Finding and Using Evidence to Inform Health-System Responses for Disaster Relief

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Objectives

• To give an overview of ‘lessons’ to consider as part of efforts to support evidence-informed planning and decision-making for health-system responses for disaster relief

• To describe a process that can be used to support the development of evidence-informed guidance

• To describe and simulate the use of key resources that can be used to find and use relevant and high-quality research evidence in a timely manner

• Describe additional methods and tools that can be used to support health-system responses for disaster relief

*** Please feel free to ask questions during the presentation (there are no ‘stupid’ questions)
Lesson 1: Be Clear About the Goal

- Evidence-informed policymaking means using the best available data and research evidence – systematically and transparently – in the time available in each of
  - Prioritizing problems and their causes (agenda setting)
  - Deciding which option to pursue (policy development)
  - Ensuring that the chosen option makes an optimal impact at acceptable cost (policy implementation)
  - ... alongside the institutional constraints, interest-group pressure, values and other political influences on the policy process
Types of evidence

- Research evidence (examples)
  - Systematic reviews
  - Randomized Controlled Trials (RCTs)
  - Qualitative studies
  - ‘Local’ data (local as in being relevant to the country, state/province, region or city in which information is needed)
- Tacit knowledge
  - Local knowledge
  - Personal experiences
What Aspects of Planning for Health-System Responses to Disaster Relief Could Research Evidence be Used?

• Preparation and planning?
• Responses?
• Monitoring and evaluation to know what worked in order to inform future efforts?
Lesson 2: Pick Locally Appropriate Ways to Get There

• Signal that research evidence is valued as a key input to the policy process [Climate for research use]
• Produce and synthesize relevant research [Prioritization]
• Make research evidence easy to use [Translation]
  • Communicate it effectively [Packaging and push]
  • Make it available when policymakers and stakeholders need it and in a form that they can use [Facilitating pull]
  • Prompt policymakers and stakeholders to use it in decision-making [Pull]
• Convene forums where health-system challenges can be discussed with key stakeholders who are informed about the best available research evidence [Exchange]
Lesson 3: Do What You Can From the ‘Outside’

Some examples from the McMaster Health Forum

1) One-stop-shops for research evidence (e.g., Health Systems Evidence)
2) Rapid response units (e.g., delivering syntheses of research evidence in days or weeks instead of months or years)
3) Citizen panels, informed by citizen briefs (to identify citizens’ values and preferences)
4) Stakeholder dialogues, informed by evidence briefs (to deliberate about actions that can be taken by different stakeholders)
5) Guidelines and health systems guidance (e.g., contextualizing guidance workbook)
6) Capacity building (e.g., Health Systems Learning – workshop delivered in more than 30 countries)

• These approaches address prioritization (2-4 & 5), packaging and push (1), facilitating pull (1-6) and exchange (3, 4)
• All of the approaches seek to support evidence-informed health systems (1-6) and some specifically use a collective problem-solving approach (3-4)
Lesson 4: Do What You Can From the ‘Inside’

• E.g., Ontario Ministry of Health and Long-Term Care
  1) Strong messages from all levels of the ministry
  2) Health System Research Fund awards (all of which have to respond to ministry-articulated priorities, and 25% of budgets held back for ‘Applied Health Research Questions’)
  3) Literature reviews and rapid responses
  4) Research Evidence Tool
  5) Capacity-building workshops (delivered by the McMaster Health Forum)

• These efforts address climate (1), prioritization (2), facilitating pull (2, 3, 5), and pull (4)
Lesson 5: Make a Sustained Commitment

• We can point to many examples of direct impact on the policy process
  • E.g., seven weeks from the ‘call’ to a cabinet decision (with six Steering Committee calls, 26 key informant interviews, a synthesis of what the research tells us and a framing of the policy issues, a stakeholder dialogue, and a briefing about what was learned)

• We see a virtuous cycle of more evidence-informed policymaking leading to
  • More evidence-informed interest-group pressure
  • More policy-relevant research

• Supports continuous learning between partners engaged in a collective effort to support evidence-informed policymaking
A Process to support the development of evidence-informed guidance Health systems guidance contextualization framework

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(Alvarez & Lavis, 2016)
STEP 1 – Clarify the problem that needs to be addressed

1) What is the problem?

2) How did the problem come to attention, and has this process influenced the prospect of it being addressed, in addition to the guidance?

3) What indicators can be used or collected to establish the magnitude of the problem and to measure progress in addressing it?

4) What comparisons can be made to establish the magnitude of the problem and to measure progress in addressing it?

5) How can the problem be framed (or described) in a way that will motivate different groups?
STEP 1 – Clarify the problem that needs to be addressed

- Describe the problem in terms of whether it relates to one or more of:
  - A risk factor, disease or condition
  - A program, service or drug currently being used
  - Current health system arrangements within which programs, services and drugs are provided
    - Governance arrangements
    - Financial arrangements
    - Delivery arrangements
  - Current degree of implementation of an agreed course of action (e.g., a policy)
    - Patients / citizens (e.g., lack of awareness of a free program)
    - Health workers (e.g., lack of adherence to guidelines)
    - Organizations (e.g., lack of performance management of staff)
    - System (e.g., lack of enforcement of regulations)
STEP 1 – Clarify the problem that needs to be addressed

• Examples of possible components of the problem
  • A risk factor, disease or condition – Some countries may not know what types of injuries they should have plans to treat in emergency situations. Other?
  • A program, service or drug currently being used – Programs may lack flexibility to respond to high volumes of clients in emergency situations. Other?
  • Current health system arrangements within which programs, services and drugs are provided
    • Governance arrangements – Fragmented accountability. Scope of practice for health workers during emergencies? Other?
    • Financial arrangements – Some countries likely do not have sufficient funds to provide a comprehensive response in emergency situations. Other?
    • Delivery arrangements – Health workers not trained to provide care in emergency situations. Other?
  • Current degree of implementation of an agreed course of action (e.g., a policy) – Differing implementation of emergency preparedness plans within and between countries. Other?
STEP 1 – Clarify the problem that needs to be addressed

- Initially a brainstorming exercise
- Most of problem definition involves finding local data
- Two main types of research evidence can support problem definition
  - Administrative database studies or community surveys that make comparisons across countries (or districts or organizations)
  - Qualitative research that addresses the meanings that individuals or groups attach to the problem, indicators and comparisons
STEP 1 – Clarify the problem that needs to be addressed (where to find research evidence)

- An example of a problem - Some countries likely do not have sufficient funds to provide a comprehensive response in emergency situations

- Steps on paper
  - Draw up a list of words that capture the problem (e.g., emergency situations), synonyms for each problem and factor (e.g., Emergency OR Disasters), and alternative spellings for each synonym (e.g., singular/plural, American/British and use OR to separate them.
  - AND decide whether systematic reviews or single research studies are your focus (for now focus on studies)
  - AND provide additional details that limit the search... and use OR to separate them (e.g., funds, financial arrangements, cash transfers).

- 1.2 Steps in the Web
  - Go to PubMed and click on “Topic-specific queries”
  - Click on “Health services research queries”
  - Enter your search terms (using Boolean operators)
  - Select the preferred type of study (and then GO)
    - Administrative database studies (or community surveys)
      - Process assessment
      - Qualitative research
STEP 1 – Clarify the problem that needs to be addressed (where to find research evidence)

Health Services Research (HSR) PubMed Queries

This page provides specialized PubMed searches on healthcare quality and costs. After running one of these searches, you may further refine your results using PubMed. Results of searches on this page are limited to specific health services research areas. Additional PubMed search filters are available, including a filter for Systematic Reviews.

Search by HSR Study Category

This search finds citations that correspond to a specific health services research study category. The search filters are based on the work of Haynes RB et al. See the filter table for details.

Search: (Emergency OR Disasters) AND (funds OR financial arrangement)
**STEP 1 – Clarify the problem that needs to be addressed (where to find research evidence)**

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<td>The International Finance Facility for Immunisation: stakeholders’ perspectives</td>
<td>Crocker-Buque T, Mounier-Jack S.</td>
<td>Bull World Health Organ. 2016 Sep 1;94(9):687-693.</td>
<td>2016</td>
<td>277708474 Free PMC Article</td>
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STEP 1 – Clarify the problem that needs to be addressed (where to find research evidence)

• **Real-time examples (~15 minutes)**
  - Identify a health systems problem related to the response to disaster relief that you are grappling with (or have grappled with in the past) and write down possible search terms
  - Search for a qualitative study that addresses stakeholders’ views about and experiences with the problem
  - Search for a research study that compares indicators (related to the problem) over time across Latin American countries
STEP 2 – Frame the options

1) Has an appropriate set of options been identified to address the problem?

2) What **benefits** are important to those who will be affected and which benefits are likely to be achieved with each option?

3) What **harms** are important to those who will be affected, which harms are likely to arise with each option and how can these harms be mitigated?

4) What are the **local costs** of each option, and is there local evidence about their cost-effectiveness?

5) What **adaptations** might be made to any given option and how might they alter its benefits, harms and costs?

6) Which **stakeholder’s views and experiences** might influence the acceptability of each option and its benefits, harms and costs?
STEP 2 – Frame the options

Examples of options to address the problem (among many that could be considered)

1. Design and implement approaches to efficiently allocate needed financial resources in disaster situations based on local contexts (financial arrangement)

2. Design and implement approaches to make optimal use of health human resources during disasters that result in mass casualties, which include temporary expansion of scope of practice for some health professionals (governance arrangement), use of lay health workers (delivery arrangement) and training (governance arrangement and implementation consideration)

3. Develop packages of care/care pathways for common injuries (e.g., burns and fractures) and diseases/infections based on resources that are likely to be available during disasters (delivery arrangement)
STEP 2 – Finding research evidence to frame the options: type of evidence needed

- Benefits of each option (or each element within an option)
  - (Reviews of) Effectiveness studies
- Harms of each option
  - (Reviews of) Effectiveness or observational studies
- Cost-effectiveness of each option
  - (Reviews of) Cost-effectiveness analyses (but ideally local CEAs)
- How and why the option works
  - (Reviews of) Process evaluations (qualitative studies)
- Stakeholders’ views and experiences
  - (Reviews of) Qualitative studies
STEP 2 – Finding research evidence to frame the options: Where to find systematic reviews?

‘My health’
- McMaster PLUS (http://hiru.mcmaster.ca/)
  - Pre-appraised studies and reviews that address the full range of questions about clinical programs and services and about drugs
- Evidence Aid
  - Provide reliable, up-to-date evidence from systematic reviews on interventions that might be considered in the context of natural disasters and other major healthcare emergencies

‘Our health’
- Health Evidence (www.healthevidence.org)
  - Pre-appraised reviews that address questions about the effectiveness of public health programs

‘Our system’
- Health Systems Evidence (www.healthsystemsevidence.org)
  - Pre-appraised reviews and economic evaluations that address how to strengthen health systems and get cost-effective programs, services and drugs to those who need them
STEP 2 – Finding research evidence to frame the options: Where to find systematic reviews?

• An example from Health Systems Evidence

Unconditional cash transfers for assistance in humanitarian disasters: Effect on use of health services and health outcomes in low- and middle-income countries

Systematic review of effects | No specific country focus

...increases income, a key social determinant of health, in disaster contexts in low- and middle-income. CONCLUSIONS: Additional high-quality evidence (especially RCTs of humanitarian disaster contexts other than...
STEP 2 – Finding research evidence to frame the options: Where to find systematic reviews?

- **Real-time examples (~15 minutes)**
  - Identify an option for addressing the health systems problem that you ‘worked up’ earlier and write down possible search terms
  - Search for a systematic review of studies of the effects of the options you’re considering. Depending on whether you focus on the individual, the population or the systems, search on McMaster Plus or evidence aid; Health Evidence or Health System evidence.
STEP 3 – Identify implementation considerations

1) What are the potential barriers to the successful implementation of each option?

2) What strategies should be considered in order to facilitate the necessary behavioural changes among healthcare recipients/citizens?

3) What strategies should be considered in order to facilitate the necessary behavioural changes among healthcare professionals?

4) What strategies should be considered in order to facilitate the necessary organizational changes?

5) What strategies should be considered in order to facilitate the necessary system changes?
STEP 4 – Consider the broader health system context

1) How do delivery arrangements influence the possibility of each option being adopted and implemented successfully?

2) How do financial arrangements influence the possibility of each option being adopted and implemented successfully?

3) How do governance arrangements influence the possibility of each option being adopted and implemented successfully?
STEP 5 – Consider the broader political system context

1) Would current **political institutions** allow for or hinder each policy change?;

2) Which politically active group(s) might have an **interest** in (face concentrated or diffuse costs or benefits) and mobilize for or against each option?;

3) Does each option resonate with the **beliefs and values** of the government and the public? Is there any local research evidence on stakeholder’s views and experiences?;

4) Are there **external factors** which may press the issue forward or draw attention away from each option?
STEP 6 - Refine the statement of the problem, options and implementation considerations in light of health system and political system factors
STEP 7 – Anticipate monitoring and evaluation needs

1) Is monitoring necessary?
   • Is monitoring already in place or are new systems necessary?
   • What are the costs of establishing a new system?
   • Are findings going to be useful for change? What actions would occur if monitoring reveals things are not going as planned?

2) What should be measured?

3) Should an impact evaluation be conducted?

4) How should the impact evaluation be done?
STEP 8 – Make policy recommendations or decisions and identify advocacy and dissemination strategies

1) If applicable, has the public been engaged in the policymaking process?

2) Is a policy brief being developed to collate all of the analyses captured in the workbook?

3) Is a policy dialogue being planned to support evidence-informed policymaking

4) Are advocacy and dissemination strategies identified to support the implementation of the proposed changes?
Tools available to help develop health system responses for disaster relief – identifying the venue, considering advocacy and dissemination strategies

- Hazard Mitigation Planning Process (FEMA, 2016)
Tools available to help develop health system responses for disaster relief – identifying the venue, clarifying the topic / problem

• Risk assessment tools
  • Hazard Identification and Risk Assessment (HIRA) (Ontario Ministry of Community Safety and Correctional Services, 2016)
  • Threat and Hazard Identification and Risk Assessment Guide (THIRA) (Homeland Security, 2013)
  • Vulnerability and Capacity Assessment Guide (VCA) (International Federation of Red Cross and Red Crescent Societies, n.d.)
  • Hospital Safety Index (PAHO, n.d.)
Tools for implementation

• State Mitigation Plan Review (FEMA, 2016)
• Local Mitigation Plan Review Guide (FEMA, 2011)
• Hospital Safety Index (PAHO, n.d.)
• Guidelines for developing emergency simulations and drills (PAHO, n.d.)
Hospital Safety Index

• “Preliminary results indicate that the nonstructural elements (architectural elements, basic installations and equipment) are most vulnerable. More importantly, political commitment has proven to be an essential prerequisite for making technical progress in improving the safety of health facilities. Likewise, it is important to have a legal framework in place that guarantees action will be taken. Applying the Hospital Safety Index requires motivation and advocacy to ensure that hospital directors invest resources in improving safety” (PAHO, n.d.)
Conclusions

• Various types of evidence, including research evidence and tacit knowledge, can be used in health decision-making

• Many barriers exist to using research evidence in evidence-informed decision-making

• There are resources (e.g., one-stop-shops for research evidence), methods (e.g., evidence briefs, stakeholder dialogues, contextualizing guidance workbook) and tools (e.g., HIRA, Hospital Safety Index), which can be used as part of planning for health-system responses to disaster planning for disaster relief
References


Lewis S. Toward a general theory of indifference to research-based evidence. Journal of Health Services Research and Policy. 2007;12(3):166-172


THANK YOU!!

Questions???