PANDEMIC PACT
Tool Development Meeting

Date: January 31st - February 1st 2023
Location: Les Pensières Center for Global Health, Annecy, France
Start time: 9:00 am CEST (8.00 am UTC), January 31st
Meeting close: 15.15 pm CEST (14.15 pm UTC), February 1st

Participants at the Pandemic PACT Tool Development Meeting in Annecy, France

1.   Aim of the Tool Development Meeting

This meeting aimed to convene a broad disciplinary group of key stakeholders for Pandemic PACT to gain their input into the required scope of the PACT tool, including informing the development of the database and data collection templates. For the meeting, the Pandemic PACT team partnered with the GO FAIR Foundation, supported by in-kind contributions from ZonMw, a GloPID-R member, to deliver a Metadata for Machine workshop nested within the tool development meeting.

The meeting started by highlighting the experience and achievements of the GloPID-R's and UKCDR's COVID CIRCLE initiative, specifically the COVID-19 Research Project Tracker and outlining the lessons learnt from the research response to the pandemic, to facilitate a forward-looking discussion and ensure that the new tool is developed with preparedness built in. The scope of Pandemic PACT was presented, outlining that the tool would track research

investments for a broad range of diseases of epidemic and pandemic potential as well as capture wider preparedness activities, while maintaining the ability to pivot rapidly to track novel diseases. There is also scope in the programme for associated analytical capacity (e.g. Rapid Research Needs Assessments) and research and policy capability to support evidence-informed policy and decision-making. A high-level plan for how the data would be acquired and how the tool could be utilised was described; the likely users will be funders, policy-makers and the WHO, researchers, and other data aggregators or tools. The programme governance, its partnerships, and the timeline of Pandemic PACT were presented; the timeline demonstrated that we are currently in the 'Develop & Build' phase.

2. GO FAIR Foundation Metadata for Machine Workshop

GO FAIR Foundation kicked off the session by providing an overview of the FAIR principles (Findability, Accessibility, Interoperability, and Reuse of digital assets) and, across the day, sought to cover FAIR metadata, FAIR vocabularies, and adapting metadata templates for the Pandemic PACT Tracker. The use of FAIR in the data architecture results in machine-actionable and machine-ready data.

Following discussions, the key requirements for the data were:

- A **flexible mixed-model approach** for data collection/input must be applied, whereby members provide data via Excel spreadsheets (potentially through a portal suitable for spreadsheet upload) and manual web data scraping of funder websites is used to increase the geographical representation of data. This model will ensure that we are inclusive and consistent in what is covered and how information is fed to stakeholders.
- **Free text should be avoided** and entries should be **mapped to existing vocabularies**. There should be agreement on the harmonised vocabulary to be used across all funders. Examples to consider were MeSH (to define categories) and HEPR (to be considered as an approaching framework).
- For funders, using the proposed **CEDAR template that requires data input for individual projects was not viewed as a feasible approach**. However, the templates are useful for defining key terms and ontology.
- It is **expected that the PACT team will have a role in standardising** the way things are described to enable automation and discussions on this commenced at the meeting.
- The metadata should be as open as possible and follow the **FAIR principles**.

With input from stakeholders into the tool, the Pandemic PACT team will continue to develop the specific language required and links to existing vocabularies. GO FAIR noted that controlled vocabulary could be mapped to other languages.

3. Stakeholder Needs and Tool Considerations and Development

Specific topics were discussed in detail on day two:

- **Vaccines and therapeutics**: it was noted that there were a lot of categorisation systems and that the tool should align with what is generally used by members and key policy stakeholders. There should also be further interrogation of the COVID-19 Research Project Tracker data to draw out what is missing.
- **Epidemiology and pathogen surveillance**: it was agreed that the sub-priority areas presented in the WHO Roadmap were useful framing and that there could be cross-coding with other sub-priority areas. Other key categories that capture investments in

preparedness include are surveillance and early detection; capacity building; and strengthening tools, technologies and techniques.

- **Vector-borne diseases and One Health**: it was emphasised the importance of reusing existing resources, such as MeSH, and that vocabulary should heavily draw from this.
- **Clinical management and infection prevention and control**: it was agreed that sub-categories would need more review to ensure they are stable across different diseases.
- **Social sciences and ethics:** it was noted that these can be seen as cross-cutting themes. The challenges of coding and capturing **ethics research** were highlighted in a presentation that looked at the landscape of global ethics focussed research during the COVID-19 pandemic. The Lead of the WHO COVID-19 Ethics Technical Working Group indicated a commitment to developing ethics priority areas based on MeSH for the PACT tool. The complexity of **social sciences research** during a pandemic was emphasised, with the need to be flexible to include new topics/categories as they arise during an outbreak. Due to this complexity, close collaborations with WHO stakeholders in these two areas are needed.

The priority disease list to be used in the PACT tool was discussed. It was recommended to have a step-wise approach to selecting diseases and to limit at the outset to those with pandemic potential (including Influenza), such as those presented in the WHO list of epidemic and pandemic-prone diseases. It was agreed that this list may evolve in the future.

The Rapid Research Needs Appraisal methodology and pilot were presented, and it was noted that the next steps would be to develop a 'Living RRNA' platform and to build capacity to review and produce outputs quickly. This would be scaled up to the full PACT list of diseases over time.

More broadly, there were discussions around the complexity of coding and implications of double tagging of categories and how that could affect the presentation of funding; particularly when looking at large-scale studies that fund varied work and when multidisciplinary projects are encouraged. A clear definition of 'preparedness' is needed, as well as a clear glossary and scope for funders (with the WHO Berlin Hub's work on prioritisation for surveillance feeding into this).

Next Steps
In terms of the next steps, the Pandemic PACT team will reflect on discussions from the meeting and refine the plan for the tool, whilst continuing to collaborate with GO FAIR Foundation to ensure the project is FAIR. The team will seek consultations with meeting attendees, as well as use the GloPID-R membership and Pandemic PACT Advisory Board members to guide the final details of the programme development.

4. Meeting Participants

Organisation
Africa African Academy of Sciences (AAS)
The Africa Centres for Disease Control
Canadian Institutes of Health Research (CIHR)
Center for Infectious Disease Research and Policy
Centre Suisse de Recherches Scientifiques en Côte d'Ivoire

European & Developing Countries Clinical Trials Partnership (EDCTP)
The São Paulo Research Foundation (FAPESP)
Fondation Mérieux
GAVI, the Vaccine Alliance
Global Research Collaboration for Infectious Diseases Preparedness (GloPID-R)
GloPID-R/ Pandemic PACT
GO FAIR Foundation
Heidelberg Institute
Korea Research Institute of Bioscience and Biotechnology (KRIBB)
Kenya Medical Research Institute (KEMRI)
South Africa Medical Research Council
University of Oxford. Engineering Science
University of Oxford. Pandemic Sciences Institute
UK Collaborative on Development Research (UKCDR) / PACT
UKRI / MRC
Wellcome Trust
WHO Berlin Hub
World Health Organisation (WHO)
WHO
The Netherlands Organisation for Health Research and Development (ZonMW)