica<sup>8</sup> recorded positive appraisals of services received, with higher rankings for group meetings and shared activities than for individual therapeutic provision. Assessment that uses feedback from those receiving psychosocial interventions has methodological limitations,<sup>106</sup> but a case-control study by Dybdahl<sup>107</sup> revealed a reduction of intrusive memories and higher self-rating of wellbeing in traumatised mothers in Bosnia who participated in weekly group meetings compared with those who received a basic package of medical care. The initial results of the UN experience with emergency and peace education with the objective of improving social capital is promising, but needs further assessment.<sup>108,109</sup>

Psychiatric practitioners trained in developed countries can participate in training, provide consultation and on-site supervision within the system, and do assessment and evidence-based investigations.<sup>76</sup> These practitioners have an important role in providing specialised care to the seriously mentally ill. Many conflict-affected

countries have little experience with western psychiatry (eg, Rwanda has one psychiatrist) so psychiatrists should amplify their effect through a culturally sensitive partnership with local indigenous healers.

### Training and education

Early in a complex emergency, individuals in the frontlines of health care and humanitarian assistance should be trained in basic mental health practices as psychological “first aid”.<sup>68,70</sup> Mental health practitioners should acquire the skills and knowledge that would enable them to deliver culturally effective evidence-based interventions. Few of these practitioners will have previous experience of large numbers of people who are emotionally affected by violence.<sup>110</sup> A new trend is the provision by relief organisations of brief mental health training to policy-makers, doctors, teachers, and relief workers. However, the professional expertise and mental health knowledge of those being trained frequently exceeds that of the trainers. Despite the popularity of this approach, scientific evidence of benefit is needed;<sup>111</sup> by contrast, assessments of mental health training given to local primary care practitioners in Bosnia and Cambodia have revealed sustainable results.<sup>112</sup> Although mental health training materials are plentiful few curricula are available or have been assessed for their scientific quality and cultural content. All such training projects should be made publicly available along with the lessons that have been learned so that duplication of effort and repetition of failed approaches can be avoided.

### Cultural competence

Complex emergencies have affected societies that are very different from developed countries in their view of medicine, but we could not find one scientific study on the provision of culturally sensitive mental health services in such an emergency. This omission is surprising because ethnicity and culture have a major effect on mental health-seeking behaviour and treatment outcomes;<sup>113–117</sup> and these effects will probably be intensified during a complex emergency. Furthermore, attitudes to mental health care may need to be overcome, such as fear of the mental health care system attributable to its previous use for torture, punishment, and incarceration, stigma and community rejection of vulnerable groups.<sup>118</sup> Avoidance of the health care system may also occur if health facilities have been targeted for destruction during the conflict.<sup>119</sup>

Much debate has surrounded the cultural validity of the diagnosis of post-traumatic stress disorder in developing societies.<sup>120</sup> However, the ethnographic study of traumatised populations has identified the common symptoms of emotional distress and related folk diagnoses that can be used by mental health providers in caring for these populations.<sup>78</sup> Psychiatric diagnoses can be combined with folk diagnoses to provide benefit to the patient.<sup>96</sup>

Cultural competence should characterise the mental health action plan’s goals and procedures. It is not enough for individual providers to practise cultural competence in a complex emergency. The California Pan-Ethnic Network and the California Healthcare Foundation have listed 12 characteristics of a culturally competent organisation that can be directly applied to the setting of a complex emergency. These characteristics include knowledge of the population served; diversity in organisation, governance and decision-making; mandatory cultural competence training; promoting delivery of culturally competent health care; and measurement of outcomes.<sup>121</sup>

### Ethics and community participation

Mental health practices should follow the principle of do no harm and ensure respect for patients’ freedom and autonomy.<sup>122</sup> Without informed consent no mental health intervention is morally justified and such consent needs to be sought in a culturally appropriate manner.<sup>123</sup> Mental health care providers should make a special effort to guarantee consent because normal standards, even if they were present before the emergency, may have been disrupted by the destruction of the health care system. Although difficult to achieve in a complex emergency, the patient and the community should be equal partners in a shared decision-making process. Community input and participation are also needed for psychosocial interventions that operate at the collective level. The Humanitarian Accountability Project<sup>124</sup> is a step towards ensuring this participation. Public awareness campaigns that include the community in all aspects of the action plan are not only ethically responsible but might also be therapeutic. Yet it is naive to think that mental health care is uniformly benign in complex emergencies and is associated with few risks.<sup>125</sup> Some interventions, especially those applied to individuals experiencing highly traumatic life events such as sexual violence or the murder of a child, can be very intrusive and psychologically disturbing and lead to serious negative mental health outcomes. Although eliciting trauma stories from survivors cannot be avoided,<sup>126–128</sup> mental health practitioners should not strip away a survivor’s psychological defences (eg, denial of recent traumas) to uncover the experience thought to be behind his or her mental health and physical disorders. Talking cures are not always benign or welcomed, especially in developing cultures, and investigations are still needed to determine the type of personal sharing of traumatic life experiences that is most helpful in the healing process.<sup>129</sup>

### Self-care and risk of burn-out in mental health care providers

Relief workers are not immune to the negative mental health effect of complex emergencies<sup>130</sup> and there seems to be a dose-response relation between the experience of trauma events and anxiety symptoms of clinical significance. Vulnerability is greatest in those workers on

Future investigations	Rationale
Adapt and develop culturally valid and reliable instruments with known psychometric properties for measuring risk and resiliency factors and mental health outcomes	Instruments such as the HTQ, HSCL-25, and GHQ can be expanded for use in complex emergencies by establishing their psychometric properties through a simple standardised approach. Simple measures that include risk and resiliency factors such as economic status and social capital do not exist for baseline mental health needs assessments. Culturally validated measurements of physical functioning and socioeconomic disability are necessary for identifying those in need of mental health care without sole reliance on psychiatric symptomatology
Undertake longitudinal studies that assess the effects of complex emergencies on the health and mental health status of conflict-affected populations over time	The natural course of mental health outcomes in conflict-affected populations is unknown; cause and effect relations are poorly described by available cross-sectional research. Studies are necessary for planning, preventing and for the timing and implementation of interventions
Do evidence-based studies of the effectiveness of interventions	Although scientific studies from other settings support the benefits of some mental health interventions, few evidence-based intervention studies such as randomized controlled trials have been done during a complex emergency.
Undertake evidence-based studies of the effectiveness of mental health trainings	Despite the heightened frequency of mental health trainings in complex emergencies, few studies have assessed the effectiveness of trainings. Studies should focus on relative effectiveness of mental health trainings in producing sustainable results including increase in the knowledge and skills of scientific practices, and the proper use of these practices, resulting in improved mental health outcomes
Investigate the ability of public awareness campaigns to protect affected populations against the negative mental health consequences of complex emergencies	Do public health awareness campaigns help prevent psychiatric illness and increase the use of services by those most in need? Do they improve shared decision-making and community participation? Are they the most culturally acceptable approach to guaranteeing community involvement? If the answers to any of these questions is no, what are more effective alternatives?
Determine the unit cost of providing culturally competent, evidence-based mental health care during complex emergencies	This information is essential for donors and policy-makers to make informed decisions on their financial support of a mental health action plan

Research agenda applies to adults, children and adolescents. HTQ=Harvard trauma questionnaire. HSCL-25=Hopkins symptom checklist-25. GHQ=general health questionnaire.

**Table 3: Research agenda for mental health and complex emergencies**

their first assignment or those with a long history of serial deployments. Local staff are especially vulnerable<sup>131</sup> and strategies to provide effective mental health protection, and treatment if necessary, for front-line personnel in complex emergencies need to be identified.<sup>132</sup>

#### Outcome assessment and research

Public health experts have called for all health interventions in complex emergencies to be evidence-based<sup>133–135</sup> (see table 3). Many mental health interventions are not based on sound scientific evidence,<sup>70</sup> and best practices for culturally effective mental health services in complex emergencies remain to be determined. A moral obligation to find such evidence for complex emergencies was emphasised at a meeting of mental health scientists after the Sept 11, 2001, terrorist attacks in the USA. Extrapolating from evidence derived from studies of natural disasters and individual traumatic events such as car accidents needs care. A review of 76 studies of early clinical interventions targeted at survivors of mass violence did not contain any studies done in a complex emergency.<sup>70</sup> The greatest barrier to the recognition of mental health as an essential public health activity is the absence of systematic work assessing response to clinical treatments and psychosocial interventions during complex emergencies.<sup>136,137</sup>

Development of a culturally valid, evidence-based action plan should begin with the assessment of mental health activities. These assessments should use standardised measures that can be simply applied by

relief organisations.<sup>25,26,138–141</sup> Public discussion of the results is essential so that lessons can be learned for the benefit of mental health activities in future complex emergencies. For example, the results of UNICEF's national training programme in Rwanda and UNHCR's counselling programmes in the Balkans could benefit future efforts.<sup>142</sup>

Donors and relief organisations should press for research and assessment in mental health to be a funding priority during complex emergencies. Some workers have argued that research wastes limited resources and increases the likelihood that the scientific community will exploit vulnerable populations. However, the opposite is true. Careful research provides effective interventions that will help achieve more equitable resource allocation. International covenants<sup>143</sup> offer specific proscriptions against the coercion of individuals into medical and scientific experiments. Guidelines to ensure that research done during complex emergencies is ethical should be established.<sup>144–146</sup>

#### Conflict of interest statement

We declare that we have no conflict of interest.

#### Acknowledgments

We thank Laura McDonald, research associate, Harvard Program in Refugee Trauma.

#### References

- Burkle FM. Lessons learnt and future expectations of complex emergencies. *BMJ* 1999; **322**: 1–5.
- Mollica RF. Waging a new kind of war. Invisible wounds. *Sci Am* 2000; **282**: 54–57.
- Armfield F. Preventing post-traumatic stress disorder resulting from military operations. *Mil Med* 1994; **159**: 739–46.

- 4 Kulka RA, Schlenger WE, Fairbank JA, et al. National Vietnam veterans readjustment study (NVVRS): description, current status, and initial PTSD prevalence estimates. Washington: Veterans Administration, 1988.
- 5 Committee for the coordination of services to displaced persons in Thailand (CCSDPT). Annual Conference Proceedings. Bangkok, Thailand, 1988.
- 6 Mollica RF, Jalbert RR. Community of confinement: the mental health crisis in site 2 (displaced persons camps on Thai-Kampuchean border). Baltimore: World Federation for Mental Health, 1989.
- 7 Mollica RF, Lavelle J, Tor S, Elias C. Turning point in Khmer mental health. Immediate steps to resolve the mental health crisis in the Khmer border camps. Baltimore: World Federation for Mental Health, 1989.
- 8 Agger I, Mimica J. Psychosocial assistance to victims of war in Bosnia-Herzegovina and Croatia: an evaluation. Brussels: ECHO, 1996.
- 9 Toole MJ, Waldman RJ. The public health aspects of complex emergencies and refugee situations. *Ann Rev Public Health* 1997; 18: 283–312.
- 10 Mollica RF. The mental health and psychological effects of mass violence. In: Leaning J, Briggs SM, Chen L, eds. Humanitarian emergencies: the medical and public health response. Cambridge: Harvard University Press, 1999: 125–42.
- 11 Putnam RD, Leonardi R, Nanetti RY. Making democracy work: civic traditions in modern Italy. Princeton: Princeton University Press, 1993.
- 12 Putnam RD. The prosperous community: social capital and public life. *American Prospect* 1993; 13: 36–42.
- 13 Lopes Cardozo B, Kaiser R, Gotway CA, Agani F. Mental health, social functioning, and feelings of hatred and revenge of Kosovar Albanians one year after the war in Kosovo. *J Trauma Stress* 2003; 16: 351–60.
- 14 Holzman SE, Elwan A, Scott C. The role of the World Bank in post-conflict reconstruction. Washington: The World Bank, 1998.
- 15 Colletta NJ, Cullen ML. Violent conflict and the transformation of social capital. Washington: The World Bank, 2000.
- 16 Goldfeld AE, Mollica RE, Pesavento BH. The physical and psychological sequelae of torture. *Symptomatology and diagnosis. JAMA* 1988; 259: 2725–29.
- 17 Mollica RF, McInnes K, Tor S. The dose-effect relationships of trauma to symptoms of depression and posttraumatic disorder among Cambodian survivors of mass violence. *Br J Psychiatry* 1998; 173: 482–89.
- 18 Kleinman A. Patients and healers in the context of culture. Berkeley: University of California Press, 1981.
- 19 Engelhardt H. Ideology and medicine. *J Med Philos* 1976; 7: 256–68.
- 20 Campbell EJM, Scadding JG, Roberts RS. The concept of disease. *BMJ* 1979; 2: 757–62.
- 21 WHO. International classification of functioning, disability and health–2 (ICIDH–2). World Health Organization, 2001.
- 22 Oswei T. The scientific approach to disease: specific entity and individual sickness. In: Crombie AC, ed. Scientific change. London: Heinemann, 1961: 629–47.
- 23 Silove D. The psychosocial effects of torture, mass human rights violations, and refugee trauma: Towards an integrated conceptual framework. *J Nerv Ment Dis* 1999; 187: 200–07.
- 24 Murray CJL, Lopez AD, editors. The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries and risk factors in 1990 and projected to 2020. Cambridge: Harvard University Press, 1996.
- 25 Mollica RF, Caspi-Yavin Y, Bollini P, Troung T, Tor S, Lavelle J. The Harvard Trauma Questionnaire: validating a cross-cultural instrument for measuring torture, trauma, and posttraumatic stress disorder in Indochinese refugees. *J Nerv Ment Dis* 1992; 180: 111–16.
- 26 Goldberg DP, Gater R, Sartorius N, et al.. The validity of two versions of the GHQ in the WHO study of mental illness in general health care. *Psychol Med* 1997; 27: 191–97.
- 27 Mollica RF, McInnes K, Sarajlic N, Lavelle J, Sarajlic I, Massagli MP. Disability associated with psychiatric comorbidity and health status in Bosnian refugees living in Croatia. *JAMA* 1999; 282: 433–39.
- 28 Mollica RF, Sarajlic N, Chernoff M, Lavelle J, Vukovic I, Massagli MP. Longitudinal study of psychiatric symptoms, disability, mortality and emigration among Bosnian refugees. *JAMA* 2001; 286: 546–54.
- 29 Bramsen I, van der Ploeg HM. Fifty years later: the long-term psychological adjustment of ageing World War II survivors. *Acta Psychiatr Scand* 1999; 100: 350–58.
- 30 Yehuda R, Schmeidler J, Wainberg M, Binder-Brynes K, Duvdevani T. Vulnerability to posttraumatic stress disorder in adult offspring of Holocaust survivors. *Am J Psychiatry* 1998; 155: 1163–71.
- 31 Mollica RF, Donelan K, Tor S, et al. The effect of trauma and confinement on functional health and mental health status of Cambodians living in Thai-Cambodia border camps. *JAMA* 1993; 270: 581–86.
- 32 Lopes Cardozo B, Vergara A, Agani F, Gotway CA. Mental health, social functioning, and attitudes of Kosovar Albanians following the war in Kosovo. *JAMA* 2000; 284: 569–77.
- 33 Lopes Cardozo B, Talley L, Burton A, Crawford C. Karenni refugees living in Thai-Burmese border camps: traumatic experiences, mental health outcomes and social functioning. *Soc Sci Med* 2004; 58: 2637–44.
- 34 De Jong JTVM, Komproe IH, Van Ommeren M, El Masri M. Lifetime events and posttraumatic stress disorder in 4 post conflict settings. *JAMA* 2001; 286: 555–62.
- 35 Robins L, Regier D, eds. Psychiatric disorders in America: the epidemiologic catchment area study. New York: The Free Press, 1991.
- 36 Helzer JE, Robins LN, McEvoy L. Post-traumatic stress disorder in the general population. *N Engl J Med* 1987; 317: 1630–34.
- 37 Kessler RC, Berglund P, Demler O, et al. The epidemiology of major depressive disorder: results from the national co-morbidity survey replication (NCCS-R). *JAMA* 2003; 289: 3095–05.
- 38 Kessler RC, Sonnega A, Bromet E, Hughes M, Nelson CB. Posttraumatic stress disorder in the national comorbidity survey. *Arch Gen Psychiatry* 1995; 52: 1048–60.
- 39 Cicchetti D, Toth S, Lynch M. Child maltreatment as an illustration of the effects of war on development. In: Cicchetti D, Toth S, eds. Rochester symposium on developmental psychopathology: developmental perspectives on trauma, Volume 8. Rochester: University of Rochester Press, 1997.
- 40 Paardekooper B, de Jong JTVM, Hermanns JMA. The psychological impact of war and the refugee situation on south Sudanese children in refugee camps in northern Uganda: an exploratory study. *J Child Psychol Psychiatry* 1999; 40: 529–36.
- 41 McCloskey LA, Southwick K, Fernandez-Esquer MD, Locke C. The psychological effects of political and domestic violence on Central American and Mexican immigrant mothers and children. *J Community Psychology* 1995; 23: 95–116.
- 42 Hjern A, Angel B, Hofer B. Persecution and behavior: a report of refugee children from Chile. *Child Abuse Negl* 1991; 15: 239–48.
- 43 Arroyo W, Eth S. Children traumatized by Central American warfare. In: Eth S, Pynoos RS, editors. Post-traumatic stress disorder in children. Washington: American Psychiatric Press, 1985: 103–17.
- 44 Bat-Zion N, Levy-Shiff R. Children in war: Stress and coping reactions under the threat of Scud missile attacks and the effect of proximity. In: Leavitt L, Fox N, eds. The psychological effects of war and violence on children. Hillsdale: Erlbaum, 1993: 143–61.
- 45 Laor N, Wolmer L, Mayes LC, et al. Israeli preschoolers under scud missile attacks. *Arch Gen Psychiatry* 1996; 53: 416–23.
- 46 Milgram RM, Milgram NA. The effect of the Yom Kippur war on anxiety level in Israeli children. *J Psychol* 1976; 94: 107–13.
- 47 Baker A, Shalhoub-Kevorkian N. Effects of political and military traumas on children: the Palestinian case. *Clin Psychol Rev* 1999; 19: 935–50.
- 48 Chimienti G, Nasr JA, Khalifeh I. Children's reactions to war-related stress. *Soc Psychiatry Psychiatr Epidemiol* 1989; 24: 282–87.
- 49 Nader K, Pynoos RS. The children of Kuwait after the gulf crisis. In: Leavitt LA, Fox NA, editors. The psychological effects of war and violence on children. Hillsdale: Erlbaum, 1993: 181–95.
- 50 Al-Eissa Y. The impact of the gulf armed conflict on the health and behaviour of Kuwaiti children. *Soc Sci Med* 1995; 41: 1033–37.
- 51 Kuterovac G, Dyregrov A, Stuvland R. Children in war: a silent majority under stress. *Br J Med Psychol* 1994; 67: 363–75.



- 52 Saigh PA. The validity of the DSM-III posttraumatic stress disorder classification as applied to children. *J Abnorm Psychol* 1989; **98**: 189–92.
- 53 Sack W, Clarke G, Him C, et al. A six-year follow-up study of Cambodian refugee adolescents traumatized as children. *J Am Acad Child Adolesc Psychiatry* 1993; **32**: 431–37.
- 54 Sack WH, Clarke GN, Seeley J. Multiple forms of stress in Cambodian adolescent refugees. *Child Dev* 1996; **67**: 107–16.
- 55 Zivcic I. Emotional reactions of children to war stress in Croatia. *J Am Acad Child Adolesc Psychiatry* 1993; **32**: 707–13.
- 56 Hubbard J, Realmuto G, Northwood A, Masten A. Co-morbidity of psychiatric diagnoses with post-traumatic stress disorder in survivors of childhood trauma. *J Am Acad Child Adolesc Psychiatry* 1995; **34**: 1167–73.
- 57 Sack WH, Clarke G, Seeley J. Post-traumatic stress disorder across two generations of Cambodian refugees. *J Am Acad Child Adolesc Psychiatry* 1995; **34**: 1160–66.
- 58 Savin D, Sack WH, Clark GN, Meas N, Richart I. The Khmer Adolescent Project: III. A study of trauma from Thailand's Site II refugee camp. *J Am Acad Child Adolesc Psychiatry* 1996; **35**: 384–91.
- 59 Weine S, Becker DF, McGlashan TH, Vojvoda D, Hartman S, Robbins JP. Adolescent survivors of "ethnic cleansing": observations on the first year in America. *J Am Acad Child Adolesc Psychiatry* 1995; **34**: 1153–59.
- 60 Stein B, Comer D, Gardner W, Kelleher K. Prospective study of displaced children's symptoms in wartime Bosnia. *Soc Psychiatry Psychiatr Epidemiol* 1999; **34**: 464–69.
- 61 Schwarzwald J, Weisenberg M, Waysman M, Solomon Z, Klingman A. Stress reaction of school-age children to the bombardment by SCUD missiles. *J Abnorm Psychol* 1993; **102**: 404–10.
- 62 Thabet A, Vostanis P. Post traumatic stress disorder reactions in children of war: a longitudinal study. *Child Abuse Negl* 2000; **24**: 291–98.
- 63 American Academy of Child and Adolescent Psychiatry (AACAP) 1998.
- 64 Shaffer D, Fisher P, Dulcan M. The NIMH diagnostic interview schedule for children version 2.3 (DISC-2.3): description, acceptability, prevalence rates, and performance in the MECA study. *J Am Acad Child Adolesc Psychiatry* 1996; **35**: 865–77.
- 65 Mollica RF, Poole C, Son L, Murray CC, Tor S. Effects of war trauma on Cambodian Refugee adolescents functional health and mental health status. *J Am Acad Child Adolesc Psychiatry* 1997; **36**: 1098–106.
- 66 Garbarino J, Kostelny K. The effects of political violence on Palestinian children's behavior problems: a risk accumulation model. *Child Dev* 1996; **67**: 33–45.
- 67 WHO. The world health report 2001: mental health: new understanding, new hope. Geneva: World Health Organisation, 2001.
- 68 WHO. Mental health in emergencies: mental and social aspects of health of populations exposed to extreme stressors. Geneva: Department of Mental Health and Substance Dependence. WHO, 2003.
- 69 US Department of Health and Human Services. Mental health: a report of the Surgeon General. Rockville: National Institute of Mental Health, 1999.
- 70 National Institute of Mental Health. Mental health and mass violence: evidence-based early psychological intervention for survivors/victims of mass violence: a workshop to reach consensus on best practices. NIH Publication No. 02–5138. Washington: US Government Printing Office, 2002.
- 71 NSW Health and NSW Institute of Psychiatry. Disaster mental health response handbook. New South Wales: NSW Health, July, 2000.
- 72 International Federation of Red Cross and Red Crescent Societies. Code of conduct for the international Red Cross and Red Crescent movement and non-governmental organizations (NGOs). Geneva: International Red Cross and Red Crescent Movement, 1996.
- 73 Flynn B. Disaster mental health: the US experience and beyond. In: Leaning J, Briggs SM, Chen LC, eds. Humanitarian crises: the medical and public health response. Cambridge: Harvard University Press, 1999: 97–123.
- 74 Toole M. Improving psychosocial survival in complex emergencies. *Lancet* 2002; **360**: 869.
- 75 The Sphere Project. Humanitarian charter and minimum standards in disaster response. Oxford: Oxfam Publishing, 2000.
- 76 Silove D, Ekblad S, Mollica R. The rights of the severely mentally ill in post conflict societies. *Lancet* 2000; **355**: 1548–49.
- 77 WHO. Alma-Ata 1978. Primary health care. Geneva: World Health Organization, 1978.
- 78 Mollica RF. The special psychiatric problems of refugees. In: Gelder M, ed. Oxford Textbook of Psychiatry. Oxford: Oxford University Press, 2001: 1591–1601.
- 79 WHO. The introduction of a mental health component into primary care. Geneva: World Health Organization, 1990.
- 80 WHO. The effectiveness of mental health services in primary care: the view from the developing world. WHO: Geneva, 2001.
- 81 WHO/UNHCR. Mental health of refugees. Geneva: World Health Organization, 1996.
- 82 Jones L. On a front line. *BMJ* 1995; **310**: 1052–54.
- 83 Loga S, Ceric I, Stojak R, et al. Psychosocial research during the war in Sarajevo. *Med Arh* 1999; **53**: 139–44.
- 84 Mollica RF. Assessment of trauma in primary care. *JAMA* 2001; **285**: 1213.
- 85 Rost K, Nutting P, Smith JL, Elliott CE, Dickinson M. Managing depression as a chronic disease: a randomised trial of ongoing treatment in primary care. *BMJ* 2002; **325**: 934.
- 86 Geddes J, Butler R. Depressive disorders. *Clin Evid* 2002; **8**: 951–73.
- 87 Bisson J. Post-traumatic stress disorder. *Clin Evid* 2002; **8**: 1010–18.
- 88 Bryant RA, Harvey AG, Dang ST, Sackville T, Basten, C. Treatment of acute stress disorder: a comparison of cognitive-behavioral therapy and supportive counselling. *J Consult Clin Psychol* 1998; **66**: 862–66.
- 89 Bryant RA, Sackville T, Dang, ST, Moulds M, Guthrie R. Treating acute stress disorder: an evaluation of cognitive-behaviour therapy and supportive counselling techniques. *Am J Psychiatry* 1999; **156**: 1780–86.
- 90 Raphael B, Wilson JP, eds. Psychological debriefing: theory, practice, and evidence. New York: Cambridge University Press, 2000.
- 91 Rosen GM. Treatment fidelity and research on eye movement desensitization and reprocessing (EMDR). *J Anxiety Disord* 1999; **13**: 173–84.
- 92 Oswald R, Anderson M, Hagstrom K, Berkowitz, B. Evaluation of the one-session eye-movement desensitization reprocessing procedure for eliminating traumatic memories. *Psychol Rep* 1993; **73**: 99–104.
- 93 Acierno R, Hersen M, Van Hasselt VB, Tremont G, Meuser KT. Review of the validation and dissemination of eye-movement desensitization and reprocessing: a scientific and ethical dilemma. *Clin Psych Rev* 1994; **14**: 287–98.
- 94 Foa E, Keane TM, Friedman MJ. Guidelines for treatment of PTSD. *J Trauma Stress* 2000; **13**: 539–88.
- 95 WHO. Traditional medicine. Brunei: World Health Organization, 2001.
- 96 Mollica RF, Tor S, Lavelle J. Pathway to healing. Cambridge: Harvard Program in Refugee Trauma, 1998.
- 97 Hiegel JP. Use of indigenous concepts and healers in the care of refugees: some experiences from the Thai border camps. In: Marcella AJ, ed. Amidst peril and pain: the mental health and well-being of the world's refugees. Washington: American Psychological Association, 1994.
- 98 Lavelle J, Tor S, Mollica RF, Allden K, Potts L, eds. Harvard guide to Khmer mental health. Cambridge: Harvard Program in Refugee Trauma, 1996.
- 99 McDonald L. The international response to the psychological wounds of war: understanding and improving psycho-social interventions. Working Paper No 7. Medford: Feinstein International Famine Center, Tufts University, 2002.
- 100 Ager A. Tensions in the psychosocial discourse: implications for the planning of interventions with war-affected populations. *Dev Pract* 1997; **7**: 402–07
- 101 Psychosocial care and protection: children in armed conflict. Conference proceedings. Nairobi: 1997.
- 102 Ager A. Psychosocial needs in complex emergencies. *Lancet* 2002; **360** (suppl 1): S43–44.
- 103 Ager A, Young M. Promoting the psychosocial health of refugees. In: MacLachlan M, ed. Cultivating health: applications across cultures. Chichester: Wiley, 2000.

- 104 UNHCR. Community services: an introduction. Geneva: UNHCR, 1996.
- 105 Mollica RF, Cui X, McInnes K, Massagli M. Science-based policy for psychosocial interventions in refugee camps: a Cambodian example. *J Nerv Ment Dis* 2002; **190**: 158–66.
- 106 Ager A. Psychosocial programs: principles and practice for research and evaluation. In: Ahearn F, ed. Psychosocial wellness of refugees: issues in qualitative and quantitative research. New York: Berghahn, 2000: 24–40.
- 107 Dybdahl, R. Children and mothers in war: an outcome study of a psychosocial intervention program. *Child Dev* 2001; **72**: 1214–30.
- 108 UNHCR. Evaluation and policy analysis unit and health and community development section. Learning for a future: refugee education in developing countries. Geneva: UNHCR, 2001.
- 109 UNESCO. Education in situations of emergency and crisis: challenges for the new century. Thematic studies. World education forum: education for all 2000 assessment. France: UNESCO, 2001. <http://unesdoc.unesco.org/images/0012/001234/123484e.pdf> (accessed July 8, 2003).
- 110 Humanitarian olympics: Solferino to Goma. *Lancet* 1995; **345**: 529–30.
- 111 Oxman AD, Thomson MA, Davis DA, Haynes B. No magic bullets: a systematic review of 102 trials of interventions to improve professional practice. *Can Med Assoc J* 1995; **153**: 1423–31.
- 112 Henderson DC, Mollica RF, Tor S, Lavelle J, Hayden D. Building primary care practitioners' confidence in mental health skills in a post-conflict society: a Cambodian example. *J Nerv Ment Dis* (in press).
- 113 Cross T, Bazron B, Dennis K, Isaacs M. Toward a culturally competent system of care: a monograph on effective services for minority children who are severely emotionally disturbed. Washington: Georgetown University Child Development Center, CASSP Technical Assistance Center, 1991.
- 114 Pinderhughes E. Understanding race, ethnicity and power: keys to efficacy in clinical practice. New York: The Free Press, 1989.
- 115 US Department of Health and Human Services. Mental health: culture, race and ethnicity, a supplement to mental health: a report of the Surgeon General, 2001. Maryland: US Department of Health and Human Services, 2001.
- 116 Fortier JP, Shaw-Taylor Y. Cultural and linguistics standards and research agenda project: part one: recommended standards. Resources for cross cultural health care with the center for the advancement of health and the department of health and human services, Office of Minority Health. Washington: US Department of Health and Human Services, March, 1999.
- 117 Sue S. In search of cultural competence in psychotherapy and counseling. *Am Psychol* 1998; **53**: 440–48.
- 118 Swiss S, Giller JE. Rape as a crime of war: a medical perspective. *JAMA* 1993; **270**: 612–15.
- 119 Iacopino V, Frank M, Bauer H, et al. A population-based assessment of human rights abuses committed against ethnic Albanian refugees from Kosovo. *Am J Public Health* 2001; **91**: 2013–18.
- 120 Summerfield D. A critique of seven assumptions behind psychological trauma programmes in war-affected areas. *Soc Sci Med* 1999; **48**: 1449–62.
- 121 California pan-ethnic health network. Diverse patients, disparate experience: the use of standardized patient satisfaction surveys in assessing the cultural competence of health care organizations. Oakland: March, 2001.
- 122 Mollica RF. Human rights reflections in daily medical practice. *Med J Aust* 1996; **165**: 594–95.
- 123 Roberts LW. Informed consent and the capacity for voluntarism. *Am J Psychiatry* 2002; **159**: 705–12.
- 124 Ombudsman project working group. An ombudsman for humanitarian assistance? London: Ombudsman Project Working Group, 1998.
- 125 Last M. Healing the social wounds of war. *Med Confl Surviv* 2000; **16**: 370–82.
- 126 Mollica RF. The trauma story: the psychiatric care of refugee survivors of violence and torture. In: Ochberg FM, ed. Post-traumatic therapy and victims of violence. New York: Brunner/Mazel, 1988.
- 127 Waters C. Emerging paradigms in the mental health care of refugees. *Soc Sci Med* 2001; **52**: 1709–18.
- 128 Robertson DW, Bedell R, Lavery JV, Upshur R. What kind of evidence do we need to justify humanitarian medical aid? *Lancet* 2002; **360**: 330–33.
- 129 Berry J, Poortinga Y, Segall M, Dasen P. Cross-cultural psychology: Research and applications. New York: Cambridge University Press, 1992.
- 130 Lopes Cardozo B, Salama P. Mental health of humanitarian aid workers in complex emergencies. In: Danieli Y, ed. Sharing the front line and the back hills: Peacekeepers, humanitarian aid workers and the media in the midst of crisis. New York: Baywood, 2002: 242–55.
- 131 The Antares Foundation. Report of the second conference on stress in humanitarian workers. Amsterdam: Antares/Center for Disease Control, 2002.
- 132 Ager A, Flapper E, van Pieterse T, Simon W. Supporting and equipping national and international humanitarian non-governmental organisations and their workers. In: Danieli Y, ed. Sharing the front line and the back hills: Peacekeepers, humanitarian aid workers and the media in the midst of crisis. New York: Baywood, 2002: 194–200.
- 133 Weinberg J, Simmonds S. Public health, epidemiology and war. *Soc Sci Med* 1995; **40**: 1663–69.
- 134 Banatvala N. Public health and humanitarian interventions. *BMJ* 2000; **321**: 101–05.
- 135 Waldman RJ. Prioritising health care in complex emergencies. *Lancet* 2001; **357**: 1427–29.
- 136 Silove D. Trauma and forced relocation. *Curr Opin Psychiatry* 2000; **13**: 231–36.
- 137 Mooren GTM, Jong de KT, Kleber RJ, Kulenovic S, Ruvic J. The efficacy of a mental health program in Bosnia-Herzegovina: Impact on coping and general health. *J Clin Psychol* 2003; **59**: 1–13.
- 138 Mollica RF, Wyshak G, de Marneffe D, Khuon F, Lavelle J. Indochinese version of the Hopkins Symptom Checklist-25: a screening instrument for the psychiatric care of refugees. *Am J Psychiatry* 1987; **144**: 497–500.
- 139 Willis GB, Gonzalez A. Methodological issues in the use of survey questionnaires to assess the health effects of torture. *J Nerv Ment Dis* 1998; **186**: 283–89.
- 140 Hollifield M, Warner T, Lian N, et al. Measuring trauma and health status in refugees. *JAMA* 2002; **288**: 611–21.
- 141 Flaherty JA, Gaviria FM, Pathak D, et al. Developing instruments for cross-cultural psychiatric research. *J Nerv Ment Dis* 1988; **176**: 257–63.
- 142 Neugebauer R. The uses of psychosocial epidemiology in promoting refugee health. *Am J Public Health* 1997; **87**: 726–27.
- 143 United Nations. Universal declaration of human rights. New York: Department of Public Information, 1948.
- 144 Leaning J. Ethics of research in refugee populations. *Lancet* 2001; **357**: 1432–33.
- 145 Cairns E. Children and political violence. Oxford: Blackwell, 1996.
- 146 Cairns E, Dawes A. Children: ethnic and political violence—a commentary. *Child Dev* 1996; **67**: 129–39.