

**Expert Consultation
World Health Organization**

**Emergency Preparedness
for the
Health Sector and Communities**
Challenges and the Way Forward

Geneva, 15-17 February 2006

Issues, Conclusions, and Recommendations

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I. Executive Summary

Drawing on experiences and lessons learned from major crises in recent years and taking stock of the outcomes of the Kobe Conference on Disaster Risk Reduction, the World Health Assembly, at its 58th Session in May 2005, adopted resolution WHA 58.1. This Resolution urged Member States to make their best efforts to engage actively in collective measures to establish global and regional preparedness plans that integrate risk reduction into the health sector and to build capacity to respond to health-related crises. It also requested Member States to formulate national emergency-preparedness plans that give due attention to public health, including health infrastructure, in order to mitigate the damage and loss of function associated with events related to hazards and to improve the effectiveness of responses to crises and contributions to the recovery of health systems. These instructions mandated that the WHO work toward these goals.

This three-day Expert Consultation was the first conducted by the Health Action in Crisis (HAC) Department of the World Health Organization (WHO) that specifically addressed disaster preparedness and capacity and capability building at the country-community level. The Consultation brought together: (1) experts from across the world; (2) staff of the Regional Offices of the WHO; (3) representatives of other United Nations agencies including UNICEF, UNDP and ISDR; several non-governmental agencies (NGOs) and governmental agencies (CIDA) that are stakeholders in disaster risk reduction, preparedness, and response (IOM; IFRC); (4) the Director General Representative of HAC (Dr. Ala Alwan) and the heads of its three units: (a) Emergency Preparedness and Capacity Building (HAC/EPC); (b) Response and Operations (HAC/ERO); and (c) Transition and Recovery (HAC/REC); (5) staff of the HAC; and (6) staff of several other WHO programs.

The objectives of the Consultation were to:

1. Review experiences in promoting and/or institutionalising emergency preparedness and disaster risk reduction at regional and country levels;
2. Identify existing gaps and major challenges and to discuss approaches for enhancing processes for mitigation of damage and emergency preparedness, such as advocacy, data and knowledge management, policy, capacity development, multi-sectoral action, sustained social mobilization, new threats, and human resources; and
3. Propose recommendations for intensifying programmatic work and technical assistance to countries provided by the WHO.

The discussions were divided equally between Plenary Sessions and Working Groups. The discussions of the Plenary Sessions included: (1) Definitions and terminology; (2) Interagency cooperation and coordination; (3) Standards and guidelines; and (4) Legislation. Working Groups were assigned to discuss: (1) Data and knowledge management; (2) New threats for public health; (3) Mass casualty management; (4) Human resource development; (5) Community preparedness; and (6) Specific threats. Each of the Working Groups reported back to the Plenary where the issues, conclusions, and recommendations were discussed. The Reports of Working Groups 2 and 6 have been combined in this Report.

A total of 62 Recommendations were abstracted from these discussions. In summary, it was recommended that the WHO develop the following operational objectives to accomplish "building the resilience of nations and communities" to reduce the health impact of potentially catastrophic events:

1. Promote legislation and strategies (WHO can impact the political processes within countries);
2. Promote plans and procedures for coordinated action to reduce the disaster risk on public health;
3. Strengthen national and international human resources;
4. Promote public education, awareness, and participation;
5. Strengthen collection, analysis, and dissemination of health-related information;
6. Assist in compilation of the pre-event status and comparisons with benchmarks that define progress to the ultimate goal of enhanced health preparedness;
7. Convene an Expert Consultation to define Guidance in how to attain the benchmarks;
8. Possibly pre-position supplies and equipment;
9. Develop joint ventures with academic institutions/organization; and
10. "Train competent people rather than provide materials."

Several strategies for achieving many of the Recommendations were suggested:

1. Rather than concentrating on the costs and requirements for funding preparedness projects, emphasis should be placed on the economic impact on the country and community and the impact of disasters on the livelihood of those affected (“value added”);
2. Build on the similarities of actions of the WHO Regions and not on the differences;
3. The many success stories should be touted rather than the failures: there are many, many successes that have been achieved in disaster preparedness that have resulted in enhanced ability to mitigate the damage, loss of function from an event, and respond to the damage and loss of function sustained. The achievements are many and differ by region, but problems and especially, the goals are the same;
4. Ownership of preparedness activities must be developed at the local and national levels;
5. A few good examples of the impact of preparedness should be piloted as demonstrations of the potential benefits of preparedness and capacity and capability building. For example, special emphasis should be placed on making medical facilities “safe” so that they will continue to provide needed health services in times of crisis (by increasing structural resilience of these facilities to known hazards and developing *business continuity plans*);
6. Methods should be developed for systematically providing information and education using all available modalities for information exchange between regional offices, country representatives, and the public; and
7. “Windows of opportunity” should be used for implementing changes wherever and whenever they present.

Several themes came to light. “Preparedness is everybody’s business.” Preparedness and capacity building are part of development. Preparedness and capacity building is the responsibility of national and community agencies, and where health is concerned, the responsibility lies within the Ministry of Health. “It is not WHO’s disaster.” It is clear that the role of WHO in health preparedness is to assist the countries and communities with enhancing their preparedness and capacity building. Yet, it was pointed out that the WHO also should “practice what it preaches”. Health preparedness is broad and requires that the health sector work closely with other sectors and develop strong partnerships with other agencies and with the private sector. At the country level, the WHO can:

1. Assist the MoH develop an institutionalized unit or office within its structure to develop and implement preparedness through capacity and capability building;
2. Broker partnerships with other actors within and outside of the health sector, including the academic community; Develop and promulgate standards for communication (terminology) and best practices, and assure the validity and credibility of the standards, objectives, and benchmarks that evolve from these standards;
3. Encourage the development of enabling legislation;
4. Develop and implement regional data and information centers to aid the countries in preparedness activities;
5. Assist the countries in preparing to cope with new threats before they become manifest and limit the spread once they become events;
6. Guide and assist the countries with the tools required for human resource development;
7. Identify sources for funding of preparedness initiatives;
8. Develop a few pilot projects to provide better exposure and illustrate the benefits associated with the implementation of preparedness measures; and
9. Assist with the transformation of technical knowledge into international and national standards and policies.

Several strategies that could assist the WHO help countries and communities to enhance their preparedness and meeting WHO-prescribed benchmarks have been identified. Using the output from this Consultation should allow the WHO to lead the way for country and community preparedness and risk reduction.

II. Abbreviations

CBRN =	Chemical, Biological, Radiation, and Nuclear
CRED =	Center for Research on Epidemiology of Disasters (Catholic University, Louvain)
CRID =	Centro Regional Información sobre Disastres
HAC =	Department of Health Action in Crisis of the WHO
IFRC =	International Federation of the Red Cross
IOM =	International Organization for Migration
ISDR =	International Secretariat for Disaster Reduction
MoH =	Ministry of Health
NLM =	National Library of Medicine
UNICEF =	United Nations Children's Fund
WHO =	World Health Organization

III. Background

Drawing on experiences and lessons learned from major crises in recent years and taking stock of the outcomes of the Kobe Conference on Disaster Risk Reduction, the World Health Assembly, at its 58th Session in May 2005, adopted resolution WHA 58.1. This Resolution urged Member States “to engage actively in collective measures to establish global and regional preparedness plans that integrate risk reduction into the health sector and to build capacity to respond to health-related crises.” It also requested Member States to formulate national emergency-preparedness plans that give due attention to public health, including health infrastructure, in order to mitigate the damage and loss of function associated with events related to hazards and to improve the effectiveness of responses to crises and contributions to the recovery of health systems. These instructions mandated that the WHO work toward these goals.

The World Health Organization (WHO) has been strengthening its capacity in the area of Health Action in Crises to better fulfill its primary role of providing technical assistance to countries in need. A new unit in charge of Emergency Preparedness and Capacity Building has been created within the new structure of the Health Action in Crises (HAC) Department of the WHO. The main objective of the above structural unit is to revitalize the Emergency Preparedness and Capacity Building component of the emergency health activities of the WHO.

In this respect, an informal, Expert Consultation was convened at the WHO to review the overall public health and medical issues in emergency preparedness, as well as regional and country experiences in promoting and supporting emergency preparedness and damage mitigation, to identify existing gaps, and to establish future priorities for action.

Long-term building of the disaster preparedness and risk reduction capacity of the national health sector is distinct from strengthening WHO's own immediate capacity to respond in a crisis. Although both activities are essential and complementary, the topic of this Consultation was exclusively to address building the capacity of Member States to cope with future events, a priority identified by the WHO Governing Bodies.

The main expected outcome (goal) of the Consultation was a set of concrete, strategic, and programmatic recommendations to WHO that will assist member states in increasing their level of disaster risk reduction and preparedness. A theme throughout the Consultation was: “It is not WHO's disaster.” It however was recognized that the WHO must prepare itself as well as the countries.

IV. Objectives of the Consultation

The objectives of the Consultation were to:

1. Review experiences in promoting and/or institutionalizing emergency health preparedness and disaster risk reduction at regional and country levels;
2. Identify existing gaps and major challenges and to discuss approaches for enhancing processes for mitigation of damage and emergency preparedness, such as advocacy, data and knowledge management, policy, capacity development, multi-sectoral action, sustained social mobilization, new threats, and human resources; and
3. Propose recommendations for intensifying programmatic work and technical assistance to countries provided by the WHO.

V. Expected Outcomes

The expected outcomes of the Consultation included that the recommendations would:

1. Be country focused and not WHO focused;
2. Be health sector centered;
3. Espouse a systematized, community approach;
4. Promote broadened partnerships with other stakeholders;
5. Be comparative-advantage oriented; and
6. Suggest that performance be assessed against defined benchmarks.

VI. Overview

The United Nations recognizes five pillars of development: (1) health; (2) education; (3) environment; (4) governance; and (5) employment (economy). Investment in each is required for countries to grow and prosper. At the national level, there must be clear authority backed by legislation, policies, administrative procedures, and technical guidelines. The policy and technical framework for emergency management is set at national level, but is executed at the local level. Communities bear brunt of disaster and must be fully involved in planning for those hazards for which they are at risk. They are responsible to safeguard the health, wealth, and wisdom of their people and to protect the gains made in development. It was recognized that there generally exists a commitment for health preparedness, but it is not multi-hazard, but rather, it is for disease-related activities. Furthermore, overall, there is a low level of knowledge and formal education in disaster preparedness and the misperceptions about preparedness are strong. It is clear that political commitment comes before knowledge transfer, and that this fact must be recognized in establishing priorities for the recommendations that have been derived from this Consultation. It was pointed out that a good strategy to accomplish this mission and the recommendations that follow could consist of demonstrating the benefits that can be achieved from increased levels of disaster risk reduction and preparedness, capacity, and capability. This could be accomplished by initiating a few good examples provided by specific pilot projects.

It was recognized from the presentations by the staffs of the WHO Regional Offices and the representatives of other UN Agencies and the NGOs, that the challenges and risks for the different regions and agencies, and organizations are “remarkably” similar and that the development of partnerships between the WHO/HAC and these agencies is essential. These partnerships with other agencies are key to the success of the WHO mission to help to enhance the levels of preparedness, capacities, and capabilities of nations and their communities.

VII. Definitions and Disaster Terminology

Issues

Regarding specialized disaster terminologies, there is a large and confusing mix of glossaries in use. It was noted that it is “difficult to make any progress without a common accepted language”. There is no common standard glossary of terms used by the health sector.

Conclusions

It was agreed that there is a need for standardized terminology including the terms used for technical processes and procedures. Several definitions and descriptions were agreed by the participants:

Health Sector—the health sector includes all actors that contribute to the health response to a disaster, including environmental engineers, water specialists, armed forces medical services, non-governmental organizations (NGOs), security, etc.

Two terms were judged to be of particular relevance to the Consultation:

Preparedness—Activities and measures taken in advance of an event to ensure effective response to the impact of hazards, including the issuance of timely and effective warnings. It was agreed conceptually that *preparedness is part of development* and that preparedness is an *ongoing* process. The participants concluded that the term “emergency preparedness” in the title of this Expert Consultation should be understood to include both preparedness and prevention of the events and mitigation of the risks.

Prevention and mitigation—Activities to provide outright avoidance (or reduction) of the adverse impact of hazards and the means to minimize the damage and loss of function related to environmental, technological, and biological events.

Risk management—as used in this document includes the absorbing capacity, buffering capacity, and response capacity.(Sundnes, *et al*, Background paper)

The differences between several terms, though not directly defined by the participants, were considered of substantial importance and were not to be confused. These included (definitions from documents included in the Consultation; when not cited, definitions are from: Thompson D(ed): *The Concise Oxford Dictionary*. Clarendon Press: Oxford, 1995):

1. Capacity vs. capability

Capacity—a multifaceted package that provides a target group with skills, resources, and technical abilities to enable it to better help itself.(*Living with Risk*, ISDR,2005) This is determined by the capacity of people to construct policy information, infrastructure, and institutions, train and educate human resources, and to facilitate the participation of stakeholders in the decision-making processes.(UNICEF, 1992) The World Bank views this as a three level process: (1) individual knowledge and skills; (2) institutional capabilities; and (3) development of rules, procedures, and understanding that people, societies, and institutions can hold and work by. Organizational and institutional development and sustainability are dependent on human resource development. Capacity building can be achieved through training and education, public information, and transfer and access to technology, and formulation of policy.”(Gamhewage G: Human Resources Development and Capacity Building. Shadowpaper, HAC, Expert Consultation: WHO, Geneva, 2006.)

Capability—the condition of being capable. **Capable**—having the ability, fitness, or necessary quality for.(Oxford, p 192)

2. Preparedness vs. readiness (including “institutional” readiness)

Readiness—preparations complete; in an appropriate state.(Oxford, p 1142)

3. Competence vs. credibility

Competence—the state of being competent. **Competent**—adequately qualified or capable.(Oxford, p 271)

Credible—believable or worthy of belief.(Oxford, p 316)

4. Protection vs. preparedness

Protection—the act of protecting; the state of being protected. **Protect**—to cover, shield from exposure, injury, or destruction.

5. Cooperation vs. Coordination vs. Collaboration

These terms were defined during the Consultation as follows:(from Dubouloz)

Cooperation—shared goals.

Coordination—shared tasks.

Collaboration—shared resources.

There was discussion about the needs for resolution of the differences that exist between the various glossaries.

Recommendations

- 1. It was suggested that, to the extent possible, the disaster terminology developed by the International Secretariat for Disaster Reduction (ISDR) in consultation with many of the main actors in disaster reduction, should be adapted.**

VIII. Capacity and Capability Building of the Health Sector

Several issues were discussed in the plenary sessions. They included: (1) development/strengthening of disaster units within the Ministries of Health (MoH) of the respective countries; (2) Interagency cooperation and coordination; (3) development of standards and guidelines; and (4) enabling legislation. These issues, the conclusions reached and recommendations to the WHO are provided in the discussions that follow.

VIII.A. Disaster Offices within the Ministries of Health

Issues

The resolution WHA 58.1 instructs the WHO “to provide prompt and appropriate technical assistance to both international and national health disaster preparedness, response, mitigation and risk reduction programs”. It first presumes the existence of programs dedicated to disaster preparedness and risk reduction in every Ministry of Health (MoH)—an assumption that is not supported by current evidence. Disaster preparedness programs, or any program must be supported and implemented by an existing unit or office in the MoH. It was stated repeatedly that: “Governments must ensure safe communities” and that preparedness is a function of public protection (safety). Of particular relevance is the resolution of the Ministries of Health in the Americas to recognize “*Reducing the Impact of Emergencies and Disasters on health*” as one of the 11 Essential Public Health Functions (EPHF) of the Ministries of Health, (PAHO Resolution CD42R14).

Conclusions

Emergency preparedness and disaster risk reduction are core responsibilities of the MoH. These functions are not transient or short-term, but are permanent. Therefore, a corresponding structure (office, unit, or department) must be institutionalized within the MoH of each country. The establishment and performance of a multi-hazard emergency preparedness/disaster risk reduction unit or office in each Ministry is regarded as the *prime benchmark* for the WHO Emergency Preparedness and Capacity Building Program.

Emergency preparedness and disaster reduction is a programmatic area requiring coordination with other disciplines and departments within the health sector and with other sectors such as Ministries of Finances, Public Works, Planning, Transportation, Civil Protection, and Foreign Affairs as well as other stakeholders such as the, armed forces, academic institutions, Red Cross, and NGOs. For both the WHO and the MoH, the first step is to assess the capabilities of each actor that contributes to reducing the health risk and improving public health.

Linkage with other actors can be a continuous, formal relationship or a one-off relationship for a specific decision or activity. Linkage is not an end in itself: it should lead to joint projects, exchange of information, and other activities benefiting all of the participating actors.

Recommendations

The WHO should:

- 1. Actively promote the establishment or strengthening of an emergency preparedness / disaster risk reduction department, unit, or office in the Ministry of Health of each country. This department/unit/office should:**
 - a. Be institutionalized as its function is a permanent core responsibility of the MoH;**
 - b. Be responsible for preparedness for all types of hazards: natural, technological, *or* complex emergencies (multi-hazard);**
 - c. Be interdisciplinary to facilitate the bridging between the different technical programs in the MoH that have a role in disaster preparedness;**
 - d. Have direct access to the decision-making level; and**
 - e. Have permanent personnel and resources dedicated to disaster risk reduction and preparedness.**
- 2. Focus on the strengthening of this unit/office in the MoH and the implementation of mutually agreed plans for action.**
- 3. Encourage the MoH to foster cooperative ventures within the Ministry, the health sector, and with other sectors. Special attention should be given by the MoH to collaborative arrangements with the Civil Protection (or other similar institutions responsible for overall safety of the population through multi-sectorial preparedness and response), relevant Ministries, and other related agencies. This is relevant particularly for those agencies that are likely to provide international assistance for improving the levels of preparedness of the country for all types of hazards for which the country is at risk. The WHO can serve as a broker between these partners at national and community levels. This may be facilitated by the WHO assisting with the conduct of multi-sectoral and cross-border training exercises as part of preparedness;**
- 4. Practice better what it is preaching by:**
 - a. Reviewing its existing memoranda of understanding (MoUs) to include emergency preparedness, as appropriate;**
 - b. Ensuring that the WHO-sponsored training activities benefit all actors and promote contact and exchange between institutions;**
 - c. Including the topic of linkage with other actors in its induction courses for the WHO staff; and**
 - d. Providing technical cooperation to key national institutions outside of the MOH (directly or outsourcing).**

VIII.B. Interagency Cooperation and Coordination

Issues

“Preparedness is everybody’s business.” It was noted that many decisions involving health have been made outside of the health sector and that many may have been inappropriate. Also, it was believed that at the community level, interest in preparedness as provided by the health sector is “quite low” compared to that provided to other sectors. It was pointed out repeatedly that disasters and disaster preparedness and capacity building are multi-sectoral, ongoing processes. Generally, sectors operate separately, and the health sector must compete with the other sectors for the Member States’ resources. There is a need for the development of interagency collaboration and coordination at the local, country, and international levels.

Substantial discussion centered on the role of the military in preparedness and capacity building. It was noted that currently, the mission of the military differs from that of humanitarian organizations. Should the military be involved? If so, what should be its role? Can its resources be depended upon?

It was pointed out that the ISDR is promoting "safe hospitals", and vital medical facilities. The Safe Hospitals Initiative already is underway in Latin America and the Caribbean. Safe hospitals are directed at preserving the structural integrity and the ability of the health facilities to continue providing needed medical care in times of crisis.

Further, it was agreed that emergency medical services (EMS) systems, where they exist, generally are under utilized for disaster preparedness. Emergency Medical Services systems include partners from other sectors, have operational coordination mechanisms, inter-sectoral plans, and cross-fertilized educational programs.

In addition, it was noted that the private sector generally is better organized than is the public sector and has abundant resources.

Conclusions

There was general agreement that collaborative partnerships must be developed with all related organizations and sectors including but not limited to ISDR, CRED, CRID, UNICEF, ICHA, UNDP, IOM, and the IFRC as well as between other intergovernmental and governmental agencies, and the private sectors. Each of these agencies must be brought into the planning processes. The WHO is in a position to foster and facilitate collaboration with intergovernmental agencies, the national governmental agencies, NGOs, and the private sector.

Partnering with the ISDR in the Safe Hospitals Initiative could provide a demonstration project for the benefits accrued by taking preparedness actions. Emergency Medical Services systems are one component that helps to ensure public safety during crises. Such systems, where they exist, may provide a model for other preparedness measures. The military is rich in resources (human and material, including transport) that are useful times of disaster. It was noted repeatedly that the military has different objectives than does the civilian sector making it difficult to find a definitive role for the military.

It also was noted that linking with other sectors and actors: (1) will require additional budgeted funds; (2) starts with joint planning; (3) can be hampered by bureaucracy and formalization and (4) will require special arrangements for the acquisition of goods and services that are needed during emergencies. Also, it was noted that linkages are needed inside and outside of the WHO.

Recommendations

The WHO should:

- 1. Engage in the development of templates for the development of *rules of engagement* for intergovernmental and governmental agencies, NGOs, the private sector, the military medical units, and others;**
- 2. Define and negotiate the potential health roles for the military sector in response to disasters and to develop model agreements between the MOH and the respective military;**
- 3. Assist the MoH with involvement of the partnering agencies into the planning processes within the countries. The WHO is well-equipped to open doors for the MoHs. Partners can assist the WHO in opening the doors for the MOHs;**
- 4. Systematically involve all of the partners in WHO-sponsored activities;**
- 5. Partner with the ISDR in promoting safe hospitals and other vital medical facilities in terms of what can be done to preserve structural integrity and continuity of function, institutional strengthening, risk assessment and monitoring, education and awareness, and ensuring health sector participation in national platforms for disaster reduction;**
- 6. Investigate identifying which EMS systems, where they exist, seem to best meet the needs of the population-at-risk, examine EMS systems as a model for other preparedness efforts, and how to incorporate EMS systems into the planning processes; and**

VIII.C. Standards and Guidelines

Issues

Most agreed that in terms of preparedness, every organization is doing something separate from the other organizations even though the goals of the organizations are similar. This is a result of the lack of commonly agreed global standards and benchmarks to achieve these unified goals. If there is a wealth of standards of terminology, technological methods and procedures, data collection tools and methods, and best practices at the community, country, and international levels in some Member States and PAHO, there are few universally accepted at world level. There are multiple and burgeoning training courses in disaster preparedness and response with no WHO-wide agreed conceptual framework or common standards upon which to base the educational objectives (see Human Resource Development; Definitions and Terminology, see also Recommendation 9 above).

Conclusions

Without global standards and guidelines, there is no firm foundation upon which to base the educational and training initiatives. There is no standardized conceptual framework into which the processes must fit. Without professional standards, there is no uniformity of education and training being delivered. Thus, there is a need for a thorough literature review and the development, testing, application, and distribution of guidelines.

Since the levels of preparedness differ substantially between countries, the WHO is the only organization that can assure the validity of generally applicable standards, and guidelines, goals, objectives, and benchmarks for health preparedness. Even though the hazards faced by countries may differ, the basic goals for preparedness are the same and progress toward these goals will be indicated by achievement of a series of benchmarks that may be general for all hazards or may be specific for certain hazards to which the countries are most at risk. It was agreed that over-reaching goals for health preparedness at the country and community levels can be defined and that universal objectives and benchmarks can be established. Countries can use benchmarks to eventually attain the goals. Attaining realistic benchmarks provides satisfaction of accomplishments for the individual countries that can proceed at their own realistic pace. Substantial progress has been made as evidenced by the benchmarks derived by PAHO in the evaluation of the Essential Public Health Functions in 2001 and SEARO in its recent (November 2005) meeting in Bangkok. Sense of accomplishments provides stimulation to proceed to the next level/benchmark. Community/national preparedness plans will benefit from the provision of such guidelines by the WHO.

Recommendations

The WHO should:

- 1. Undertake a definitive review of the existing literature (scientific and grey) to define already known goals and standards for preparedness; and**
- 2. Encourage the development of international standards and guidelines, goals, objectives, and benchmarks that will guide countries in their respective investments in improving their disaster risk reduction and health preparedness, capacities, and capabilities. The benchmarks defined by PAHO and SEARO should serve as a good beginning.**
- 3. Support regional offices by harmonization of conceptual frameworks, guidelines, and normative activities, technical advice, and publication of standards and best practices.**

VIII.D. Legislation

Issues

Hazards and the risks they generate only can be dealt with effectively through public policy, public participation, and public-private collaboration. Preparedness currently has too low of a profile and (outside the Americas) has been neglected. Many countries do not have a legal framework to endorse and support the development of health preparedness. "A legal framework lays down the ground rules and principles to be adopted in disaster management and places the actions to be taken into the broader and ethical and lawful social context. A legal framework reflects awareness of, and political commitment to the importance of disaster preparedness. Such a legal framework must include functioning coordinating mechanisms and defines an organizational structure for the country. It provides the structure in which preparedness and development can occur. A cross-sectoral, legal framework is required to provide the mandate, power, and the resources necessary to take actions required to enhance the levels of health preparedness.

Conclusions

Many of the participants noted that a legal framework on which to rest preparedness and capacity building activities is required in each country. Responsible units within each MoH must be vested with the mandate, power, and resources to accomplish its tasks in the development of preparedness. All of the countries involved in the earthquake and tsunami of December 2004 endorsed the need for a legal framework upon which to build preparedness in their respective country. In many countries, the process of obtaining a legal framework can be facilitated by the WHO as it can influence the political environment in the respective countries in ways that may not be possible from within the MoH. It was suggested that the WHO promote a marketing campaign to promote a prioritized agenda for advancing preparedness and for capacity and capability building. The WHO can assist the countries with creating public and political awareness and legislative commitment through participation and education. Policies and the appropriate legal framework must be established by countries, and must be developed at the national and community levels.

Policies must include the importation and donation of pharmaceuticals. In this regard, the WHO Guidelines for the provision of pharmaceuticals are outdated and require revision.

Recommendations

The WHO should:

- 1. Develop health-related standards and guidelines that will assist countries in the development and implementation of enabling legislation required for enhancing the levels of preparedness within the countries and assisting the MoH in promulgating preparedness activities; and**
- 2. Update its guidelines for the supplies of pharmaceuticals. These guidelines can serve as a model for other health standards and guidelines.**

IX. Thematic Issues

Special thematic issues were assigned to Working Groups. These groups deliberated and reported back to the Plenary. These reports then were discussed in the plenary. No formal votes were taken and endorsement was assumed when no opposition was raised by the participants. Issues that raised objection have not been included in this Report.

IX.A. Data and Knowledge Management

Issues

While technology and the numbers of users of data and knowledge pursuant to preparedness, capacity building, and capability building has skyrocketed, many limitations are inherent: (1) Data access often is restricted or used as a powerbase; (2) Inadequate cross-references mean users may be unaware of existing information; (3) Compilation and distribution of the data and information derived from the data have not been a priority; (4) Information is stored in non-accessible places or non-standardized formats; (5) Information often exists in weird formats that are costly to convert; and (6) Compilers often are not aware of the user's needs. It was noted that most information relative to the health sector comes from non-government sources.

Thus, currently, there is a great quantity of data and information pursuant to the public health and medical aspects of disasters that is stored in widely dispersed, multiple, complex databases. Unfortunately, the data and information are difficult to access and/or search by national users due to their residence in so many databases, their complexity, and general lack of structure. For example, an important database, the Disaster Management Information Center, is a function of IFRC, but is not available for public access. Currently, there are many countries that only have limited access to electronic databases often using the Internet. The information obtained from the latter sources may be inaccurate, biased, and misleading. Access to current, existing knowledge and data elements is essential for assessing, designing, implementing, and evaluating interventions to enhance preparedness.

The observation that knowledge and data and information are not the same was emphasized on several occasions. It is important to distinguish between knowledge and data and information. Knowledge is the ability to diagnose and act, i.e., treat tuberculosis, and is part of expertise, while the data must be integrated and interpreted by experts in order to develop the expertise.

Conclusions

Knowledge is required for: (1) sharing and re-applying experiences; (2) leveraging systems; (3) fostering an enabling environment; and (4) translation of policy into action. The group concluded that knowledge management and access to existing databases are essential to disaster health preparedness, and hence, must be a key function of WHO/HAC. Such needs may vary by region and/or country, and hence, should be attended at the Regional level. Furthermore, there have been successful examples with the management of the data and knowledge, and any new system should be built upon already defined strengths in WHO using examples already in use in some regions. The Regional Disaster Information Center for the Americas (CRID) with support from the National Library of Medicine (NLM) is an example. A database that will serve this purpose should focus on health-sector needs and resources with links to other sectors. Furthermore, the database should use standard indexing nomenclature and should incorporate existing grey information. It should contain data and knowledge gained from the pre-event, the disaster, and the lessons learned. Current challenges, then, include: (1) making existing data available to those who need it; (2) assist the countries in the development of the necessary capacities and capabilities to use the data and information; (3) develop clearing house technologies to sort the data into standardized categories; and (4) be aware of and implement, as appropriate, future technologies such as electronic conferencing, distance learning, document sharing, and remote imaging.

Recommendations

- 1. The group strongly supports that the WHO develop and implement a networked, information and knowledge management facilities at the Regional level based on existing WHO experience. The Centers should be staffed by persons competent in accessing and processing requests for data and information. When resources permit, a similar facility should be established at the country level using the same methodological approach. It is crucial that these facilities be partnered with the ISDR, UNDP, IFRC, IOM, and other agencies. Such Centers should be based on a customized, client-service approach that would provide access and filtering, and the final product in response to requests not only should consist of a list of references, but also must include hard or electronic copies of relevant existing information. The Center staff should have access to all existing sources (written or electronic, formally published or not).**
- 2. The WHO should organize a Task Force with partners (e.g., CRID, CRED, IFRC, NLM) on modalities to set up such networked Information Centers. The Task Force will consider very technical problems and must have access to persons who can work within those limitations.**
- 3. The WHO must assure that there is comprehensive sharing of information between its Regional Offices.**

IX.b. Threats for Public Health

Issues

The changing environment presents multiple emerging or increasing hazards (chemical, biological, radiological, nuclear (CBRN), infections, communicable diseases, terrorism, population migrations) that currently are threats to public health and to other sectors worldwide.

Disasters from the hazards not only take a human toll, but are associated with huge economic and social costs as well. The needs are further complicated by: (1) volatile political environments; (2) frequent changes in the MOH; (3) conflicting priorities; (4) lack of awareness; (5) lack of political commitment; and (6) lack of good governance.

Thus, societies increasingly are confronted by new challenges and threats including: (1) global influenza pandemic; (2) fragile states with civil unrest and mass displacement; (3) CBRN threats including terrorist attacks; (4) effects of globalization with growing interconnectivity (mobility and trade); (5) global environmental change (global warming); and (6) increasing frequency and severity of disasters caused by natural hazards.

Countries currently are requesting assistance from the WHO with surveillance mechanisms and in the development of surge capacities *and* capabilities. The provision of technical expertise is essential (communicable diseases, environmental health, etc.). The WHO has the technical expertise to provide guidance and standards to the countries. Currently, the world community is on edge with the expectation that a influenza pandemic is imminent. Also, a functioning platform for coordinating interventions for enhancing preparedness to cope with such events does not exist.

Conclusions

The responsibility for health preparedness for such events rests with the Ministries of Health. The group concluded that the development and implementation of the new International Health Regulations (IHRs) can be a tool for preparedness to epidemics. The revisions of the IHR present a *window of opportunity* to strengthen collaboration of the various departments and programmes within the WHO and could facilitate capacity building to cope with multiple hazards at the national level. In addition, the augmentation of preparedness for a possible influenza pandemic at the global level could be used as a vehicle to promote the concept of multi-sectoral, multi-cultural preparedness. Furthermore, the conduct of national risk assessments may constitute a bridge to the national, cross-sectoral committees. It was noted that setting-up response systems is part of preparedness and that

responses are not possible without preparedness. It also was repeatedly noted that health facilities must be able to continue to operate during crises (“safe hospitals”).

The WHO Department of Public Health and Environment’s mission is to improve health by preventing and reducing avoidable deaths and diseases from disasters, emergencies, and outbreaks associated with environmental risk factors. The Global Outbreak Alert and Response Network (GOARN) was established by WHO to contain known risks and preventing an international spread of infectious diseases. It is a network of institutions to increase the international surge capacity and may be a model that could be adapted to preparedness against other hazards. The possibility of pandemic influenza also provides a *window of opportunity* to enhance preparedness for many hazards.

The participants took note of the three pillars pandemic epidemic alert and response as a potential model for the development of other preparedness measures: (1) respond to unexpected; (2) contain known risks; and (3) improve preparedness. “Every country should be able to quickly detect, rapidly verify, and respond appropriately to epidemic-prone and emerging disease threats as and when they arise, be they natural, accidental, or intentional in origin. This ability should help to contain them locally, thus reducing the risk of international spread and minimizing their impact on the health and economy of both the affected country and the world’s population

Recommendations

- 1. The national disaster offices in each MOH must be involved in preparedness activities for all potential crisis scenarios (all hazards).**
- 2. The WHO/HAC must revise and update its “tool box” of user-friendly, generic and operational technical guidelines (packaged information). The guidelines must be incorporated into strategic and operational programmes that must be implemented at the country level by the disaster unit within each MOH. The programmes must be adjusted to different target groups. The WHO should promote the integration of other stakeholders into this programme.**
- 3. The WHO must promote the role of the national emergency preparedness and risk unit within each MOH to link these technical guidelines and standards in local institutions.**
- 4. It is important that the WHO facilitate inter-country networks of capacity building and implement cross-border exercises. The WHO has the ability to liaison international expertise and knowledge into country-level preparedness programs particularly as they apply to surveillance, early warning, and risk management.**
- 5. The WHO should use influenza pandemic preparedness at the global level as a vehicle to promote the concept of multi-sectoral preparedness.**
- 6. The WHO should help the MOHs to coordinate and educate other actors (all sectors) relative to ensuring health responses from all threats.**

IX.C. Management of Mass Casualties

Issues

Many, but not all disasters produce a large number of casualties (injured) that exceed the capacities of the existing medical facilities. Often, such facilities are unable to continue to provide needed medical care. The ability of the country to attend to these casualties will be contingent upon: (1) the existence of functional emergency medical systems in normal times; (2) the resilience of the health facilities to damage from the event; and (3) the existence of plans *and* skills for the management of mass casualties. In reference to the latter, Paragraph 19. (ii) Social and Economic Development Practices of the Hyogo Framework states: “(e) Integrate disaster reduction planning into the health sector, promote the goal of “hospitals safe from disaster” by ensuring that all new hospitals are built with a level of resilience that strengthen the capacity to remain functional in disaster situations and implement mitigation measures to reinforce existing health facilities, particularly those providing primary health care.”(Hyogo Framework)

Conclusions

The health facilities located in areas exposed to natural hazards often are damaged and unable to continue operations when they are needed most. Although techniques and methods have been developed recently to assess and reduce the structural, non-structural, and functional vulnerability of hospitals and health facilities, few countries have made a sustained effort to mitigate the damage to these facilities. The World Conference in Kobe (2005) adopted safe hospitals as an inter-sectoral indicator and a global objective for 2015. The participants took note of the excellent initiative from WHO Kobe Center to develop a program on hospital damage mitigation.

There presently is no clear focal point in WHO for the development of EMS systems in the countries. The role of these EMS systems far exceeds merely the treatment of injured and sick patients. There is considerable evidence that low-cost interventions can make a substantial difference to the total number of injured and dead. The participants stressed the relationships between a strong EMS and effective treatment of mass casualties, but noted that the responsibility for improving pre-disaster trauma care and EMS should not lie with the WHO/HAC.

The actual management of mass casualties requires coordinated support from many sectors and departments in addition to the mobilization of a surge capacity of the EMS. Substantial technical guidelines have been developed by the WHO both at regional and headquarters level. There is a need to review and possibly update the current guidance provided to member states.

International medical responses to disasters caused by natural hazards occasionally are inappropriate or mismatched in amount and/or the nature of the rapidly evolving needs. This problem has been noticeable particularly with the influx of medical teams and field hospitals in the response to the earthquake and tsunami that struck southeast Asia (2004) and the earthquake in Pakistan (2005). Generally, local authorities are not informed sufficiently to appreciate and regulate the offers for medical assistance. There is a need for national legislation and regulation of foreign medical teams and mobile hospitals.

Recommendations

The WHO should:

- 1. Assume leadership in promoting disaster resilient hospitals and other health facilities, and actively partner with the ISDR in the biennial campaign on safe health facilities; this activity constitutes an example of the benefits preparedness can offer to any society.; Clarify its roles and responsibilities for strengthening EMS in normal times and guiding the countries in selecting the model most appropriate to meet their respective needs. The WHO should seek partnerships for this purpose;**
- 2. Promote dialogue and facilitate collaboration on mass casualties management between all relevant partners at country level, i.e., military, police, private sector, and Red Cross;**
- 3. Review existing guidelines on mass casualties management in order to update and improve their consistency;**
- 4. Assist member states to develop regulations and tools to screen offers of medical assistance and consider the possibility of an international mechanism of accreditation of field hospitals and staff; and**
- 5. Update its guidelines on the use of field hospitals and international medical assistance in light of the recent experiences with the tsunami and the earthquake in Pakistan.**

IX.D. Human Resources Development and Training

Issues

Competent, well-prepared persons are essential for successful disaster responses. In addition, special competencies are required for persons engaged in disaster preparedness activities. The training of personnel to perform during disaster responses is a function of preparedness and capacity building. The goal for human resource development is to enhance the overall competence of people involved in

disaster preparedness focused at the national level for local application. Overall, there is a disconnect between knowledge and training. Education and training needs must be based on responsibilities and the core competencies required to meet these responsibilities. Objectives for training and education should be directed toward increasing both capacities *and* capabilities. Some countries have well-developed training programs while many have little if any.

Currently, there are no recognized global tools specifically designed for the assessment of emergency preparedness, the training programs, or the capacity of the existing training programs in the health sector or other related sectors. The conduct of disaster exercises promotes inter-sectoral capacity building. Some training programmes currently are donor-driven.

Furthermore, it was noted that persons with developed competencies in key positions turnover with political changes in administration at the country and community levels. This creates an ongoing "brain drain" and the need to repeatedly educate and train the incoming staff. This process impairs progress in preparedness.

It has been demonstrated repeatedly that international persons and organizations without adequate competence appear in disaster areas and actually may detract from the quality and efficacy of the assistance being provided to the affected communities. There are no universally accepted mechanisms for the credentialing of personnel, responding agencies, or healthcare facilities. Many of the educational programmes currently provided do not involve academic institutions. Often, academic institutions do not include disaster risk reduction and preparedness in their curriculum.

Conclusions

As a first step in enhancing the preparedness at the national and community levels, the trainers, leaders, and managers of each of the sectors that relate directly or indirectly to human health must be trained. Because of the multi-sectoral nature of disasters and hence, of health preparedness, persons engaged in expanding human resource capabilities and capacities should be recruited from the health and non-health sectors. The WHO has strengths and weaknesses that should be taken into account in the development of education and training programmes.

Mechanisms for assessing and certifying the competence of personnel and organizations is required prior to the event, and hence, are part of preparedness activities. The processes used for performing assessments and certifications are dependent upon the establishment of standards for best practices, which, for the most part, are non-existent. Standards for education and training should be based on the responsibilities and core competencies required to perform assigned tasks. Particular emphasis should be placed on the education and training of community leaders and those responsible for the provision of coordination and control of responses.

The loss of competent and experienced personnel for political reasons constitutes a major impediment to the development of preparedness at the country and community levels. Such persons must be part of the permanent bureaucracy within the MoH and other sectors responsible for disaster preparedness.

Recommendations

- 1. Training packages should be developed by academic institutions with the input of the WHO, other components of the health sector, and non-health institutions. These training programs should not be donor-driven. At the Regional level, training activities should have a programmatic approach and should not be an individual, one-time training activity.**
- 2. The participants strongly recommended that good assessment tools for the evaluation of existing and future training programmes in disaster health preparedness must be developed at global level.**
- 3. Networking and advocacy must be done at the highest national levels as well as within the WHO.**

Therefore, the WHO should:

- 4. Facilitate the development, validation, and endorsement of best-practice standards in the health sector. These standards should be used in the development of educational and training curricula and for credentialing personnel and organizations;**

5. **Encourage each MoH to assess the current status of risk management and emergency preparedness within the MOH;**
6. **Assist the countries in assessments of their educational and training capabilities and capacities;**
7. **Using an agreed conceptual framework for curriculum, assist countries with development of a national education and training agenda;**
8. **Encourage countries to enlist academic institutions and international experts for the development and implementation of educational programs;**
9. **The indicators selected for attaining best practices should be community-based, not purely health-oriented, and should be individually adapted to each country;**
10. **Support countries with the development of special competencies with emphasis on mass casualty events;**
11. **Investigate possible mechanisms for assessing and certifying competence of health personnel and organizations for specific health aspects of disaster risk management and preparedness and hence, response.**

IX.E. Community Preparedness

Issues

The WHO has a mandated role to strengthen community health, which extends to disasters. Therefore, it is expected that the WHO will have strategies to support Disaster Health Preparedness for the communities. Some governments and their respective MOH believe that disaster preparedness is an exclusive function of the national government and do not understand the importance of disaster preparedness at the community level. However, it is the local community and individuals that are impacted by the event, suffer the consequences, and must first respond to the damage. As the patterns of disaster threats change (e.g., climate changes, terrorism), the health consequences of disasters also are changing as are the probable scenarios. The WHO and the MoHs have existing networks and structure into which preparedness programs can be integrated. It is important to note that the ISDR message in 2007 will be "Health Resilience in the Community".

Conclusions

The role of WHO should be to support the national *and* local governments, and work through partners for the communities and not be directly operational within the communities. Many of the authorities at the national levels may not be aware of the multiple possible scenarios that may occur and the implications of these scenarios at the community level.

Recommendations

The WHO should:

1. **Identify and build on existing networks and capacities to deliver at the community level.**
2. **Advocate with the governments and the MoH to recognise the importance of preparedness at the community level. As part of this advocacy, awareness of the various possible scenarios should be included;**
3. **Draw attention of authorities to the health consequences of changing patterns of disaster threats (e.g., climate change) and the need to support communities for eventualities outside of their traditional means of coping;**
4. **Assist each MOH with integrating disaster preparedness into existing community structures using programmes such as the RC network;**
5. **Commission operational research in community-based preparedness approaches in order to identify good practices; in this manner, the WHO will be able to partner with others sectors and learn from the models provided by other community health work. In addition, the WHO should develop and adopt a multi-risk framework to assist in the placement of health-related risks into the framework of what the communities identify as high risk;**

6. **Devise, adopt, and promulgate strategies that will add value to those already available within the communities (their coping), identify those that are over-extended or missing, and fill-in gaps through practical inputs in partnership with other agencies.**
7. **Partner with the ISDR in promoting its message of “Health Resilience in the Community”.**

X. Actions and Strategies

Issues

There was general agreement that there is a difference between plans and actions. This disconnect at national and WHO levels creates an environment of distrust and apathy. It was agreed that for the most part, planning has not been followed by appropriate actions to implement and evaluate the interventions planned.

Conclusions

It was stressed repeatedly that much can be accomplished in preparedness and capacity building when *windows of opportunity* present themselves, generally during or following a disaster. It was pointed out that the International Health Regulations (IHRs) are in the process of revision and approval and that this process presents a *window of opportunity*. The regulations will detail core capacities in surveillance and response, will be submitted for approval by the WHA in May 2006, and will be enforceable in all countries in 2007.

Action plans must include goals (established by definition of standards), objectives in terms of how to accomplish these goals, and the establishment of benchmarks that provide the paths to gaining the objectives. It was agreed that the national governments must establish the policies based on goals, but that the local communities must develop plans that are congruent with the local needs. It also was agreed that preparedness and capacity and capability building must be moved upward in recognition of importance and requires creation of political awareness. It was stressed that policies must be advanced into practical realities at the local level. It was emphasized that preparedness and capacity and capability building are components of public safety and that public “protection” may garner more attention than would “preparedness” and “capacity building”.

In addition, it was noted that it is essential that the present state (pre-event baseline) must be known before it is possible to provide support. The present state should be compared with the benchmarks as defined above. It is “not possible to stop natural hazards, but it is possible to decrease the damage created by them.”

Recommendations

Several strategies for achieving many of the recommendations noted above were suggested. In general, the following were noted:

1. **Rather than concentrating on the costs and requirements for funding preparedness projects, emphasis should be placed on the economic impact on the country and community and the impact of disasters on the livelihood of those affected (“value added”);**
2. **Similarities between the various programs and agencies should be emphasized rather than differences;**
3. **The many success stories should be touted rather than the failures: there are many, many successes that have been achieved in disaster preparedness that have resulted in enhanced ability to mitigate the damage and loss of function from an event and to respond to the damage and loss of function that does result. The achievements are many and differ by region, but problems and especially, the goals are the same;**
4. **Ownership of preparedness activities must be developed at the local and national levels;**
5. **A few good examples of the impact of preparedness should be piloted as demonstrations of the potential impact of preparedness and capacity and capability building. Special emphasis should be placed on making medical facilities “safe” so that they will continue to provide**

needed health services in times of crisis (by increasing structural resilience of these facilities to known hazards and developing *business continuity plans*);

- 6. Methods should be developed for systematically providing information and education using all available modalities for information exchange between regional offices, country representatives, and the public.**

It was recommended that the WHO develop the following operational objectives to accomplish “building the resilience of nations and communities”:

- 1. Promote legislation and strategies (WHO can impact the political processes within countries);**
- 2. Promote plans and procedures for coordinated action;**
- 3. Strengthen human and international resources;**
- 4. Promote public education, awareness, and participation;**
- 5. Strengthen collection, analysis, and dissemination of information;**
- 6. Assist in compilation of the pre-event status and comparisons with benchmarks that define progress to the ultimate goal of enhanced preparedness;**
- 7. Convene an Expert Consultation to define Guidance in how to attain the benchmarks;**
- 8. Possibly pre-position supplies and equipment;**
- 9. Develop joint ventures with academic institutions/organization;**
- 10. “Train competent people rather than provide materials.”**

XI. Summary

“Preparedness is everybody’s business.” Preparedness and capacity building are part of development. Preparedness and capacity building are the responsibilities of national and community agencies, and where health is concerned, the responsibilities lie within the Ministry of Health. “It is not WHO’s disaster.” It is clear that the role of WHO in preparedness is to assist the countries and communities with enhancing preparedness and with capacity building. Yet, it was pointed out that the WHO also should “practice what it preaches”. Health preparedness is broad and requires that the health sector work closely with other sectors and develop strong partnerships with other agencies and with the private sector. At the country level, the WHO can:

1. Assist the MoH develop unit or office within its structure to develop and implement preparedness through capacity and capability building;
2. Broker partnerships with other actors, including the academic community;
3. Develop and promulgate standards for communication (terminology) and best practices, and assure the credibility of the global standards, objectives, and benchmarks that evolve;
4. Encourage the development of enabling legislation;
5. Develop and implement regional data and information centers to aid the countries in preparedness activities;
6. Assist the countries in preparing to cope with new health threats before they become manifest and limit the spread once they become events;
7. Guide and assist the countries with the tools required for human resource development;
8. Identify sources for funding preparedness initiatives;
9. Develop a few pilot projects to provide better exposure and illustrate the benefits associated with the implementation of preparedness measures; and
10. Assist with the transformation of technical knowledge into international and national standards and policies.

Several strategies that could assist the WHO help countries and communities enhance their preparedness and meeting WHO prescribed benchmarks have been identified. Using the output from this Consultation should allow the WHO to lead the way for country and community preparedness and risk reduction.

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