

Additional file 2

Survey form distributed via Qualtrics®

EM-DAT database

Q1.1 Delphi study aiming to define the registration of epidemics, within the International Disaster Database EM-DAT

The International Disaster Database (EM-DAT) is a global database that **collects data on disasters' human and economic impact since 1900** (see: www.emdat.be). It is maintained by the Centre for Research on the Epidemiology of Disasters (CRED) at the Université catholique de Louvain (UCLouvain) in Brussels, Belgium. EM-DAT is supported by the Bureau for Humanitarian Assistance (BHA) U.S. Agency for International Development (USAID).

EM-DAT is a globally recognized international database used by scholars, international organizations, and operational agencies. However epidemic data collection could be collected and encoded in a more systematic manner, requiring to establish eligibility criteria for entering epidemics in the database.

We are asking for your input in this process. As an expert in this field, we invite you to participate in a survey that will normally not take more than 15 minutes of your time. The resulting report/paper will acknowledge your participation as an international expert, should you agree with your details being shared.

Consent

Q2.1 I have read and understand that by answering this questionnaire, I give my explicit and informed consent for my personal and professional data to be used by CRED exclusively for the purpose of this survey. I acknowledge that I have the option to maintain anonymity in this survey by withholding my name, however, it is essential to provide data that describes my profile to ensure the representativeness of the participants and the quality of the results. I agree that the processing of my data will comply in all respects with GDPR obligations.

25 ☐ Yes (1)

26 ☐ No (2)

27 Personal and professional information

28 **Q3.1 Name** _____

29 **Q3.2 Gender**

30 ☐ Female (1)

31 ☐ Male (2)

32 ☐ Other (3)

33 **Q3.3 Age group**

34 ☐ 18-34 (1)

35 ☐ 35-64 (2)

36 ☐ >65 (3)

37 **Q3.4 Expertise field**

38 ☐ Infectious disease epidemic surveillance (1)

39 ☐ Disaster databases (2)

40 ☐ Dataflow (3)

41 ☐ If other, specify (4) _____

42 **Q3.5 Principal institution name** _____

43 **Q3.6 Country of work** _____

44 **Q3.7 Category of Institution**

45 ☐ NGO (1)

46 ☐ Academia (2)

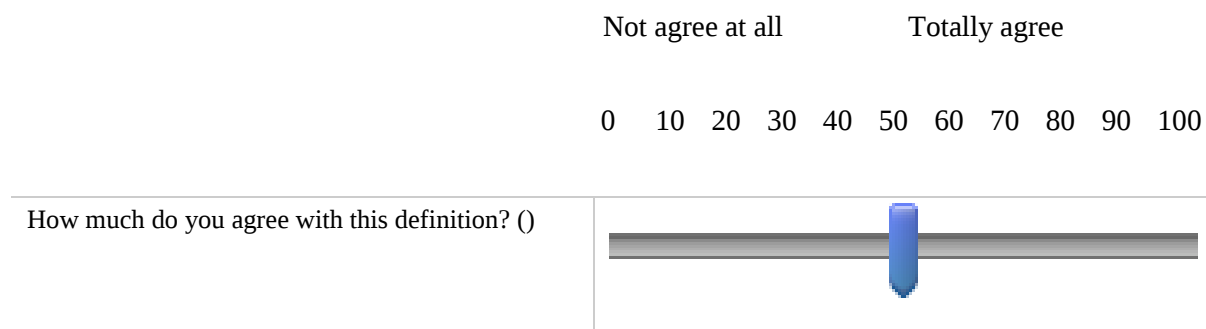
47 ☐ For-Profit/Commercial (3)

- 48 ○ International Organization (4)
- 49 ○ Government (5)
- 50 ○ If other, specify (6) _____

51 Definitions

52 **Q4.1 Epidemics are defined as** *“the occurrence of cases of an illness, specific health-related behavior,*
 53 *or other health-related events clearly in excess of normal expectancy” in a specific community and in*
 54 *a specific time period. The “normal expectancy” varies according to the “agent, size and type of*
 55 *population exposed, previous experience or lack of exposure to the disease, and time and place of*
 56 *occurrence”* (WHO definition)

57 **Q4.2 How much do you agree with this definition?**



58 If [How much do you agree with this definition?] <= 50

59 **Q4.3 Provide a reason for your lack of agreement. What changes/clarifications do you**
 60 **want to make to the definition?**

61 _____

62 **Q4.4 An *outbreak* refers to the occurrence of cases of a disease in a population greater than what is**
 63 *normally expected within a given area and time period. An **epidemic** can be seen as a widespread*
 64 *outbreak of a disease within a particular community or region, and a **pandemic** is a global outbreak of*
 65 *a disease affecting a large proportion of the world's population.*

66 **Q4.5 Do you agree that the focus of EM-DAT should be on including epidemics of a certain size,**
 67 **and not on including outbreaks and pandemics?**

68 ☐ Yes (1)

69 ☐ No (2)

70 *If Do you agree that the focus of EM-DAT should be on including epidemics of a certain size.*

71 = No

72 **Q4.6 Why not?**

73 _____

74 **Q4.7 Thank you for sharing any additional feedback you have.**

75 _____

76 Criteria

77 **Q5.1**

78 EM-DAT with its focus on major disasters, follows a systematic methodology in reporting disasters
79 that meet at least one of the following eligibility criteria:

80 - *10 or more people dead.*

81 - *100 or more people affected.*

82 - *The declaration of a state of emergency.*

83 - *A call for international assistance.*

84 **Q5.2 Can we use these inclusion criteria for epidemics as well?**

85 ☐ Yes (1)

86 ☐ No (2)

87 *If Can we use these inclusion criteria for epidemics as well? = No*

88 **Q5.3 If no, which adaptation would you propose?**

89 _____

90 **Q5.4 How would you define the people affected in the context of an epidemic?**

91 _____

Q5.5 A disaster can be defined as a *“serious disruption of the functioning of a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.”* (United Nations Office for Disasters Risk Reduction, 2016).

Q5.6 Which characteristics of an epidemic allow you to conclude it to be a disaster?

Q5.7 What do you think marks the beginning and the end of an epidemic disaster?

Indicators

Q6.1 In EM-DAT, for disasters, human indicators are quantified as follows:

- *Total dead = dead + missing*
- *Total affected = affected + injured + homeless*

Q6.2 How can they be adapted to be applicable for epidemics?

Q6.3 What other human health related indicators should we capture to quantify the impact of an epidemic?

Q6.4 What opportunities and challenges do you foresee for measuring these indicators when monitoring epidemics?

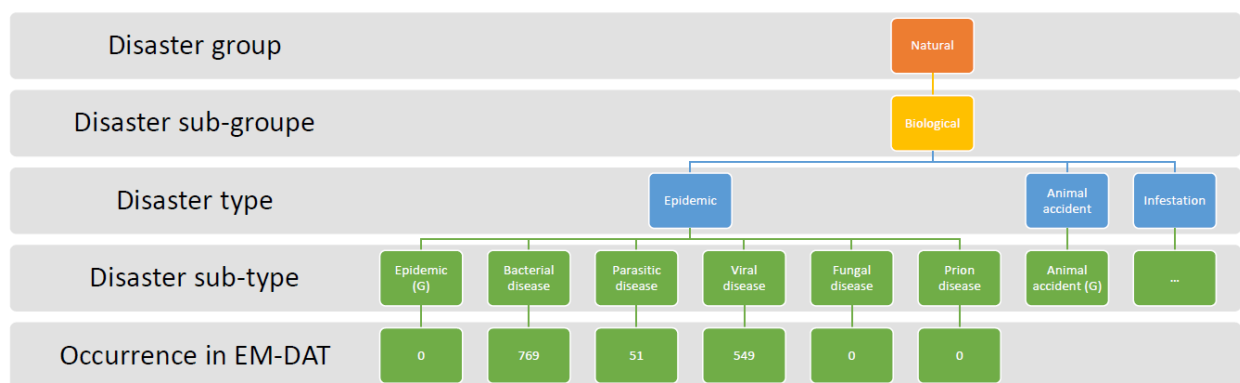
Q6.5 How can we address these challenges?

Q6.6 What major sources of information (databases and others), do you know, that could assist in finding the information allowing to estimate indicators you mentioned?

Q6.7 To what extent do you consider the information in these sources to be reliable and complete?

Classification

Q7.1 The current disaster sub-type classification for epidemics in EM-DAT includes:



Q7.2 Can we improve this sub-type classification?

- ☐ Yes (4)
- ☐ No (5)

If Can we improve this sub-type classification? = Yes

Q7.3 Can we improve this sub-type classification?

Q7.4 Do you know any other classification systems that are used elsewhere? Please specify

Additional information

Q8.1 What additional information would you want to have about epidemics when retrieving data from EM-DAT? (select all that apply)

- | | |
|---|---|
| ☐ Spatial dimension: Point of emergence | ☐ Prevalence/incidence and distribution of disease outbreak |
| ☐ Clusters (size) | ☐ Case fatality |
| ☐ Type of transmission | ☐ Attack rates |
| ☐ Utilization of clinical services | ☐ Infection fatality rate |
| ☐ Existence of medical countermeasures | ☐ Effective reproduction number (R_t) |
| ☐ R_0 | ☐ Other:_____ |
| ☐ Mortality rate | ☐ Other:_____ |
| ☐ Transmission rate | ☐ Other:_____ |
| ☐ Duration of infection | ☐ Other:_____ |
| ☐ Hospitalization rate | ☐ |

134

135 Comments

136 **Q9.1 Have you any general comments about this survey or the subject matter that's being**
 137 **covered?**

138 _____