



A healthcare worker at a Save the Children-supported health facility during the Ebola outbreak in the Democratic Republic of the Congo. September 18, 2019. Hugh Kinsella Cunningham / Save the Children

READY: GLOBAL READINESS FOR MAJOR DISEASE OUTBREAK RESPONSE

Available Technical Guidelines Assessment Report

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EXECUTIVE SUMMARY

From 2011–2017, the World Health Organization (WHO) documented 1,307 epidemic events in 172 countries.¹ The convergence of political, economic, ecological, and social forces in complex humanitarian emergency settings heightens the vulnerability of the population to infectious diseases. The 2016–2018 cholera outbreak in Yemen and the 2018–2020 Ebola virus disease (EVD) outbreak in the Democratic Republic of the Congo (DRC) are just two examples of many recent outbreaks that demonstrate the nature and complexity of managing large-scale outbreaks. These epidemics have far-reaching consequences on populations and global economies, challenging our response strategies and straining the systems' capacity. It is not uncommon to see non-governmental organizations (NGOs) playing a significant role supporting the national governments to contain the spread of the disease and mitigate the broader impacts on the populations.

In response to this established need, the United States Agency for International Development (USAID) Office of U.S. Foreign Disaster Assistance (OFDA) has cited a need to fill critical gaps in outbreak response capacity and capability. To achieve this, Save the Children US (SCUS) now leads a global consortium, known as READY, bringing together leadership from Save the Children, the Johns Hopkins University (JHU) Center for Humanitarian Health (CHH), the JHU Center for Communication Programs (CCP), UK-Med, MERCY Malaysia, and EcoHealth Alliance (EHA). READY leverages the expertise and best practices across these institutions with expertise in academics, research, program implementation, and communications to strengthen capacity for response to major infectious disease outbreaks or pandemics.

READY has conducted landscape analyses of existing and planned global and regional networks and initiatives for epidemics/pandemics in broad global health sectors with gender, one-health, ethics, and social behavioral change as cross-cutting themes. Under Objective 3, READY intends to improve technical capacities of NGOs to respond to large-scale infectious disease outbreaks. Among many activities designed to reach this goal, CHH led the review of technical guidelines across sectors to identify gaps in available technical guidance and to provide direction on how READY should contribute to bridging some of these gaps.

The assessment began with the formation of the Objective 3 - Technical Working Group (TWG) composed of technical advisors (TA) across the READY consortium representing the following sectors: 1) Child protection; 2) Nutrition; 3) Reproductive, maternal, & neonatal health (RMNH); 4) Water, sanitation, & hygiene (WASH); 5) Mental health & psychosocial support (MHPSS); and 6) Agriculture & food security (A&FS). It also included advisors for cross-cutting thematic areas: 1) Gender; 2) One-health; 3) Ethics; 4) Social behavior and change (SBC). Consultations were made to capture special considerations for pandemic influenza.

Under the guidance of READY technical advisors (TA), key technical guidelines were curated across sectors and cross-cutting themes. Through a consultative process, we collectively explored answers for these following questions:

1. In your sector, what are the key technical guidelines relevant for outbreak response?
2. With respect to infectious disease outbreaks, what are the major gaps in technical guidance (guidelines and tools) in your sector?
3. How can READY address these gaps?

¹ WHO. Managing epidemics: Key facts about major deadly diseases [Internet]. 2018 [cited 2020 June 3]. Available from: <https://www.who.int/emergencies/diseases/managing-epidemics-interactive.pdf>

- What technical platforms and working groups should READY engage with?
- What specific technical guidelines should READY develop or contribute to?

Each of these questions were explored with the understanding that READY is focusing on three modes of transmission: 1) infectious diseases which are transmitted through respiratory route; 2) feco-oral route; 3) and through close contact with bodily fluid. We summarized the inputs from the consultation into a working document and solicited inputs and comments from respective TAs. This report summarizes the common thematic gaps in technical guidance for each of the sectors as well provides sector-specific recommendations to address these gaps.

This was an adequacy analysis in which the primary goal of the assessment is to identify areas where there is a need for additional technical guidance. The report does not address the quality or comprehensiveness of technical guidelines. The scope and applicability of recommended actions are tailored to fit READY's mandate to improve the technical capacity of NGOs to respond to large-scale outbreaks.

Key findings:

A total of 156 technical documents were reviewed between August 2019 and January 2020, and 112 technical guidance materials were found to be relevant to infectious disease response. Out of 112 guidelines, 24 of them were guidance specific to disease outbreaks transmitted through close contact with bodily fluid, 11 of them were specific to outbreaks spreading via feco-oral route, and 9 of them were specific to pathogens spread through respiratory route. Ebola, cholera, and influenza predominated the respective transmission route. The detailed breakdown by sector-specific guidelines is detailed below. Other salient findings are:

1. There is heterogeneity in available technical guidelines among different sectors. For example, the technical guidelines for Water, Sanitation, and Hygiene (WASH) are more numerous and well-defined in comparison to other sectors such as child protection, agriculture & food security, and animal health.
2. Although there are general sectoral guidance materials available, the technical guidance that address the nuances of infectious disease outbreaks and its specific needs is generally sparse in the sectors we reviewed. This gap is magnified when different modes of transmission and different pathogens are considered.
3. Most of the guidelines are focused on cholera and Ebola outbreaks; the availability of guidance on respiratory pathogens is fairly limited.
4. There is a limited amount of technical guidelines addressing the needs of special populations such as children under five, elderly, and pregnant and lactating women in the context of large-scale outbreaks.

Key recommendations:

1. Creation of new technical guidelines is an ambitious goal given READY's limited time frame and resources. Instead, READY should position itself to contribute to ongoing work to fill the technical gaps, and not pursue the task of generating new guidelines.

2. To solicit feedback from the broader global humanitarian community (agencies within SAG membership and other relevant technical working groups) on the gaps identified and the proposed plan of action and consider revising the work plan to addressing the specific needs of NGOs.
3. READY should consider contributing to the development of operational how-to documents in technical areas, which was identified as a major gap across various sectors.
4. The intersectoral approach to outbreak preparedness involving cross-cutting themes such as one-health, ethics, gender, and social behavior change is a key strength of READY. The project should utilize its unique position to communicate the gaps in these areas at global health forums and advocate for action.
5. The repository of guidelines should be linked to the integrated response framework and should be disseminated through READY knowledge management hub platform to promote their utilization.

ACRONYMS

A & FS - Agriculture & Food Security
CDC - Centers for Disease Control and Prevention
CCP - Johns Hopkins Center for Communication Programs
CHH - Johns Hopkins Center for Humanitarian Health
CHS - Core Humanitarian Standard Alliance
ECDC - European Centre for Disease Prevention and Control
EHA - Eco-Health Alliance
ELRHA - Enhancing Learning and Research for Humanitarian Assistance
ETU - Ebola treatment unit
EVD - Ebola Virus Disease
FAO - Food and Agriculture Organization of the United Nations
GNC - Global Nutrition Cluster
GTAM - Global Technical Mechanism for Nutrition
IASC - Inter-Agency Standing Committee
IFE - Infant Feeding in Emergencies Core Group
IFPRI - International Food Policy Research Institute
IPC - Infection Prevention and Control
IYCF - Infant and Young Children Feeding
IFRC - International Federation of Red Cross and Red Crescent
JEE - Joint External Evaluation
JHU - Johns Hopkins University
FAO - Food and Agricultural Organization of United nations
MERS - Middle Eastern Respiratory Syndrome
MHPSS - Mental health & psychosocial support
MSF - Médecins Sans Frontières
MSH - Management Sciences for Health
NGO - Non-governmental organization
OFDA - Office of U.S. Foreign Disaster Assistance
OIE - World Animal Health Organization
PPE - Personal protective equipment
PFA - Psychological First Aid
RCCE - risk communication and community engagement
RMNH - Reproductive, Maternal, & Neonatal Health
SAM - Severe Acute Malnutrition
SBC - Social behavior change
SCUS - Save the Children United States
SCUK - Save the Children United Kingdom
TA - READY technical advisors
UNFPA - United Nations Population Fund
UNHCR - United Nations High Commissioner for Refugees
UNICEF - United Nations Children's Fund
USAID - United States Agency for International Development
WASH - Water, Sanitation, and Hygiene
WHO - World Health Organization WHO
WFP - World Food Program of the United Nations

INTRODUCTION

ABOUT READY

The United States Agency for International Development (USAID) Office of U.S. Foreign Disaster Assistance (OFDA) awarded a three-year, \$8 million award to Save the Children United States to lead a global consortium to strengthen capacity for response to major infectious disease outbreaks or pandemics. The consortium, known as READY, brings together leadership from Save the Children United States (SCUS), Save the Children United Kingdom (SCUK), the Johns Hopkins University (JHU) Center for Humanitarian Health (CHH), the JHU Center for Communication Programs (CCP), UK-Med, MERCY Malaysia, and EcoHealth Alliance to fill critical gaps in outbreak response capacity and capability by leveraging expertise and best practices across these operational, academic, clinical, and communications organizations.

By augmenting the non-governmental organization (NGO) capacity in coordination with other global outbreak initiatives, READY will strive to improve the humanitarian community's response to infectious disease outbreaks with the potential to become international humanitarian emergencies, and even prevent many from ever becoming global. Operational consortium members will be supported to build and retain standing capacity to more quickly and effectively respond to large-scale disease outbreaks. The program will also design and roll-out a multi-sectoral response approach to address the holistic needs of outbreak-affected communities.

PURPOSE

The Intermediate Result 3.1 of the READY Consortium workplan calls for “Establishing a cross-sectoral, integrated approach to infectious disease outbreaks that have the potential to become a humanitarian emergency.” Among many activities designed to reach this goal, CHH, along with the support of SCUS, SCUK, EHA, and CCP, was tasked with conducting a review of available technical guidelines across sectors identified under READY. The main intention behind this assessment is to identify gaps in available technical guidelines and to provide guidance on how READY should contribute to bridging some of these gaps. However, as an intermediate outcome, the review will assemble key technical guidelines for each of the READY sectors and cross-cutting themes leading up to creation of a repository of relevant technical guidelines which broader humanitarian community can utilize in their work. Through closely linked activity, the assessment will also identify points of leverage to create linkages with the integrated response framework.

METHODS

The assessment began with the formation of the Objective 3 - Technical Working Group composed of READY's technical advisors (TA) representing following sectors: 1) Child protection; 2) Nutrition; 3) Reproductive, maternal, & neonatal health (RMNH); 4) Water, sanitation, & hygiene (WASH); 5) Mental health & psychosocial support (MHPSS); and 6) Agriculture & food security (A&FS). It also included advisors for cross-cutting thematic areas: 1) Gender; 2) One-health; 3) Ethics; 4) Social behavior and change (SBC). Consultations were made to capture special considerations for pandemic influenza.

Under the guidance of the READY TAs (hereinafter referred to as TA), CHH curated key technical guidelines and tools utilized by agencies during infectious disease outbreak response. We then created a

repository using Microsoft Excel where these guidelines were populated and categorized by organization and technical sectors. This repository served as a backdrop to our discussion with the TAs where we collectively explored the answers to three questions:

1. In your sector, what are the key technical guidelines relevant for outbreak response?
2. With respect to infectious disease outbreaks, what are the major gaps in technical guidance (guidelines and tools) in your sector?
3. How can READY address these gaps?
 - What technical platforms and working groups should READY engage with?
 - What specific technical guidelines should READY develop or contribute to?

Each of these questions were explored with the understanding that READY is focusing on three modes of transmission: 1) infectious diseases which are transmitted through respiratory route; 2) feco-oral route; 3) and through close contact with bodily fluid. Attention was paid to exploring technical guidelines addressing the needs of special populations such as children, elderly, pregnant women, and individuals living with comorbidities. We summarized the inputs from the consultation into a working document and solicited inputs and comments from respective TAs. This report summarizes the common thematic gaps in technical guidance for each of the sectors as well provides sector-specific recommendations to address these gaps.

SCOPE OF THE REPORT

This report relies on the fact that TAs are continuously engaged with relevant technical platforms and working groups, and have a comprehensive knowledge of guidelines available in their sector. Therefore, they are best positioned to provide information on their availability, identify the key gaps in respective sectors, and how READY should address these gaps. This report assumes that the inputs and guidance provided by the TAs are representative of the opinions and inferences held by broader community of technical experts.

This report is an adequacy assessment. We restricted our focus on the availability of technical guidelines and did not assess the comprehensiveness, accuracy of information, strength of evidence, and other qualitative metrics. Further, it focuses on identifying the need for additional guidance, and not on how to improve the quality of technical evidence.

The scope and applicability of these recommendations are tailored to fit READY's mandate to improve NGO's technical capacity to respond to large-scale outbreaks. Hence, the sectors considered for the review align with the technical sectors under READY; it does not mirror the traditional outbreak response pillars such as surveillance, contact tracing, case management, safe and dignified burial, etc.

RESULTS: GAPS ANALYSIS AND RECOMMENDED ACTIVITIES

CHILD PROTECTION

The key child protection guidelines relevant to large-scale infectious disease outbreaks is presented below in Table A.

TABLE A: CHILD PROTECTION GUIDELINES			
PARENT ORG.	NAME OF THE DOCUMENT	TRANSMISSION ROUTE	COMMENTS
Alliance for Child Protection in Humanitarian Action	Minimum Standards for Child Protection in Humanitarian Action (2019)	General guidance document	Considered the gold standard overarching document.
Interagency Standing Committee (IASC)	Guidance Note and the Study Guide on Protecting Children During Infectious Disease Outbreaks (2020)	General guidance document	Key document which is specific to child protection in the context of large-scale outbreaks.
Interagency Working Group on Unaccompanied and Separated Children	Alternative Care in Emergencies Toolkit (2013)	General guidance document	Assembles key tools and guidance materials to facilitate planning and implementing interim care and services for children separated from their families either because they are isolated in the treatment centers or due to death of their parents.
Save The Children, Australia	Child Protection Implementation Guidelines - International Programs (2011)	General guidance document	
Interagency Standing Committee (IASC)	Guidelines for GBV Interventions in Humanitarian Settings: Focusing on Prevention of and Response to Sexual Violence in Emergencies (2005)	General guidance document	
Alliance for Child Protection in Humanitarian Action	Child Neglect in Humanitarian Settings: Literature review and recommendations for strengthening prevention and response (2018)	General guidance document	
Alliance for Child Protection in Humanitarian Action	Minimum Standards for Child Protection in Humanitarian Action (2019)	General guidance document	
Inter-agency Initiative of the Child Protection	Child Protection in Emergencies Competency Framework (2010)	General guidance document	
United Nations Children's Fund (UNICEF)	Child Protection Resource Pack: How to Plan, Monitor and Evaluate Child Protection Programmes (2015)	General guidance document	
Save the Children	Working to end violence against children – Save The Children thematic plan (2016)	General guidance document	

Key Gaps:

The review found that there are several unanswered questions regarding child protection and a general lack of availability of technical guidance for implementing protection activities in the context of infectious disease outbreaks. A few notable gaps are:

- a. There is a general lack of guidance on how to integrate child protection into broader health response strategies.
- b. There is a lack of guidance on how to adapt overarching child protection guidelines to fit the specific disease outbreaks and what the specific considerations on protection for different modes of transmission are.
- c. There is a need for standardized guidance on observational interim care and alternative care of unaccompanied and separated children.
- d. There is a need for developing a basic primer detailing the considerations for child protection during outbreaks spread through different transmission route and how to provide psychosocial support to children in highly infectious environments.

Recommended Actions:

1. Instead of developing new guidelines, READY can prioritize developing a training module based on Interagency guidance on child protection in infectious disease outbreaks and potentially disseminate it using COMPASS platform.
2. Child protection TAs to contribute to the ongoing work at Interagency Working Group on development of guidelines and tools for observational interim care of affected children and alternative care of children separated from the families.

NUTRITION

Some of the key technical guidelines for nutrition in the context of infectious disease outbreaks are presented in Table B:

TABLE B: NUTRITION GUIDELINES		
PARENT ORGANIZATION	NAME OF THE DOCUMENT	TRANSMISSION ROUTE
World Health Organization (WHO) / UNICEF / World Food Program (WFP).	Interim guideline: Nutritional care of children and adults with Ebola virus disease in treatment centres (2014)	Bodily Fluid - Ebola Virus Disease (EVD)
WHO	Interim Guidance: Clinical care for survivors of Ebola virus disease (2016)	Bodily Fluid - Ebola Virus Disease (EVD)
Save the Children / UNICEF	Infant & Young Children Feeding in the Ebola context - Decision making tree for health workers (2018) – Attached below	Bodily Fluid - Ebola Virus Disease (EVD)
WHO / UNICEF / Centers for Disease Control and Prevention (CDC) / Ministry of Health and Social Welfare, Liberia.	Infant feeding in the context of Ebola: Updated guidance (2014)	Bodily Fluid - Ebola Virus Disease (EVD)
WHO	Guidelines for the management of pregnant and breastfeeding women in the context of Ebola virus disease (2020)	Bodily Fluid - Ebola Virus Disease (EVD)
WHO	Clinical care for survivors of EVD - Interim guidance (2016)	Bodily Fluid - Ebola Virus Disease (EVD)
WHO	Clinical Management of patients with VHF - pocket guide for front-line workers (2016)	Bodily Fluid - Ebola Virus Disease (EVD)
CDC	Nutritional care for patients with Ebola Virus Disease in Ebola treatment units – past and current experiences (2019)	Bodily Fluid - Ebola Virus Disease (EVD)
WHO	Reducing excess mortality from common illnesses during an influenza pandemic (2008) (Chapters: 1.2.1 Fluids and nutrition, 2.5 Treatment of Diarrhea, 3.2 Acute malnutrition programs)	Respiratory Route - Pandemic Influenza
World Health Organization (WHO) / United Nations Children's Fund (UNICEF) / Ministry of Health-Zimbabwe	Infant and young children feeding (IYCF) during diarrhea and cholera: Guide for health workers at cholera treatment centres (2009)	Waterborne - Cholera
WHO	Breastfeeding mothers in cholera treatment centres (2007)	Waterborne - Cholera
Save the Children	Cholera and Severe Acute Malnutrition (SAM) – Protocols for Emergency Health Unit – Attached below	Waterborne - Cholera
Save the Children	Cholera and Severe Acute Malnutrition (SAM) – Protocols for Inpatient Care – Attached below	Waterborne - Cholera

Key Gaps:

In general, there is a paucity of scientific evidence which can facilitate timely development of nutritional guidelines specific to infectious disease outbreaks. Often, organizations adapt interventions during an outbreak response without sound scientific evidence backing their approaches.

There are a plethora of research gaps and unanswered questions, for example: What the risks of vertical transmission of Ebola virus through breast feeding? What are the nutritional needs of non-breastfeeding infants? This lack of evidence from the operational point of view underpins the importance of documenting the experiences of practitioners providing nutritional care in emerging infectious disease outbreaks.

Even when guidance exists, the nutrition component of the guidance is not delineated, and nutritionists are not necessarily trained on outbreak response nor health workers on the nutritional issues. There is a need for scenario-based thinking around the needs of pregnant and lactating women and children below the age of two years with all the sectors that are involved in the response.

There are challenges in terms of coordination and collaborative work. Infant young child feeding (IYCF) experts are not always included from the beginning of the outbreak response planning, jeopardizing a faster development of relevant policies, messaging and programming. Public health practitioners focused on infectious diseases and maternal and child health have not always been working closely together causing setbacks.

Cholera and Nutrition:

For cholera, tools are often developed by national clusters and partners, but they have not been consolidated into a central repository of guidance and tools. This raises the issue of standardization of guidance materials and competencies. Critical evidence gaps exist around treatment of cholera in severe acute malnutrition particularly the issues around rehydration protocols.

Ebola virus disease (EVD) and Nutrition:

There are significant technical gaps in the interim guidelines and standard operational procedures for nutritional care in Ebola treatment units (ETU). There is a lack of rigorous scientific research on the specific role of macro and micronutrients in patient's recovery and documenting patients' as well as practitioners' experiences inside ETU. Some research questions to explore with respect to ETUs are: the utility of food and nutritional packages, monitoring nutrition intake by patients, the impact of nutritional support on their nutritional status and its evolution over the course of their stay, perceptions and experiences of patients to nutritional interventions, mapping the relationship between nutritional support and clinical outcomes such as mortality and morbidity, the impact of the disease on patient's eating habits and preferences, and how to deal with breastfeeding inside ETUs. For improved response to future disease outbreaks, research on vertical transmission of EVD should be prioritized, infant and young child feeding experts should be integrated into outbreak response planning, and a digital repository of potential and appropriately tailored guidance materials should be created.

Recommended Actions:

READY should collaborate with the following groups and contribute to some of the activities listed below:

1. Collaborate with the Global Nutrition Cluster (GNC) as it is the primary coordination mechanism for nutrition in emergency. READY should engage in GNC meetings and contribute to discussions around nutrition in outbreak response (for example, infant nutrition protocols for EVD outbreak in DRC). READY should leverage Save the Children's membership on the GNC Strategic Advisory Group to contribute to ongoing work relevant to outbreaks.
2. READY should coordinate with Infant Feeding in Emergencies (IFE) Core Group and contribute to discussions on new/revision of technical guidance for infant feeding in outbreak-related emergencies. READY nutrition TA should consider contributing to ongoing discussions around revising Ebola infant feeding guidance.
3. READY should consider engaging with Global Technical Mechanism for Nutrition (GTAM) which has a vision of becoming a forum for technical conversations such as guidance development, technical advising, knowledge management, etc. in epidemics.

REPRODUCTIVE, MATERNAL, AND NEONATAL AND CHILD HEALTH (RMNCH)

The key RMNCH technical guidelines relevant to outbreak response are presented below in Table C:

TABLE C: RMNCH GUIDELINES		
PARENT ORGANIZATION	NAME OF THE DOCUMENT	TRANSMISSION ROUTE
WHO / UNICEF / Save the Children	A guide to the provision of safe delivery and immediate newborn care in the context of an Ebola outbreak (2015)	Bodily Fluid - Ebola Virus Disease (EVD)
Médecins Sans Frontières (MSF)	Management of a cholera epidemic (2018) (Chapter 5.7 Cholera and pregnancy)	Waterborne - Cholera
Interagency task team to address HIV in humanitarian emergencies	Ebola crisis: ensuring continuity of HIV services (2014)	Bodily Fluid - Ebola Virus Disease (EVD)
United Nations Population Fund (UNFPA)	Ebola outbreak: Impact on reproductive health and proposed mitigation strategy (2017)	Bodily Fluid - Ebola Virus Disease (EVD)
WHO	Pregnancy and pandemic influenza A (H1N1) 2009: information for programme managers and clinicians (2010)	Respiratory route - Pandemic Influenza
Perinatal Services British Columbia	Management Guideline for Pregnant Women and Neonates Born to Women with Suspected or Confirmed Pandemic H1N1 Influenza (2011)	Respiratory route - Pandemic Influenza
WHO	Reducing excess mortality from common illnesses during an influenza pandemic: WHO guidelines for emergency health interventions in community settings	Respiratory route - Pandemic Influenza

Key Gaps:

There are some important gaps in technical guidance in RMNCH with respect to large-scale epidemics.

- a. In the context of Ebola, there is lack of clear guidelines on the management of pregnant women who test negative for the disease or how to provide services while awaiting lab diagnosis. There is also no clear guidance on home delivery and peri-natal care with ongoing transmission.
- b. There is a lack of guidelines on how to collect data on pregnant women and newborn in the context of epidemics. There is a very limited data on these topics which in turn affects the quality of guidelines in this sector.

Recommendations:

1. READY, through its TAs, should contribute to the development of guidance on the continuity of RMNCH services during disease outbreaks following the three transmission routes.
2. READY should contribute to ongoing work on developing guidance on how to provide sexual and reproductive health services in the context of an outbreak when the lab diagnosis is unknown.
3. READY partners can consider working with CDC and other organizations to aid them in data collection in pregnancy and newborn in outbreak settings which forms the basis of guideline development.

WATER, SANITATION AND HYGIENE (WASH)

Table D provides an overview of key WASH technical guidelines and other relevant documents. The specific guidance documents for WASH in epidemics are still in the process of development as evidence evolves around emerging infectious outbreaks. As a result, much of the work around technical guidelines is still ongoing and are expected to be made available. Because of a long history of water-borne disease outbreaks such as cholera, the technical guidance in this sector seems to be more evolved and consolidated as compared WASH guidelines for disease transmission via bodily fluids. The WASH technical guidance for airborne transmission is also very scant.

TABLE D: WASH GUIDELINES		
PARENT ORGANIZATION	NAME OF THE DOCUMENT	TRANSMISSION ROUTE
UNICEF	WASH Package for Ebola Care and Treatment Centres/Units. Guidance Note (2014)	Bodily Fluid - Ebola Virus Disease (EVD)
WHO	Hand hygiene in health care in the context of Filovirus disease outbreak response. Rapid advice guideline (2014)	Bodily Fluid - Ebola Virus Disease (EVD)
WHO	Ebola and Marburg virus disease epidemics: preparedness, alert, control, and evaluation (2014)	Bodily Fluid - Ebola & Marburg Virus Disease
WHO	Ebola Response: Key considerations for implementation of Community Care Centres (2014)	Bodily Fluid - Ebola Virus Disease (EVD)

WHO	Ebola virus disease: Key questions and answers concerning health care waste (2014)	Bodily Fluid - Ebola Virus Disease (EVD)
OXFAM	Guide to community engagement in WASH: A practitioners' guide, based on lessons from Ebola (2016)	Bodily Fluid - Ebola Virus Disease (EVD)
WHO / UNICEF	Ebola virus disease: Key questions and answers concerning water, sanitation and hygiene (2014)	Bodily Fluid - Ebola Virus Disease (EVD)
WHO	How to conduct safe and dignified burial of a patient who has died from suspected or confirmed Ebola or Marburg virus disease (2017)	Bodily Fluid - Ebola Virus Disease (EVD)
UNICEF	Guidelines for Water, Sanitation and Hygiene in Cholera Treatment Centres.	Waterborne - Cholera
Global Task Force on Cholera Control	Technical Note: Water, Sanitation and Hygiene and Infection Prevention and Control in Cholera Treatment Structures (2019)	Waterborne - Cholera
OXFAM	Cholera outbreak guidelines: preparedness, prevention, and control (2012)	Waterborne - Cholera
UNICEF	Cholera toolkit (2013)	Waterborne - Cholera
Solidarites International	Fighting Cholera: Operational Handbook – response to outbreaks and risk prevention in endemic areas (2018)	Waterborne - Cholera
MSF	Management of cholera epidemic (2017)	Waterborne - Cholera
WHO	Pandemic influenza preparedness and mitigation in refugee and displaced populations. WHO guidelines for humanitarian agencies (2008)	Respiratory route - Pandemic Influenza
MSF	Public health engineering in precarious situations (2010)	General guidance
WHO	Hand Hygiene in Outpatient and Home-based Care and Long-term Care Facilities (2012)	General guidance
WHO/IFRC	Management of dead bodies after disasters: A field manual for first responders (2016)	General guidance

Key Gaps:

The gaps in WASH technical guidelines can be linked to the lack of a dedicated platform/technical working groups for WASH in epidemics. The four major gaps are:

- Lack of clarity on the jurisdiction of infection prevention and control (IPC) activities: It is often considered to be part of health sector implemented alongside disease control measures but the implementation of many of IPC measures involve WASH activities. There is a need for dialogue at a global level to clarify the roles and responsibilities as well to identify commonalities between sectors.
- National level WASH coordination mechanisms in epidemics need to be strengthened. A stronger coordination amongst actors and clear guidance on roles and responsibilities is urgently needed.
- There are siloed efforts and lack of collaboration between WASH and health sector. There is a need for both clusters to work on joint technical guidelines to effectively respond to large-scale outbreaks.
- WASH in the context of airborne disease outbreaks is a major gap and needs to be addressed.

Recommended Actions:

1. READY should assist in the development of technical guideline that defines the linkages between WASH activities and infectious disease control. This can be achieved by bringing together the information from a diverse set of literature and case studies from the field into a single technical document.
2. READY should consider creating a repository of select technical guidance materials ensuring easy accessibility and usefulness.
3. Through the development of an integrated response framework and sector-specific impact mapping, READY should attempt to clarify the most important WASH interventions for each transmission route.
4. READY should engage with health-focused organizations such as MSF, and actively engage with health experts to foster collaborative work between health and WASH experts.

MENTAL HEALTH & PSYCHOSOCIAL SUPPORT (MHPSS)

Some of the guidelines and manuals which are specific to outbreaks are presented below in Table E.

In general, there is a scarcity of technical guidance specific to MHPSS and outbreak settings. Apart from few documents around EVD and Zika, there are no technical documents specific to outbreaks/pandemics in general.

Key Gaps:

- a. Although there are many research papers written about the importance of MHPSS in outbreaks, there has been no systematic effort to translate them into formalized and endorsed guidelines.
- b. There is a need for evidence-based guidance in MHPSS and outbreaks. More research needs to be undertaken to generate evidence on what works in outbreak settings, and to formulate a set of best practices.
- c. There is a need to address the nuances and challenges that are specific to different modes of disease transmission and MHPSS.
- d. MHPSS in children is a massive and long-standing issue in general.

Recommended Actions:

READY should consider engaging with IASC Task Team on MHPSS in Emergency Settings which has a working group on MHPSS for Disaster Risk Reduction. This could be a potential group READY can connect with and play a role in addressing the MHPSS needs in outbreak setting. The IASC - MHPSS Reference Group annual meeting is also a good opportunity for READY to present its approach and identify potential areas to contribute.

TABLE E: MHPSS GUIDELINES			
PARENT ORG.	NAME OF THE DOCUMENT	TRANSMISSION ROUTE	COMMENTS
IASC	Mental Health and Psychosocial Support in Ebola Virus Disease Outbreaks: A Guide for Public Health Program Planners (2015)	Bodily Fluid – Ebola Virus Disease (EVD)	Core technical document for MHPSS in outbreak setting.
WHO / UNICEF / World Vision	Psychological First Aid: Psychological First Aid (PFA) during Ebola virus disease outbreaks (2014) and Facilitation Manual Psychological First Aid During Ebola Disease Outbreaks (2014)	Bodily Fluid – Ebola Virus Disease (EVD)	Although PFA is a framework and not a technical guideline, these documents were released during West Africa EVD outbreak and currently, PFA is recommended as part of all emergency response including outbreaks.
IFRC	Psychosocial support during an outbreak of Ebola virus disease (2018)	Bodily Fluid – Ebola Virus Disease (EVD)	
The Alliance for Child Protection in Humanitarian Action	Guidance note: Protection of children during infectious disease outbreaks	General guidance document	
UNICEF	Care and Protection of Children in the West African Ebola Virus Disease Epidemic (2016)	Bodily Fluid – Ebola Virus Disease (EVD)	
IASC	Guidelines on Mental Health and Psychosocial Support in Emergency Settings (2007)	General guidance document	
SPHERE project	SPHERE Handbook (2018)	General guidance document	Includes a very small (but new) chapter on MHPSS with a focus on integrated services
IASC	Recommendations for conducting ethical mental health and psychosocial research in emergency settings (2014)	General guidance document	
WHO / United Nations High Commissioner for Refugees (UNHCR)	Assessing mental health and psychosocial needs and resources: Toolkit for humanitarian settings” (2012)	General guidance document	
UNICEF	Operational Guidelines: Community-based mental health and psychosocial support in humanitarian settings: Three-tiered support for children and families – Field test version” (2018)	General guidance document	

AGRICULTURE & FOOD SECURITY

The only overarching document that addresses agriculture and food security issues in humanitarian emergencies is Food and Nutritional Needs in Emergencies by WHO/UNHCR/UNICEF/WFP. Save the Children has key guidance on market analysis, food security, and livelihood tools, but none of them are specific to outbreaks. The complete list of guidelines and tools are listed below in Table G.

TABLE G: AGRICULTURE & FOOD SECURITY GUIDELINES		
PARENT ORGANIZATION	NAME OF THE DOCUMENT	TRANSMISSION ROUTE
WHO / UNHCR / UNICEF / WFP	Food and nutritional needs in emergencies(2004).	General guidance document. Although quite old, it is the only guidance in this sector.
International Food Policy Research Institute(IFPRI)	An Assessment of Ebola-related Food Security Threat in Guinea (2015)	Bodily Fluid – Ebola Virus Disease (EVD)
WFP	Market Analysis Tool – How to Conduct a Trader Survey? (2017)	General guidance document
Save the Children	Market Analysis - Decision tree for food for cash – Attached below	General guidance document
Save the Children	Market support and livelihood strengthening guidelines - Attached below	General guidance document
Save the Children	Food Security & Livelihood Tools - Attached below	General guidance document
Save the Children	TANGO 1 - Pandemic Influenza Recovery Programs in Latin America - Attached below	Respiratory route – Pandemic Influenza
Save the Children	TANGO 2 - Pandemic Influenza Impacts and Activities for Mitigation and Recovery - Attached below	Respiratory route – Pandemic Influenza
Save the Children	TANGO 3 - Pandemic Influenza Recovery Programming Checklist - Attached below	Respiratory route – Pandemic Influenza

 SCI_MarketAnalysis_FoodforCash.pdf	 SCI_MarketSupport.pdf	 SCI_FSLStandardTools.XLSx	 TANGO 1 - Panflu_Recov_Program	 TANGO 2 - Impact, Mitigation, & Recovery	 TANGO 3 - Panflu_recovery_Checklist
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Key Gaps:

- There is a need for connecting guidelines to address the gaps between local markets and regional market capacities.
- Guidance on measures that need to be taken while distributing food and other livelihood supplies in the context of a highly infectious disease outbreaks need to be mapped in detail accounting for different modes of transmission.
- There is also a need to translate the overarching guidance materials into easy-to-use tools/job aids for different modes of transmission.

Recommended Actions:

1. READY TAs should work with technical working groups within the Food Security Cluster and contribute to ongoing work to revise/modify existing guidance materials for different outbreak types and seek endorsement from the Food Security Cluster.
2. READY should contribute to developing improved guidelines for mapping, accessing, and augmenting local food production and procurement.
3. READY should explore ideas on how to synthesize the overarching guidelines into easy-to-use tools for outbreak response.

GENDER

In general, there is a scarcity of technical guidance to address gender-related issues in outbreak settings. Some of the gender guidelines and manuals which are relevant to outbreaks and other emergency settings are presented in Table F below:

TABLE F: GENDER GUIDELINES			
PARENT ORG.	NAME OF THE DOCUMENT	TRANSMISSION ROUTE	COMMENTS
IASC	Gender handbook for humanitarian action (2018).	General guidance document	This the key document for emergency setting in general.
WHO	Addressing sex and gender in epidemic-prone infectious diseases (2007)	General guidance document	This document is old but specific to gender in epidemics.
USAID	Gender, One Health and Infectious Disease Training Guide: Facilitator Guide(2015)	General guidance document	NA
Save the Children	Engendering Transformational Change: Save the Children Gender Equality Program Guidance & Toolkit (2014)	General guidance document	NA
Save the Children	Humanitarian Gender Equality Marker (2017)	General guidance document	NA
Save the Children	Save the Children Gender Equality Policy: Transforming Inequalities, Transforming Lives (2017)	General guidance document	NA
IASC	Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action, 2015	General guidance document	NA
UNFPA	Minimum Standards for Prevention and Response for Gender-Based Violence in Emergencies(2015)	General guidance document	NA

Key Gaps:

In general, the global health community lacks gender guidelines specific to humanitarian settings and epidemics; there do not appear to be specific guidelines for infectious disease outbreaks during the past 10 years.

- a. Guidelines and modules on how to conduct gender analysis and utilize the outcomes of the analysis in programming in epidemics are scarce.
- b. Designing pandemic outbreak strategies and programming with gender integration is a major gap.
- c. There is a lack of technical guidelines exploring broader gender issues and epidemics such as threats to girls' education, increased gender-based violence, early childhood and forced marriages, human trafficking, sexual exploitation, and malnutrition and inequitable feeding practices.

Recommendations:

1. READY should integrate gender into sectoral guidance in the upcoming integrated response framework.
2. READY should consider supporting the development of practical guidance material on how to conduct gender analysis in an outbreak setting and how to use it in program design/implementation.
3. READY should consider developing an online training module for humanitarians on gender analysis in pandemic outbreak settings and how to apply the results for improved impact. This gender analysis is the cornerstone for addressing gender inequities in outbreak response.

PANDEMIC INFLUENZA (PRE-COVID-19)

Although there are a number of framework and strategic documents, there is a limited number of technical guidance documents on pandemic scale influenza outbreak. [US Centers for Disease Control \(CDC\) Community Mitigation Guidelines to Prevent Pandemic Influenza \(2017\)](#) is the only document that provides guidance on community mitigation and non-pharmaceutical interventions (NPI) including social distancing measures. Save the Children has put together a pandemic preparedness checklist for Save the Children country and field offices. The complete list of relevant documents can be found below:

Save the Children internal documents:

1. [Seasonal Flu, Pandemic Flu, and You - What SC Staff Should Know and Be Prepared For \(2018\)](#)
2. [Pandemic Threats: Summary Travel Guidance for SC Staff \(2018\)](#)
3. [Home Stockpiling of Food & Essential Items \(2019\)](#)
4. [Staff Repatriation and Relocation \(2019\)](#)
5. [Pandemic Threats: News & Guidance Links \(2018\)](#)
6. [Pandemic Preparedness Summary Checklist for SC Country & Field Offices \(2018\)](#)
7. [Severe Pandemic Flu: Challenges for Preparedness & Response \(2011\)](#)
8. [Summary of the Threat, & SC Activities & Priorities \(2017\)](#)
9. [Pandemic Flu & Kids \(2019\)](#)

Key External Resources:

1. [CDC - Non-pharmaceutical Interventions guidance documents on community mitigation/NPIs/social distancing.](#)
2. [European Centers for Disease Prevention & Control \(ECDC\) - Guide to public health measures to reduce the impact of influenza pandemics in Europe – ‘The ECDC Menu’ \(2009\)](#)
3. [WHO - Community case management during an influenza outbreak: A training package for community health workers \(2011\)](#)
4. [CDC - The Flu: Caring for Someone Sick at Home \(2010\)](#)
5. [United States Department of Labor - Guidance on Preparing Workplaces for an Influenza Pandemic, US Dep. of Labor \(2009\)](#)
6. [Government of New Zealand - Business Continuity Planning Guide \(2009\)](#)

Key Gaps:

- a. Authoritative guidance should be developed that is geared towards low-income settings. Such guidance will need support for country-level adaptation, rapid roll-out, and field-testing. In a severe pandemic from a rapidly spreading novel respiratory virus, when all countries and responding organizations will themselves be affected, most low-resource countries will fail to receive adequate medical and non-medical supplies, and their health services will be severely stressed. However, these populations could, by employing well-planned, evidence-based measures, reduce disease transmission and care for those not severely ill.
- b. There is a general gap in detailed operational/'how-to' guidance to implement broader guidance at the country, district and community levels.
- c. There are also limited mechanisms to roll-out this guidance and train the front-line workers at the district and community levels within a span of days to weeks during an epidemic.

Recommendations:

1. Pandemic preparedness should be better integrated into more generic outbreak preparedness planning; READY can utilize OPP workshops to address this need.
2. READY TAs should work with WHO & partners to support the development of a concise, operational and feasible package of community mitigation measures that can be rapidly be implemented locally, but at scale, and develop plans for rapid roll-out of these measures.
3. READY could explore COMPASS platform to roll-out pandemic-related training, particularly on COVID-19.

ONE-HEALTH

Similar to the other cross-cutting thematic areas, there is a scarcity of technical guidelines addressing the role of one-health, including animal health and zoonotic disease surveillance, in large-scale disease outbreaks in human population. The key guidelines are listed below in Table H:

TABLE H: ONE-HEALTH / ANIMAL HEALTH GUIDELINES			
PARENT ORG.	NAME OF THE DOCUMENT	TRANSMISSION ROUTE	COMMENTS
World Animal Health Organization (OIE)	Tool for evaluation of performance of veterinary services (2019)	General guidance document	N/A
Convention on Biological Diversity	Guidance on integrating biodiversity considerations into one health approaches (2017)	General guidance document	N/A
World Bank	Operational framework for strengthening human, animal and environmental public health systems at their interface (2018)	General guidance document	This is a framework rather than a technical guideline. However, it is a strong evidence piece and takes broad one-health angle to the issue. To some degree it is a technical guideline for environmental health.
WHO	Joint External Evaluation tool (JEE): IHR (2005) Monitoring and Evaluation framework (2018)	General guidance document	N/A
Food and Agriculture Organization of the United Nations (FAO) / WHO / OIE	Taking a Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries (2019)	General guidance document	N/A
WHO	NAPHS for all: A 3 step strategic framework for national action plan for health security (2018)	General guidance document	N/A

Key Gaps:

- Many of these guidance materials exist only at the national level, and there are limited ongoing efforts to translate them to be used at community level. They are often developed on an ad-hoc basis based when the need arises.
- Adaptation of these overarching guidance is contextually challenging given the unique diversity of fauna and flora. There are significant gaps in guidance for wildlife and biodiversity. Even in cases where there are guidelines available, implementing them is always a challenge.

Recommended Actions:

- Rather than focusing on the generation of new technical guidelines, READY should focus its efforts to emphasize existing reports and guidelines, and advocate that such guidance is needed.

2. The World Bank One Health Operational Framework is still new; READY could assist with messaging and uptake through actions like highlighting it in the global coordination mapping exercise and including it in talking points at relevant meetings. At the country-level workshops and trainings, READY could host a presentation or small workshop on how to implement the guidance, perhaps geared toward the outbreak response elements.
3. READY can also be a voice for advocating for the advent of technical guidance on the wildlife side of health as it relates to human health. The OIE-performance of veterinary services pathway is much more focused on livestock and additional technical guidance for zoonotic wildlife diseases (from prevention through response) is still a large gap. While READY cannot be expected to generate such guidance, the reports that READY will produce are an excellent opportunity to emphasize this gap.

ETHICS

The literature offering guidance on the ethical considerations related to infectious disease outbreak response is relatively limited. However, there is significant literature on medical ethics in clinical settings and on ethics related to conducting research during an epidemic response.

Key ethics guidance that can be used in infectious disease outbreak response settings are:

1. British Medical Association: [Doctors working in conflicts and emergencies - an ethical toolkit \(updated regularly\)](#)
2. Johns Hopkins Berman Institute of Ethics/Welcome Trust: [Ethics Guidance for the Public Health Containment of Serious Infectious Disease Outbreaks in Low-Income Settings: Lessons from Ebola\(2019\)](#)

Key literature discussing ethics in emergency or outbreak response:

1. [Thompson A et al. \(2006\). Pandemic influenza preparedness: an ethical framework to guide. BMC Medical Ethics \(7:12\).](#)
2. [WHO \(2007\). Ethical considerations in developing a public health response to pandemic influenza](#)
3. [WHO \(2015\). Ethics in epidemics, emergencies and disasters: Research, surveillance and patient care – Training Manual](#)
4. [WHO \(2016\). Guidance for Managing Ethical Issues in Infectious Disease Outbreaks.](#)
5. [Schwartz L, Sinding C, Hunt M, et al. \(2010\). Ethics in conditions of disaster and deprivation: learning from health workers' narratives. AJOB Prim Res. 2010;1\(3\): 45-54](#)
6. [Schwartz, Lisa et al.,\(2012\) Western Clinical Ethics: How well do they travel to humanitarian contexts: Dilemmas, Challenges and Ethics of Humanitarian Action](#)
7. [Smith JM, Silva DS. \(2015\). Ethics for pandemics beyond influenza: Ebola, drug-resistant tuberculosis, and anticipating future ethical challenges in pandemic preparedness and response. Monash Bioethics Review Issue 33.](#)

General guidance on humanitarian ethics:

1. [Hunt et al., \(2011\). Establishing moral bearings: Ethics and expatriate health care professionals in humanitarian work. Disasters \(35: 3\).](#)
2. [Rubenstein J \(2015\). Between Samaritans and States: The political ethics of humanitarian INGOs. Oxford University Press.](#)
3. [Smith, James \(2018\). Difficult Decision-Making, Compromise, and Moral Distress in Medical Humanitarian Response in Ahmed Ayesha and Smith, James \(eds\) Humanitarian Action and Ethics. Zed Books.](#)

Frameworks for ethical deliberation and related literature:

1. [Clarival, C and Biller-Adorno, N. \(2014\). Challenging Operations: An Ethical Framework to Assist Humanitarian Aid Workers in their Decision-making Processes. PLOS Currents Disasters. 23 June 2014.](#)
2. [Fraser, V et al. \(2014\). Humanitarian Health Ethics Analysis Tool. HHEAT Handbook July 2014.](#)
3. [Johns Hopkins Bloomberg School of Public Health \(JHU\), International Rescue Committee and Syrian American Medical Society \(2019\). Ethical Challenges in Humanitarian Health in Situations of Extreme Violence.](#)

General Findings:

- Both general and disease-specific ethics guidance exists, they tend to be concentrated on EVD and influenza. They are mostly based on published literature and are not vetted guidelines.
- Most of the existing guidance identifies and addresses ethical tensions/challenges at the macro level, oriented to governments or global health agencies and situated within the discipline of public health ethics or global health security.
- Guidance situated within the discipline of humanitarian health ethics is less available, and there is insufficient attention to the ethical dilemmas of the frontline aid worker (e.g., the micro level) and ‘translation’ of expert guidance into frontline-friendly support.
- The existing guidance tend to provide a mixture of ethical support (what is the right thing to do) with more general guidance on best practice (how do we do things the right way), while the recognition and addressing of ethical dilemmas receives far less attention. Frameworks for ethical deliberation exist but not adequately studied or tested.
- Unlike many technical areas, the technical ethics expertise for outbreak response is not primarily situated within general outbreak or disease-specific outbreak expertise, but within bioethics, then applied to a given challenge or situation.

Key Gaps:

1. The first primary gap in humanitarian organizations engaged in infectious disease outbreak response must be defined in terms of organizational unfamiliarity with ethics and ethical deliberation. Even within humanitarian health organizations, the existence of staff familiar with clinical or professional ethics proves insufficient to situations of large-scale epidemic response that require a solid understanding of public health ethics.
2. The second gap is in the establishment at the organizational level policies and practices that provide adequate support at all stages of deployment: pre-departure orientation, post-

deployment support to individual aid workers for the ethical challenges they face in the field, and in significant measure pre-empt or mitigate individuals from being placed in the distressing situation of feeling that they must take decisions which involve 'playing god'.

3. The third gap is in the understanding of best practice in the prevention of moral distress, or in ensuring support to those suffering from it.
4. Finally, studies of ethical dilemmas in humanitarian workers and moral distress have focused almost exclusively on the experience of expatriate health professionals, leaving a massive gap in the understanding of how this affects nationals or non-health sector personnel working in humanitarian response.

Recommended Actions:

1. READY should consider developing basic (user-friendly) guidance to frontline health staff, aimed at helping them to recognize and think about the ethical tensions/dilemmas that underpin difficult operational or clinical choices.
2. By engaging with its NGO networks, READY should foster basic organizational understanding of ethics in outbreak response, with the aim of supporting organizations in preparing or supporting outbreak response staff (e.g., training, guidance, key policy clarifications).
3. READY should deepen the case for ethical guidance in epidemic responses at global, regional, and country-level that reflect humanitarian priorities.

OVERALL FINDINGS:

1. There is heterogeneity in available technical guidelines among different sectors. For example, the technical guidelines for Water, Sanitation, and Hygiene (WASH) are far more numerous and well-defined in comparison to other sectors such as child protection, agriculture & food security, and animal health.
2. Availability of technical guidance that address the specific needs of infectious disease outbreak response is generally sparse in the sectors we reviewed. This gap is magnified when different modes of transmission and different pathogens are considered. Most of the guidelines are focused on cholera and Ebola outbreaks; the availability of guidance on respiratory pathogens is fairly limited.
3. There is a limited amount of technical guidelines addressing the needs of special populations such as children under five, elderly, and pregnant and lactating women.
4. Many of the guidance materials reviewed are broad overarching documents and do not address the operational need of 'how-to-do' in different contexts.
5. We noted a variable level of engagement between READY technical advisors and external working groups and partner agencies. Therefore, we found that some of the READY TAs are well positioned to collaborate and contribute to ongoing work compared to others.

RECOMMENDATIONS FOR READY

1. Creation of new technical guidelines is an ambitious goal given READY's limited time frame and resources. Instead, READY should position itself to contribute to ongoing work to fill the technical gaps, and not pursue the task of generating new guidance material.
2. To solicit feedback from the broader global health community (agencies within SAG membership and other relevant technical working groups) and consider revising the work plan to addressing the specific needs of NGOs.
3. READY should consider contributing to the development of operational how-to documents in technical areas, which was identified as a major gap across various sectors.
4. Cross-cutting themes such as one-health, ethics, gender, and social behavior change are key strengths of READY, and the project should utilize its unique position to communicate the gaps in these areas at global health forums and advocate for action.
5. The repository of guidelines should be linked to the integrated response framework and should be disseminated through READY knowledge management hub platform. Through the coordination working group, READY should advertise and promote their utilization.