

International Standards and Guidelines on Education and Training for the Multi-disciplinary Health Response to Major Events that Threaten the Health Status of a Community*

Education Committee Working Group
World Association for Disaster and Emergency Medicine

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*Note: This is an abbreviated version of the complete issue paper. The complete document can be accessed at: <http://wadem.medicine.edu/issuepaper.htm>.

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Abbreviations:

WADEM = The World Association for Disaster and Emergency Medicine

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Abstract

The 13th World Congress on Disaster and Emergency Medicine, convened in Melbourne, Australia in May 2003, requested the World Association for Disaster and Emergency Medicine (WADEM) to lead the development of "International Standards and Guidelines on Education and Training for "Disaster Medicine". This Paper has been developed by a Working Group of the WADEM Education Committee ("the Working Group") in response to that request from the international "Disaster Medicine" and emergency health community. The main focus of the Working Group is to develop standards and guidelines for education and training in the multi-disciplinary health response to major events that threaten the health status of a community. The contemporary view is that of a multi-disciplinary health response to major events which threaten the health status of a community, including the prevention and mitigation of future events, and taking account of the broader context in which these events occur.

It is the vision of the Working Group that *evidence-based* standards and guidelines for education and training must be developed in a broad sense, for *all members of the healthcare community*. Rather than purely describing isolated performance indicators, the Working Group agreed that priority be given to explaining the *general approach*, presenting the *conceptual framework*, clarifying important *principles*, and describing the *educational needs* and *training requirements* for situations for which there exist a major threat to the health status of a community.

It is not the intent to produce an updated educational curriculum for special courses in "Disaster Medicine" by listing levels of theoretical knowledge and clinical skills required for medical doctors, nurses, and paramedics. Nor, does the Working Group think it is useful to repeat requirements and learning outcomes that are part of the normal basic education and training for the various health professionals.

The purpose of this Issues Paper is to present an initial summary of current issues relating to an international perspective of "Disaster Medicine" education and training. This summary has been prepared following discussions within the Working Group of the WADEM Education Committee. The paper aims to stimulate debate and form the basis of further of discussion at an *international meeting* scheduled to be held in Brussels (Belgium) on 29–31 October 2004.

The Working Group has structured this Issues Paper into five parts and has identified several key issues for discussion.

Part 1: Understanding the contemporary interpretation of the multi-disciplinary health response to major events that threaten the health status of a community

Issue 1: Definitions and terminology in "Disaster Medicine";

Issue 2: Getting to grips with the contemporary concepts and international trends in "Disaster Medicine"; and,

Issue 3: Valuing personal attributes in "Disaster Medicine" practitioners.

Part 2: Developing an underlying scientific framework for linking theory to practice in "Disaster Medicine"

Issue 4: Creating a scientific framework(s) for "Disaster Medicine".

Part 3: Defining a conceptual framework and general principals to develop "International Standards and Guidelines on Education and Training for the Multi-disciplinary Health Response to Major Events that Threaten the Health Status of a Community"

Issue 5: Where are we now? Getting to grips with the contemporary concepts and international trends in "Disaster Medicine" education and training.

Issue 6: Where do we want to get to? Identifying contemporary, evidence-based education and training standards

and guidelines for "Disaster Medicine" education and training programs.

Issue 7: How do we get there? Overcoming barriers to introducing the International Standards and Guidelines.

Part 4: Maintaining the momentum—improving international collaboration

Issue 8: Exploring the feasibility of an ongoing, international, collaborative network of "Centres of Excellence" in "Disaster Medicine" research and/or education.

Part 5: Additional input

Issue 9: What other issues would you like to bring to the attention of the Working Group?

Conclusions: The results of the consultation will lead to the development of international standards and guidelines that will be presented and consensus sought during the 14th World Congress on Disaster and Emergency Medicine (WCDEM-14) to be convened in Edinburgh in May, 2005.

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Introduction

Purpose

The 13th World Congress on Disaster and Emergency Medicine, held in Melbourne, Australia, in May 2003, requested the World Association for Disaster and Emergency Medicine (WADEM) to lead the development of "International Standards and Guidelines on Education and Training for "Disaster Medicine". This Paper has been developed by a Working Group of the WADEM Education Committee (the Working Group) in response to that request from the international "Disaster Medicine" and emergency health community.

The main focus of the Working Group is to develop standards and guidelines for education and training in the multi-disciplinary health response to major events that threaten the health status of a community. It is the vision of the Working Group that *evidence-based* standards and guidelines for education and training must be developed in a broad sense, for *all members of the healthcare community*. Rather than purely describing isolated performance indicators, the Working Group agreed that priority be given to explaining the *general approach*, presenting the *conceptual framework*, clarifying important *principles*, and describing the *educational needs and training requirements* for situations for which there exists a major threat to the health status of a community.

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required for medical doctors, nurses, and paramedics. Nor does the Working Group think it is useful to repeat requirements and learning outcomes that are part of the normal basic education and training for the various health professionals.

The purpose of this Issues Paper is to present an initial summary of current issues relating to an international perspective of "Disaster Medicine" education and training. This summary has been prepared following discussions within the Working Group of the WADEM Education Committee. (Appendix 1).

The paper aims to stimulate debate and form the basis of further discussion at an *international meeting* scheduled to be held in Brussels (Belgium) on 29–31 October, 2004, the details of which can be found at the following website: <http://www.ecomed.be/conference.htm>.

The Working Group invites your response to this Issues Paper. Responses should be forwarded to Dr. Geert Seynaeve by email at: fa082693@skynet.be by the deadline for response of 17 September 2004.

Disclaimer

The contents of this Issues Paper have been prepared in good faith to stimulate discussion, critical reflection and independent input. To the best of our knowledge, it doesn't contain copyright or privileged material unless so identified in the text. The views expressed do not necessarily

reflect the views of WADEM, the Working Group, or individual members of the Working Group.

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SUMMARY OF KEY ISSUES

The Working Group has structured this Issues Paper into five parts and has identified several key issues for discussion.

Part 1: Understanding the contemporary interpretation of the multi-disciplinary health response to major events that threaten the health status of a community:

Issue 1: Definitions and terminology in "Disaster Medicine";

Issue 2: Getting to grips with the contemporary concepts and international trends in "Disaster Medicine"; and

Issue 3: Valuing personal attributes in "Disaster Medicine" practitioners.

Part 2: Developing an underlying scientific framework for linking theory to practice in "Disaster Medicine":

Issue 4: Creating a scientific framework(s) for "Disaster Medicine".

Part 3: Defining a conceptual framework and general principals to develop "International Standards and Guidelines on Education and Training for the Multi-disciplinary Health Response to Major Events that Threaten the Health Status of a Community":

Issue 5: Where are we now? Getting to grips with the contemporary concepts and international trends in "Disaster Medicine" education and training;

Issue 6: Where do we want to get to? Identifying contemporary, evidence-based education and training standards and guidelines for "Disaster Medicine" education and training programs; and

Issue 7: How do we get there? Overcoming barriers to introducing the International Standards and Guidelines.

Part 4: Maintaining the momentum—improving international collaboration:

Issue 8: Exploring the feasibility of an ongoing, international, collaborative network of "Centres of Excellence" in "Disaster Medicine" research and/or education.

PART 5: Additional input

Issue 9: What other issues would you like to bring to the attention of the Working Group?

PART 1: UNDERSTANDING THE CONTEMPORARY INTERPRETATION OF THE MULTI-DISCIPLINARY HEALTH RESPONSE TO MAJOR EVENTS THAT THREATEN THE HEALTH STATUS OF A COMMUNITY

The Working Group suggests that there is a need to understand the contemporary interpretation of the health response to "disasters", as the evidence-base to support informed, relevant and dynamic education and training programs of the future.

ISSUE 1: Definitions and terminology in "Disaster Medicine"

1.1. Definitions of "Disaster" and of "Disaster Medicine"—The Working Group has identified "Definitions" as an issue and seeks input on:

1.1.1. Contemporary international definitions of "Disaster" and of "Disaster Medicine"; and

1.1.2. Suggestions for clarifying these definitions, particularly from the perspectives of health issues related to major events.

1.2. Terminology of "Disasters" and of "Disaster Medicine"—The Working Group recognises that despite previous attempts to find international agreement on terminology in this dynamic field, there currently either is a lack of consensus on terminology, or the current "Standard Definition Sets" are not well-known. In addition, the Working Group also believes that these "Standard Definition Sets", although useful in their context, are not adequately inclusive of contemporary perspectives. The Working Group has identified "Terminology" as an issue and seeks input on:

1.2.1. Contemporary alternatives to the terms "Disasters" and "Disaster Medicine";

1.2.2. International standard definitions/terminology sets; and

1.2.3. Suggestions for clarifying terminology.

ISSUE 2: Getting to grips with the contemporary concepts and international trends in "Disaster Medicine"

The Working Group suggests that there is a need to understand the contemporary interpretation of the health response to "disasters", in terms of: (1) the scope (classifications) of "Disaster Medicine"; (2) contemporary concepts and principles; (3) emerging influences and drivers; (4) conceptual frameworks for understanding "Disaster Medicine"; (5) the literature on the epidemiology and the science of "Disaster Medicine"; (6) learning from case studies of recent "Major Events"; and (7) the implications of having to maintain normal functions whilst also managing the "extraordinary event"?

Thus, the Working Group asks if the following list adequately represents a contemporary scope (classification) of major events that may threaten the health status of a community: (1) mass gatherings; (2) major incidents; (3) technological dis-

asters; (4) natural disasters; (5) public health crises; and (6) complex humanitarian emergencies. Ultimately, the Working Group must adopt an internationally agreed upon scope (classification) of “Disasters” and of “Disaster Medicine”.

2.1. Scope (classifications) of “Disasters” and of “Disaster Medicine”—The Working Group has identified the “scope (classification) of “Disasters” and of “Disaster Medicine” as an issue and seeks input on:

- 2.1.1. *International classifications of “Disaster” events;*
- 2.1.2. *Databases of “Disaster” events;*
- 2.1.3. *Descriptions, and their basis, of the scope of “Disaster Medicine”; and*
- 2.1.4. *Suggestions for clarifying the scope (classification) of “Disaster Medicine”.*

2.2. Contemporary concepts and principles—Most current “Disaster Medicine” practitioners and educators would underpin their practices with concepts and principles; however, these may not be explicit nor shared widely. The few text books on “Disaster Medicine” are variable in using an approach based on “concepts and principles”. Likewise, the few journals devoted to “Disaster Medicine” and the “Disaster Medicine” articles in general journals, address concepts and principles in a fragmented manner. As a consequence, there is an emerging range of major concepts and principles that are evolving, and, as yet, poorly defined in their application or role in “Disaster Medicine. The Working Group has identified defining “contemporary concepts and principles” in “Disaster Medicine” as an issue and seeks input on:

- 2.2.1. *Generally accepted concepts and principles that provide the base for the current practice of “Disaster Medicine” are international and should be confirmed as reasonable current practice;*
- 2.2.2. *Concepts and principles that are historical remnants and should be relegated to history;*
- 2.2.3. *The gaps in concepts and principles that should be updated to reflect current practices; and*
- 2.2.4. *Suggestions for clarifying concepts and principles.*

2.3 Emerging influences and drivers—The Working Group also has identified that there are a number of emerging influences and drivers for change in “Disaster Medicine”. Understanding these contemporary factors is a requirement if education and training programs not only are to be contemporary, but also, lay the base for the “graduate” to be able to adapt to change in the immediate future. **This is a major challenge for the International Disaster Medicine and Emergency Health Community!** The Working Group believes that there is “change in the wind”, and that this change needs to be described as a precursor to developing effective education and training programs to underpin the effective health response to disasters. At this time, the Working Group believes that this “change” is not well-articulated in the literature. To further clarify this issue, the

Working Group is supporting the preparation of a “White Paper” which will provide more detailed background information on specific health emergencies, including case reports and thematic reference articles. The Working Group has identified “emerging influences and drivers” of “Disaster Medicine” as an issue and seeks input on:

- 2.3.1. *Emerging influences and drivers impacting on the international practice of “Disaster Medicine”; and*
- 2.3.2. *Suggestions for clarifying emerging influences and drivers.*

2.4. Conceptual frameworks for understanding “Disaster Medicine”—Conceptual frameworks to describe and/or understand “Disaster Medicine” are a keystone for effective communication, to advance the science of “Disaster Medicine”, and to underpin education and training programs. The Working Group is keen to receive input on conceptual frameworks that are in use around the world, and then, to identify those that represent “Best Practice”. The Working Group has identified conceptual frameworks in “Disaster Medicine” as an issue and seeks input on:

- 2.4.1. *Conceptual frameworks that may be suitable to describe and understand the current or emerging international practice of “Disaster Medicine”; and*
- 2.4.2. *Suggestions for clarifying or developing contemporary conceptual frameworks.*

2.5. The literature on the epidemiology and the science of “Disaster Medicine”—The Working Group believes that it should take an evidence-based approach to its tasks. It recognises the importance of exchanging and discussing experiences and knowledge about major incidents, internationally and across professional disciplines. The Working Group will sponsor initiatives or publications that make available (peer reviewed) information, keynote articles, and relevant data with a view to improving the management of health emergencies and crises.

Whilst the Working Group will be inviting input on these specific approaches to the literature, the Working Group also believes that the international disaster medicine and emergency health community is so rich and diverse that there will be individuals and groups who already will have prepared papers addressing some of the above in total or in part. The Working Group:

- 2.5.1. *invites you to supplement the invited papers and to identify current Centres of “Disaster Medicine” research, including available resources and illustrative case histories;*
- 2.5.2. *wishes to receive suggestions on priorities for future research and action.*

From these reviews, the Working Group also will provide input to the WADEM Research Committee to assist that Committee in its tasks, one of which is the development of future research and action priorities in “Disaster Medicine”.

2.6. Learning from case studies of recent “Major Events”—The annual publication of the World Disasters Report typically includes a number of case studies that are used as examples to illuminate various aspects of “Disasters”. Other international organisations also provide a rich source of information about disaster epidemiology and from case studies. The Working Group believes that this style of analysis and presentation is a powerful adjunct to the more traditional quantitative approach to disaster reports and has great potential to assist the international disaster medicine and emergency health community to understand many aspects of “Disasters” and “Disaster Medicine”. It also believes that this style has great potential to assist learning in “Disaster Medicine” education and training programs. Towards these ends, the Working Group:

- 2.6.1. *invites case-study type input to help define the parameters and aid understanding of one or more aspects of “Disasters” and “Disaster Medicine”, and/or, to be used as exemplars for education and training programs in this field.*
- 2.6.2. *seeks input on your experiences reflected through case studies, to illuminate understanding of one or more aspects of “Disasters”, “Disaster Medicine” and/or “Disaster Medicine” education.*

2.7. The implications of having to maintain normal functions whilst also managing the extraordinary event—The Working Group is acutely aware that one of the significant implications of managing extraordinary events that are a threat to the health status of the community, is the maintenance of normal functions both within the community and by the emergency services. The Working Group believes that this adds an additional paradigm for both understanding the management of these events, and also for education and training. The Working Group invites input on:

- 2.7.1. *effective management strategies to maintain daily routine health services while managing unusual or extraordinary events;*
- 2.7.2. *the educational and training needs to underpin these management strategies.*

ISSUE 3: Valuing personal attributes in “Disaster Medicine” practitioners—The Working Group recognises that there is increasing acknowledgement that personal attributes and values are important in the practice of “Disaster Medicine”, and hence, must be included in education and training programs.

3.1. The Working Group recognises that the aspect of personal attributes is complex in an international environment. However, if education programs in “Disaster Medicine” are to be “International”, they will need to be informed by the identification of those personal attributes and values deemed to be important in the practice of “Disaster Medicine”. The Working Group seeks:

3.1.1. *input on your reflections and invites case studies on this important issue.*

PART 2: DEVELOPING AN UNDERLYING SCIENTIFIC FRAMEWORK FOR LINKING THEORY TO PRACTICE IN “DISASTER MEDICINE”

The Working Group suggests there is a need to develop scientific framework(s) in “Disaster Medicine” to not only link practice and experience to theory and general principles, but also to underpin sound pedagogy in “Disaster Medicine” education and training programs.

ISSUE 4: Creating a scientific framework(s) for “Disaster Medicine”—The Working Group seeks to identify the current status of scientific frameworks for “Disaster Medicine” as the basis for later discussion.

4.1. The Working Group seeks responses to the question, “Do adequate scientific frameworks exist for “Disaster Medicine”?”—The Working Group invites:

4.1.1. *direct input on scientific frameworks for “Disaster Medicine” in terms of theories, models, frameworks, or principles that eventually may link theory to practice in “Disaster Medicine”, and hence, provide the cognitive and practice base for underpinning sound pedagogy in “Disaster Medicine” education programs; and*

4.1.2. *input on international strategies to develop a research agenda and priorities for “Disaster Medicine.”*

4.2. Research agenda for “Disaster Medicine”—The Working Group will liaise with WADEM Research Committee to assist that Committee in its tasks, one of which is the development of a future research and action priorities in “Disaster Medicine”.

PART 3: DEFINING A CONCEPTUAL FRAMEWORK AND THE GENERAL PRINCIPLES TO DEVELOP “INTERNATIONAL STANDARDS AND GUIDELINES ON EDUCATION AND TRAINING FOR THE MULTI-DISCIPLINARY HEALTH RESPONSE TO MAJOR EVENTS THAT THREATEN THE HEALTH STATUS OF A COMMUNITY”

The Working Group suggests there is a need to recommend “best practice” and to develop International Standards and Guidelines on education and training based on the science of “Disaster Medicine” that also reflects the: (1) changing context of “Disaster Medicine” itself; (2) need for a multi-disciplinary approach, taking into account the different stages before, during, and after an event, and the importance of international exchange and cross border collaboration; (3) needs, vulnerabilities, possibilities, and coping capacities of the local community and people affected; and (4) contemporary influences and drivers, current concepts and principles, and the emerging conceptual frameworks of education and training programs addressing “health response to disasters”. The Working Group suggests that there is a need to consider strategies for the

implementation of evidence-based standards, quality assurance, and certification of existing and new education and training programs, and, possibly, of practitioners.

ISSUE 5: WHERE ARE WE NOW?—Getting to grips with the contemporary concepts and international trends in “Disaster Medicine” education and training.

5.1. What is the “State-of-the-Art” and what are the international trends in the structure of “Disaster Medicine” education and training programs?—The Working Group recognises the identification of the “state-of-the-art” of the structure of education programs in “Disaster Medicine” at the international level as an issue and seeks international input on:

5.1.1. The current structure of education and training programs in “Disaster Medicine”, and are they meeting current needs?

5.1.2. Current programs that are innovative and could be seen as “exemplars” or demonstrate “best practice” in the structure of “Disaster Medicine” education and training; and

5.1.3. Where are graduates of “Disaster Medicine” education and training programs currently utilised/employed?

5.2. What is the current pedagogy demonstrated in the process of “Disaster Medicine” education and training, and what emerging factors may be influencing this pedagogy?—The Working Group believes that it should identify at an international level, not only the structure of current programs, but also the current pedagogy of “Disaster Medicine” education and training, and what emerging factors may influence this pedagogy? The Working Group has identified the current pedagogy of “Disaster Medicine” education and training as an issue and seeks input on:

5.2.1. Current pedagogy of “Disaster Medicine” education and training;

5.2.2. Current programs that are innovative and could be seen as “exemplars” or demonstrate “best practice” in the pedagogy of “Disaster Medicine” education and training; and

5.2.3. Emerging educational concepts, principles, and frameworks, including generic education and “Disaster Medicine” specific influences, which may impact on this pedagogy?

5.3. Strengths and weaknesses of existing “disaster medicine” education and training programs—In seeking input through the previous two issues on current “Disaster Medicine” education and training programs, the Working Group would value your appraisal of the “strengths and weaknesses” of existing “Disaster Medicine” education and training programs. The Working Group wishes to identify the strengths and weaknesses of existing “Disaster Medicine” education and training programs and seeks input on:

5.3.1. your perceptions of the strengths and weaknesses of existing “Disaster Medicine” education and training programs with suggestions as to how the strengths may be retained, and the weaknesses may be eliminated in future programs.

5.4. What models of “Standards and Guidelines” for education and training exist in kindred fields and may serve as a model for International “Disaster Medicine”?—The Working Group is aware that throughout the world there are many current situations in which “standards and guidelines” have been prepared in various educational settings. These guidelines often are used by professional organisations to provide guidelines to educational bodies for the conduct of courses and requirements that must be met if they wish their courses to be accredited by the professional organisation. The Working Group seeks input:

5.4.1. on examples of models of “standards and guidelines” for educational programs that may be useful to inform the development of such a model for “Disaster Medicine”.

ISSUE 6: WHERE DO WE WANT TO GET TO? Identifying contemporary evidence-based education and training standards and guidelines for “Disaster Medicine” education and training programs—The Working Group wishes to encourage a medium term vision for “Disaster Medicine” education and training and sets this issue in a five-year time frame.

6.1. “Disaster Medicine” education and training—a systems approach?—In considering the future, the Working Group suggests that there may be value in exploring a “systems approach” to “Disaster Medicine” education and training. The Working Group seeks guidance on the usefulness of a systems approach to “Disaster Medicine” education and training.

6.1.1. Would a systems approach be feasible in considering future international programs in “Disaster Medicine” education and Training?; and

6.1.2. If so, what would be the components and relationships in such a model?

6.2. Identifying the levels and scope of practice for “Disaster Medicine” education and training programs—In starting to construct a framework to structure education and training programs in “Disaster Medicine”, the Working Group has given initial consideration to the attributes listed above, and as outlined in Appendix 3. Readers are reminded that Appendix 3 is reflective of initial considerations only and is offered for your consideration, debate, and informed input.

The Working Group is aware that there are very successful similar multi-level programs in other disciplines. For example, in emergency cardiac care, there is a full suite of articulated community-based and professional courses in Basic and Advanced Life Support. The Working Group would be keen to benefit from lessons learnt by these international programs.

The Working Group has identified the levels for education and training for “Disaster Medicine” personnel as an issue and seeks input on a medium-term view of five years:

6.2.1. *How many levels should be developed in the scope of "Disaster Medicine", who is the target group, and what is the general description (scope of practice) for each level?*

6.2.2. *Should the Working Group develop standards and guidelines for all levels or just selected levels?*

The Working Group believes that while consideration of content in "Disaster Medicine" education and training programs eventually will need to be discussed, the definition of content can be left to a later time after the levels and scope of practice have been resolved.

6.3. **What general education principles should be considered to underpin these education and training programs?**—As a preliminary exercise, the Working Group has explored the feasibility of defining a conceptual model for multi-disciplinary "Disaster Medicine" education and training and believes that it will be possible to achieve consensus on the principles of such a conceptual model during the October Conference. An initial set of attributes or components of a conceptual model are listed below as the basis for further discussion: (1) multi-disciplinary programs; (2) vocational focus; (3) case or scenario-based framework; (4) themed approach; (5) core and electives; (6) modular approach; (7) supervised practical experience; (8) a competency-based approach; (9) competencies within a conceptual framework. These attributes are outlined further in Appendix 4.

The Working Group has identified the principles of education and training programs for "Disaster Medicine" personnel as an issue and seeks input on:

6.3.1. *General principles that should be considered to underpin these education and training programs of the future.*

6.4. **Achieving recognition for "Disaster Medicine" practitioners**—The Working Group is keen to receive input on the emerging trends in the employment and utilisation options for graduates of "Disaster Medicine" education and training programs at various levels. There is a belief that there are increasing opportunities for "Disaster Medicine" graduates at local, regional, national, and international level. Further, given this issue relates to "the future", where should, and where could, "Disaster Medicine" graduates be employed or utilised in the future? The Working Group seeks guidance on:

6.4.1. *Potential employment/utilisation of "Disaster Medicine" graduates of various levels;*

6.4.2. *The adequacy of current recognition of "Disaster Medicine" practitioners; and*

6.4.3. *Is there a demand for international credentialing of "Disaster Medicine" practitioners?*

6.5. **Endorsement of "Disaster Medicine" education and training programs**—Para. 5.1.1 raised the possibility of developing an international list of "Disaster Medicine" education and training programs that, in time, could become a "Register of Approved Education and Training Programs in "Disaster

Medicine". The Working Group sees potential benefits in networking between education providers and in providing the international disaster medicine and emergency health community with a list of available education programs. The Working Group seeks guidance on:

6.5.1. *The pros and cons of developing external/professional endorsement of "Disaster Medicine" education and training programs with international recognition.*

6.6. **Framework for standards and guidelines on education and training for the multi-disciplinary health response to major events which threaten the health status of a community**—Given that this consultation process has identified models of standards and guidelines for education and training programs in other situations, and given the Working Group is charged with developing Standards and Guidelines for "Disaster Medicine" education and training programs, the Working Group is keen to receive input on how a framework can be structured for developing standards and guidelines for "Disaster Medicine" education and training programs.

Given the earlier issue which identified models used in other settings, the Working Group seeks guidance on:

6.6.1. *A suitable framework for Standards and Guidelines for "Disaster Medicine" education and training applicable internationally.*

ISSUE 7: HOW DO WE GET THERE?—Overcoming barriers to introducing the International Standards and Guidelines

7.1. **Overcoming Barriers**—The Working Group is committed to achieving measurable outcomes on this project. Of equal importance to the issues previously raised is guidance on an implementation strategy. The Working Group is well aware that, in working at an international level, particularly in a relatively new discipline, there are real and significant barriers to "change". Change is a normal feature of life and of professional development. Although there are general principles guiding change management and implementing innovations, the Working Group is aware that it is likely that there will be specific issues relating to the "Disaster Medicine" field that may act as barriers or limitations to the development and implementation of the International Standards and Guidelines in "Disaster Medicine" education and training.

However, identifying potential barriers although useful, in itself, is insufficient without thoughtful and collaborative consideration of appropriate strategies to address effective and efficient implementation. The Working Group seeks guidance on:

7.1.1. *Identifying potential barriers to the further development and implementation of International Standards and Guidelines, and*

7.1.2. *What strategies can be examined to overcome these potential barriers?*

7.2. **Overseeing the development and implementation of the consequent International Standards and Guidelines**—Of particular interest to the Working Group is a broad-based input on whether “international recognition” of education and training programs and/or of practitioners in “Disaster Medicine” is desirable or feasible. There are current moves to improve international recognition, external accreditation, and mutual recognition of academic/professional organisations, educational programs, and practitioners in public health medicine and in emergency medicine. Are there lessons learnt from these disciplines that may be of use to “Disaster Medicine”?

Of critical importance to any consideration on this issue is consideration of effective models, infrastructure, quality assurance, credentialing, and resources if this objective is to be achieved. In particular, what role should WADEM have in this process?. Therefore, The Working Group seeks guidance on:

- 7.2.1. *How effective and efficient International oversight can be achieved; and,*
- 7.2.2. *What role should WADEM have in this process?*

PART 4: MAINTAINING THE MOMENTUM—IMPROVING INTERNATIONAL COLLABORATIONS

ISSUE 8: *Exploring the feasibility of an ongoing international, collaborative network of “Centres of Excellence” in “Disaster Medicine” research and/or education*—Developing this International Network can proceed separately, but in parallel to the development of the International Guidelines and Standards. The Working Group seeks guidance on:

- 8.1. *The scope, interest in, and methods of establishing a network of collaboration in “Disaster Medicine” research and/or education.*

The Working Group also invites *individuals and organisations to register their interest* in contributing to such a network by forwarding to the Working Group (fa082693@skynet.be) a registration of interest with their contact details in the knowledge that their contact details will be distributed during and following the October international meeting.

PART 5: ADDITIONAL INPUT

ISSUE 9: *What other issues would you like to bring to the attention of the Working Group?*—The Working Group recognises that in its preparation of this Issues Paper, it may have overlooked other significant issues and invites you to submit papers on additional issues you see as important to clarify this topic or in addressing the Working Group’s terms of reference and ultimate objectives.

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Education Committee: The World Association for Disaster and Emergency Medicine (WADEM)

Information about WADEM is provided on the WADEM web site at <http://wadem.medicine.wisc.edu>.

Mandate from the 13th WCDEM – Melbourne, 2003

1. During the World Congress (WCDEM-13) in Melbourne, the Education Working Group had a discussion based on the original question of the need for a Masters Degree in “Disaster Medicine”. A consensus was reached that included a ‘WADEM vision statement’, two main objectives, an answer to the questions ‘why?’ and ‘why WADEM’, an ‘Action Plan’ and an agreement on the approach.
2. One of the outcomes of the Melbourne meeting, and endorsed by the closing session of the Congress, was to call a meeting of the Education Working Group within six months of the Melbourne Congress and to prepare for an open, international meeting within 12 months of the Melbourne Congress.
3. The “Melbourne Statement” also endorsed by the closing session of the Congress also provided direction to WADEM that is being fulfilled by the proposed activities of the Working Group. (Appendix 2). The Working Group is responding to the requirements of the Melbourne Congress.

Justification

Justification for WADEM to take an initiative to establish international standards and guidelines with respect to “Disaster Medicine” education and training include:

1. There is a need for guidance on best practice and international standards, given the proliferation of all kind of courses and degrees, sometimes with commercial motives;
2. WADEM has both the moral/scientific duty and the possibility/capacity to take the lead in this, by centralising the wealth of existing experience and knowledge, and facilitating an open discussion and consensus on best practice; and
3. WHO Officers, among others, suggested or informally requested WADEM to provide expert advice with respect to access to educational programs, standardization of curricula and quality assessment of courses.

Terms of Reference

The terms of reference of the Working Group focus on the Working Group taking the necessary steps to investigate and report to the 14th WCDEM in Edinburgh, May 2005, on *“fostering the development of international standards and guidelines for the education and training and recognition of disaster and major incident managers and other members of the healthcare community”* who contribute to the multi-disciplinary response to major events which actually or potentially threaten the health status of a community. These major events include, but are not necessarily limited to,

complex human emergencies, natural events, public health crises, major incidents, and mass gatherings. Note: The underlined section has been added to the original term of reference by the Working Group. In perusing its mandate, the Working Group raises in this Issues Paper a broader approach than just Degrees in “Disaster Medicine” at the Masters level.

Principles

The Working Group believes that the following principles should be used to help focus on achieving the final objective:

1. Be ethically based, and include socio-economic and psychosocial issues;
2. Focus on the health workforce, both professional and community, as the primary audience;
3. Include core health perspective elements for other first responders (eg police, fire, local authorities), as well as including core management elements (broader than providing health care) for the health work force;
4. Focus on education and training, whilst being informed by the “science” of “Disaster Medicine”;
5. Whilst the background would be a conceptual model, it should draw a careful balance between theory and the practical applications;
6. Be influenced by recent developments in managing major health events from the civil perspective;
7. Adopt a modular and scenario-based approach to education and training; and
8. Structured to acknowledge the dynamic and multidisciplinary nature of this discipline and of the co-disciplines, and also the constantly changing world environment, thereby, facilitating and encouraging regular updates to maintain currency of application.

Consultation

Since the Melbourne Congress in May 2003, the Working Group has had four, two-day meetings in each of Brussels, Barcelona, Athens and Edinburgh. This Issues Paper is being circulated widely to the international “Disaster Medicine” and emergency health community. The widest possible input is being actively sought by the Working Group.

Following the October open international Conference, to be held in Brussels, a meeting will be held in early 2005, possibly in the US, to prepare the final report for the 14th WCDEM in Edinburgh in May 2005.

Further information about the Working Group

Requests for further information about the Working Group should be forwarded electronically by email to Dr. Geert Seynaeve as a Chair of the Working Group at the following e-mail: fa082693@skynet.be.

APPENDIX 2

Melbourne Statement: 13th Congress of the World Association of Disaster and Emergency Medicine (WADEM)

Whereas, disasters and emergencies include exceptional events caused by natural hazards and man-made factors, including armed conflict;

Whereas, disasters have global consequences and continue to result in large numbers of potentially preventable deaths and human suffering;

Whereas, disasters create major problems for the public health of populations and the health systems of countries affected by disasters, especially poor countries;

Whereas, there exists a large number of organisations and professional disciplines worldwide that are involved in disaster prevention, preparedness, response, and recovery;

Whereas, there exists a need to develop collaborative relationships between such organizations and disciplines;

Whereas, there is a need for better understanding of the epidemiology of disasters and to rigorously evaluate the effectiveness of preventive and response measures;

Whereas, there currently exist standardized structures for the development of evidence-based indicators and standards for disaster response and for the conduct of structured research (Health Disaster Management: Guidelines for the Evaluation and Research in the Utstein Style);

Whereas, there is a paucity of international systems that independently collate and transfer experiences into improved understanding of these mechanisms.

Thus:

WADEM will focus more of its energies on the public health aspects of disasters and emergencies;

WADEM will contribute to the development and dissemination of knowledge concerning disaster epidemiology, policy, planning, response, recovery, and program evaluation;

WADEM will promote international professional standards and educational programs for persons involved in disaster prevention, preparedness, response, and recovery;

WADEM will facilitate the development of global multidisciplinary collaborative relationships with other organizations and institutions committed to disaster prevention, preparedness, response, and recovery;

WADEM will coordinate a series of consultations to prepare a formal framework of action that will be presented at the 14th World Congress for Disaster and Emergency Medicine to be convened in Edinburgh in 2005.

APPENDIX 3

Category	Attribute							
	Target	Description	Core & Electives	Delivery	Formal Assessment	Certificate Issue	CPD	Instructor Level
Level 1	Community	Civilian, community-based emergency preparedness and awareness	Common core for all, plus local needs	Short, didactic, competency-based, manageable	No	Certificate of Attainment (time limited)	No	Yes
Level 2	First responders: Basic	First contact, primary care providers, all disciplines and responders. Categories: Bronze (provider); Silver (tactical); Gold (strategic). Basic general emergency preparedness (US model), MIMS (UK model). Basic discipline, specific fundamentals	Common core for all, plus local needs	Short, didactic, competency-based, manageable	Yes	Certificate (time limited)	Yes	Yes
Level 3	First responders: Advanced or specific disciplines or speciality areas	First contact, primary care providers, all disciplines and responders. Categories: Bronze (provider); Silver (tactical); Gold (strategic). Advanced general emergency preparedness (US model), MIMS (UK model). Specific discipline—speciality areas, e.g., CBNR, Communications.	Common core for all, plus local needs	Short, didactic, competency-based, case-related, manageable	Yes	Advanced certificate (time limited)	Yes	Yes

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Appendix 3—DRAFT for discussion purposed only (continued on next page) (CBNR = chemical, biological, nuclear, radiological; CC = critical care; CPD = continuing professional development; EM = emergency management; MIMS = major incident management system; PH = public health; UK = United Kingdom; US = United States)

Category	Attribute							
	Target	Description	Core & Electives	Delivery	Formal Assessment	Certificate Issue	CPD	Instructor Level
Level 5	Professional—Masters degree	Formal education courses at professional level, e.g., Bachelor or Masters for recognition as Professional". Course curriculum to meet local, national, and international standards. Consider external accreditation by international body.	Core of CC, EM, and PH, plus electives related to discipline and regional needs.	As determined by specific academic or professional organizations.	Yes	Bachelor or Masters Degree. Issued by specific academic or professional organization	Yes	Academic or professional staff
Level 6	Specialist/Consultant—Masters plus practical experience	For holders of formal education course award at Masters level to add formal, supervised, mentored professional experience in real time "Disaster Medicine" situations. Course curriculum to meet local, national, and international standards. Consider external accreditation by international body.	Core of CC, EM, and PH, plus electives related to discipline and regional needs.	"In the field" specification of supervised, mentored professional experience in real time "Disaster Medicine" situations.	Yes	Formal course award, e.g., Fellowship or specialist endorsement as determined by specific academic or professional organization	Yes	Academic or professional staff
Level 7	Research, national leader—Doctoral	For holders of formal education course award at Masters level to add formal training in research and/or delivery and/or management and/or education at doctoral level—e.g., professional doctorate with coursework and major thesis. Could be PhD by major thesis only. Course curriculum to meet local, national, and international standards. Consider external accreditation by international body.	Core of CC, EM, and PH, plus electives related to discipline of doctoral studies.	As determined by specific academic or professional organizations.	Yes	Doctoral degree issued by specific academic organization	No	Academic or professional staff

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Appendix 3—continued (CBNR = chemical, biological, nuclear, radiological; CC = critical care; CPD = continuing professional development; EM = emergency management; MIMS = major incident management system; PH = public health; UK = United Kingdom; US = United States)

APPENDIX 4

General Education Principles That Could Be Considered to Underpin “Disaster Medicine” Education and Training Programs

As a preliminary exercise, the Working Group has explored the feasibility of defining a conceptual model for multi-disciplinary “Disaster Medicine” education and training and believes that it will be possible to achieve consensus on the principles of such a conceptual model during the October Conference. An initial set of attributes or components of a conceptual model are outlined below as the basis for further discussion:

- o **Multi-disciplinary programs**—The operational context of “Disaster Medicine” is increasingly multi-disciplinary and the Working Group believes that education programs in this field should reflect this operational reality.
- o **Vocational focus**—Education and training programs for all levels of “Disaster Medicine” practitioners should be based on a vocational focus with the required underpinning knowledge, understanding, skills and attitudes integrated in the program. The education program should meet, as a minimum, local standards and vocational requirements and also reflect in the international standards which may result from this international consultative process.
- o **Case or scenario-based framework**—In any education program, educational objectives need to be specified and the various teaching methods need to relate to those objectives. A common teaching method in health professional education is that of “case or scenario-based” education. The Working Group believes that “Disaster Medicine” education lends itself naturally to exploring this methodology as a keystone component of a conceptual framework.
 - In case or scenario-based models, the selected cases/scenarios:
 - integrate the biomedical sciences, health social sciences, clinical sciences, public health sciences, and emergency management standards;
 - integrate the required knowledge, skills, and attitudes in a holistic approach;
 - facilitate the development of cognitive and management skills in participants;
 - facilitate developing the ability to change in the setting of the modern, dynamic, evolving, and integrated community-based emergency response system;
 - facilitates the use of concepts/principles in applying the information;
- facilitates a research/evidence-based approach to practice and establishes the foundation for learning from evaluations of major events; and
- lend themselves to be student-centered and suitable for flexible delivery strategies.
- o **Themed approach**—In structuring education programs, amongst the recent initiatives is the introduction of a themed approach. In such programs, the content is arranged in themes which integrate specific disciplines and attempt to introduce the student to a more integrated, real-life curriculum.
- o **Core and electives**—For all of these events, there also exists what can be called the ‘core knowledge’, which is an educational need common to all health workers, and ‘elective knowledge’ can be added, with more in-depth knowledge and skills, according to professional background and personal interest.
- o **Modular approach**—The above framework appropriately facilitates a modular approach. By offering international standards and guidelines in a modular way, it will be possible to choose different core units and a number of elective units, depending on existing risks and hazards, the size and possibilities of universities, and individual requirements or preferences.
- o **Supervised practical experience**—The very nature of “Disaster Medicine” requires a hands-on approach as reflected in the traditional “tabletop” and field exercises. The Working Group is aware of an increase in complexity and need to demonstrate immediacy of skills in major events that may be a threat to the health of a community. Thus, it has been suggested that “Disaster Medicine” courses, at least at the more senior level, should include a compulsory period of supervised practical experience over a defined period before receiving course awards. This core requirement would be in addition to the didactic phase of the course.
- o **Competency-based approach**—The competency movement in education and training is not new, although it has reached greater recognition in the last 10 years or so and has been most strongly linked with developing training in the industrial sector and has been linked to improving productivity of a country in the international arena.

The Columbia University School of Nursing Center for Health Policy, supported by the Center's for Disease and Trial and Prevention, and the association of teachers of preventive medicine, have developed competency statements for all public health workers in the setting of bio-terrorism and emergency readiness. These competencies are available through the Columbia University's School of Nursing web site, <http://www.nursing.hs.columbia.edu>.

Some authors have suggested that the competency approach is reductionist, component driven, and inappropriate in professional education programs. These authors argue that this approach is unable to develop higher order cognitive processes such as decision-making, a key attribute required of "Disaster Medicine" practitioners. However, other authors argue that it is possible to develop these higher-order competencies in the setting of a competency-based approach.

The Working Group is keen to receive input from the "Disaster Medicine" and emergency health community on the applicability of the competency-based

approach for some, or all levels in "Disaster Medicine" education and training at the international level. Of particular interest is whether such competency statements are sufficiently generic to be applicable internationally, or whether they are set within the local context.

- o **Competencies within a conceptual framework**—The Working Group has attempted to explore the usefulness of the competency approach within the conceptual framework previously outlined. The competencies required for persons involved in the 'management of events or potential events that are a major threat to health' can be situated at the intersection of three main 'disciplines'.

The management of major health incidents includes clinical care, public health, and emergency management. The clinical field here is not reduced to skills and competencies belonging to emergency medicine, but includes e.g., psychosocial aspects and contributions from the other health disciplines.