Mapping the evidence: identifying evidence on natural disasters & humanitarian emergencies for Evidence Aid

Kate Misso¹, Caro Noake¹, Claire Allen², Mike Clarke² & Jos Kleijnen¹
Kleijnen Systematic Reviews (KSR) Ltd, York¹
Evidence Aid²
Introduction

• Evidence Aid commissioned KSR Ltd. for mapping searches
• Identification of evidence on natural disasters & other humanitarian emergencies
• Application of systematic (reviews) searching
• Resources included biomedical, health, nursing, economics and social sciences databases
• Analysis of yield of relevant trials by database
What is Evidence Aid?

- Established after the Indian Ocean Tsunami (Dec 2004)
- Founding members from Cochrane Collaboration
- Co-ordinated, international initiative
- Aim: improve effective & timely access to systematic reviews (SRs) on effects of interventions before, during & after natural disasters & other humanitarian emergencies, to improve health-related outcomes
- Which interventions work? Which don’t? Which need more research? Which might be harmful?
- Provide information to agencies and people preparing for, or responding to, disasters
- Team: Mike Clarke, Claire Allen & Bonnix Kayabu
Who are Kleijnen Systematic Reviews Ltd?

- Independent research consultancy established in 2005 by Professor Jos Kleijnen
- Undertake systematic reviews, health technology assessments, cost effectiveness analyses, support of guidelines development and literature searching
- Training in EBM, systematic review skills & information retrieval
- Variety of commissioners, including NICE, IQWIG, similar organisations in Europe and pharmaceutical companies
- Team of +20 reviewers, health economists, statistician & information specialists
- Info Team: Kate Misso & Caro Noake
- Combination of info retrieval & topic-specific expertise
Remit of the mapping search

• Mapping exercise, not a systematic review
• Identify relevant systematic reviews (SRs) and randomised controlled trials (RCTS)
• Topics... *Earthquakes, tsunami, flood, hurricane, tornado, manmade/nuclear/industrial accidents & disasters, emergency aid, relief workers, displaced populations, refugee camps, mass trauma, ferry & aviation disasters etc.*
• Search as widely as possible: databases from multiple disciplines, registers, websites, grey literature etc.
• Compile a list of relevant organisations & websites for later follow-up
• Limited time available (searches completed in June 2011)
Databases and sources

- RCT & SR study design filters used
- No language limits applied; restricted to human studies
- 23 bibliographic databases searched (inception to June 2011)
  - Medline, In-Process & Daily Update
  - Embase
  - CDSR
  - Central
  - DARE
  - NHS EED
  - HTA
  - PsycINFO
  - SSCI
  - CINAHL
  - HMIC
  - PILOTS
  - CORDIS
  - LILACS
  - CAB Global Health
  - Social Care Online
  - IBSS
  - ASSIA
  - Sociological Abstracts
  - OpenSigle (now called OpenGrey)
  - EconLit
  - C2-SPECTR
Themes

• ‘Seed’ references (n=14) & citation searching
• Explored humanitarian disaster themes (using IFRC & Save the Children classifications for disasters and emergencies, 2011)
• Grouped search facets into five overall themes:
  - Nuclear & industrial incidents
  - Mass casualty incidents (natural disasters & other accidents)
  - Refugees
  - Emergency & planning
  - Emergency & infrastructure
• ‘War & conflict’ theme was not included in mapping exercise (to be investigated at later date)
Retrieval

• Where possible, applied objectively-derived methodological filters (identified from InterTASC ISSG Search Filter Resource)
• Total of 14,028 records retrieved from all searches
• Separate search for RCTs (n=8412) and SRs (n=2984) undertaken on 16/23 databases
• Another 7 resources searched without study design filter (n=2632)
• Independently screened by two researchers
• RCT screening completed; SR screening to be completed; first screening of combined search results completed
Database yield & included studies for RCTs

- SSCI highest number of unique includes
- PILOTS lowest number needed to read
- Minimum combination of 9/15 resources needed to find all included studies

![Bar chart showing total yield of retrieved studies]

- For more detailed analysis, see HLG poster
Challenges of mapping searches

• Time!
• Unique challenges when applying an SR approach to non-health resources for these types of topics
• Outside of health, research methods may be poorly described in text & indexing terms – impacts on retrieval
• Limitations when applying objectively-derived filters combined with Evidence-Aid topic terms e.g. SR filter in PsycINFO

Search Concepts
Nuclear/industrial accident$
Natural/manmade$ disaster/catastroph$
Earthquakes$/tsunami$/flood$/quake$
Humanitarian emergenc$/crisis/crises
Tidal wave$/hurrican$/tornado$
Emergenc$ aid/relief worker$ etc
Limitations

• Limited budget for searching & screening
• Large & diverse evidence-base dispersed across multiple disciplines & sources
• Pragmatic, subjectively derived strategy
• Strategy performance variable dependent on resource e.g. high recall on PILOTS database (PTSD content)
Future developments

• Screening of SR search results ongoing
• Potential for analysis of database yield of included SRs
• Gap analysis to prioritise future reviews
• First Evidence Aid review completed in 9 months – Use of electric fans during heat-waves
• Considering development of specialist register of trials
• Ongoing evidence surveillance of Cochrane Library
• Update of mapping searches (last searched June 2011)
Get involved in Evidence Aid

- **Read** the Evidence Aid website, leaflet & Annual Report
- **Take** part in the online survey about evidence needs during natural disasters & humanitarian emergencies
- **Help** select priority areas for systematic reviews for Evidence Aid
- **Send** relevant information & funding opportunities to the EA Team
- **Identify** information & funding opportunities to the EA Team
- **Prepare & maintain** systematic reviews for Evidence Aid
- **Identify** systematic reviews and trials for Evidence Aid

http://www.EvidenceAid.org
Thank you for listening

- Evidence Aid
  http://www.EvidenceAid.org
  Twitter: @evidenceAid
  Facebook: Evidence Aid

- Claire Allen (Knowledge Manager)
  Callen@evidenceaid.org

- Kate Misso (Information Specialist Manager)
  Kleijnen Systematic Reviews (KSR) Ltd.
  01904 727989
  kate@systematic-reviews.com
  http://www.systematic-reviews.com