Integrated Outbreak Analytics (IOA) Toolkit: Concept Note

Introduction

Integrated Outbreak Analytics (IOA) applies a multidisciplinary and multi actor approach to understanding outbreak dynamics and to inform outbreak response. It aims to drive comprehensive, accountable, and effective public health and clinical strategies by enabling communities, and national and subnational health authorities to use data for operational decision-making. IOA embraces a holistic perspective of outbreak dynamics throughout: from the analytical questions to the data that are collected or accessed, to the interpretation of results and the recommendations that follow (Figure 1). In addition, IOA promotes co-development of evidence-informed recommendations with Ministries of Health (MoH). To track uptake of these recommendations, mechanisms have been developed to monitor implementation[1].

Figure 1: Information sources from multiple disciplines, sources and actors that can contribute to Integrated Outbreak Analytics (IOA)

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[1] Carter SE, Gobat N, Zambruni JP, Bedford J, Kleef E van, Jombart T, et al. What questions we should be asking about COVID-19 in humanitarian settings: perspectives from the Social Sciences Analysis Cell in the Democratic Republic of the Congo. BMJ Glob Health. 2020 Sep 1;5(9):e003607

IOA is produced through partnerships and a multi-disciplinary community of practice. It is primarily a field-based initiative that leverages support from national, regional, and international experts to reinforce pre-existing local capacity. In response for growing demand for IOA technical guidance and support, in 2020, a network of agencies and organizations that work or are interested in working with this approach have come together under the Global Outbreak Alert and Response Network (GOARN)[2]. This IOA Initiative seeks to support health ministries to lead accountable and evidence-based outbreak responses through technical expertise (trained local, national, international capacity), guidance (tools, training packages) and knowledge exchange (working groups, field exchange) as well as identifying IOA subject matter experts. The IOA network mobilizes multiple actors, entities, and organizations.

In order to support actors working in Public Health Emergency (PHE) responses in humanitarian settings and crises, an IOA Toolkit Task Team (including IOA Core Team partners from UNICEF, WHO, MSF-Epicentre and IFRC) will develop an IOA guided approach (IOA Toolkit). Each IOA Toolkit Task Team member will represent the experiences of their respective field operations. The project has the following objectives:

Objectives

To create a guided approach for IOA. This will be achieved through the development of an IOA toolkit consisting of an IOA guidance, including associated standard operating procedures (SOPs), IOA tools and existing case studies and animations.

Objective 1: To produce a guidance document for implementing the IOA approach

Objective 2: To collate tools that can be used in IOA and host them in an open-source repository

Activities

Objective 1

- Develop IOA guidance and associated SOPs based on:
  - The existing range of reports, case studies, videos and publications already produced by the IOA initiative
  - Feedback from a consultative process with the IOA Network and key stakeholders to ensure applicability and relevance in local contexts
- For the consultative process:
  - Invite 1-2 stakeholders from key organisations to become reviewers of the IOA Toolkit material at key stages of its development. This will include:
    - Participating in an online workshop to input to a draft design of the IOA toolkit during the week of 15th January 2024
    - Reviewing the draft IOA toolkit in March/April 2024
    - Reviewing the final product before dissemination in January 2025
    - Explore the most appropriate settings for piloting the IOA Toolkit (3 pilots will be performed, one of which will be in the DRC)

Objective 2

- Perform an operational review of existing tools, processes, and resources for IOA
  - Identify IOA implementors and invite them to share their experience applying IOA
  - Consult with IOA implementors to gather insights from their practical experience regarding 1.) tools beneficial or less beneficial to IOA application, 2.) gaps/challenges in IOA application, and 3.) tools that would be advantageous for future IOA implementation
  - Analyse qualitative information from consultations and incorporate findings into the Toolkit
- Create an open-source repository of existing IOA tools, processes and resources that may facilitate easier implementation and local adaptation of IOA

Piloting and evaluation

- Pilot and monitor IOA toolkit in 3 sites (one of which will be DRC) (Sep-Dec 2024)
- Evaluate pilot projects
- Incorporate findings into final IOA Toolkit
- Disseminate final IOA toolkit (March 2025)

Dissemination of IOA Toolkit

- Via workshops led by Ministries of Health in 3 selected sites (possible locations include: DRC, Haiti and an unidentified site), that will include a broad range of humanitarian health organizations including INGOs, local NGOs and country Clusters (especially Health, WASH, Nutrition, Protection).
- Via 'special sessions' of the IOA network
- Via short video animations explaining how to use the IOA toolkit, the different components (guidance, SOPs, IOA tools etc.) and how that can all be adapted to the context
- Via workshops with regional working groups (e.g., the WASH cluster's Hygiene Hub)
- Via the IOA website (currently in development)
- And via the IOA network, GOARN, IOA and academic partnerships and other platforms such as Save the Children's READY 2 Initiative to broaden the reach of the dissemination strategy.

Beneficiaries targeted by intervention and targeting criteria

- Populations in need due to an outbreak or PHE in humanitarian settings and crises
- Civil society who will be contributing to the outbreak or PHE response in humanitarian settings and crises
- Ministries of health and coordination bodies (national and global) coordinating an outbreak or PHE response in humanitarian settings and crises
- Outbreak response actors (national and international) responding to outbreaks or PHE in humanitarian settings and crises
- Academic partners that are supporting the outbreak or PHE response in humanitarian settings and crises
- IOA use in country has been found to contribute to a more accountable outbreak response which is adapted to better protect women and children (e.g. safe access to vaccination locations during Ebola outbreaks; addressing the protection risks women face during cholera prevention activities; identifying risk factors associated with greater caseload of Ebola among children under 5 years)