

Reaching consensus on Global Health Essential Data Science Skills

Landscaping and Knowledge Gap Analysis Survey

Background

Development of new expertise in data science and the skills to overcome the well-recognised barriers that limit the collecting, sharing, analysis and use of high-quality data, are essential to addressing the current inequalities encountered by health research teams in low-resource settings. Enabling the development of tools, training and resources to build data science capability is critical.

There is a need to determine where the barriers and enablers to engagement in data science lie and so by working with a large, global community of practice we will identify, by consensus and via an evidence-based approach, what are considered essential health data science skills. A data science curriculum can be built around those consensus themes. Resources, tools and training materials can be identified, developed or redeployed taking account of what already exists and what has proven effective. Mechanisms for dissemination of these also need to be determined.

We will use a crowd-consensus approach to determine the essential data science skills. This landscaping and knowledge gap analysis forms the first stage in that process.

Who are we seeking to reach with this survey?

Anyone working in global health data science in Africa, Asia and Latin America and the Caribbean.

About the survey

This survey consists mainly of free text responses, but there are also some 'tick box' questions.

We greatly appreciate your time, as your experience and knowledge will help guide our development of an essential global health data science skills curriculum framework which will facilitate development of new expertise in data science. and the skills to overcome the well-recognised barriers that limit the collecting, sharing, analysis and use of high-quality data. This survey consists of 6 questions and will take 25-30 minutes to complete.

This survey aims to:

1. Understand what major global health data science programmes are under way in your region with a significant capacity building element
2. Determine the stakeholders that health data science capacity development programmes have been designed for and the key data science skills that they are seeking to develop
3. Understand what data science training resources, toolkits and opportunities exist in your region which meet the needs of stakeholders
4. Understand what the gaps are in data science training resources, toolkits and opportunities in your region and barriers to skills development

All data collected through this survey will be stored and analysed securely in a cloud based platform, NVivo and will be used to generate a report which identifies existing data science capacity development initiatives and gaps. Personal data will only be collected with consent and secured securely by HDR UK. Personal data will not be shared or included in the report generated through this landscaping survey.

Thank you for your interest in this survey. This survey is the first step in gaining an understanding of the essential data science skills. The findings will be shared on the [Global Health Data Science Hub](#) and then used to inform the development of a further survey which aims to build consensus on the essential data science skills.

Thank you for your help and time in sharing your valuable views and experience in this survey.

Please Note

The findings from this survey may be published in a report, a scientific journal, presented at a conference and made openly available. Your identity will remain anonymous in all publications, release of the data and presentations of the findings.

Your identity will only be requested within the survey if you give permission for us to keep in contact about this study. Your identity and contact details will not be shared beyond the research team working on this study (Fiocruz, Africa CDC, icddr,b, The Global Health Network and HDR Global).

Consent to proceed

Please confirm whether you wish to proceed and complete this survey.

Yes, I wish to proceed and complete this survey.

No, I do not wish to proceed.

A few questions about you

1) Which of the following best describes your primary occupation? [single response please]

- Academic (Teacher in Higher Education Institution)
- Civil/Public Servant
- Clinical Officer
- Community Health Worker
- Data Analyst
- Dentist
- Doctor
- Epidemiologist
- Ethicist
- Laboratory Professional (Manager, Technician etc)
- Microbiologist
- Mathematician
- Midwife
- Nurse
- Pharmacist
- Policymaker
- Politician
- Project Manager
- Principle Investigator
- Regulatory Affairs Professional
- Researcher
- Research Funding/Grants Professional
- Scientist (Research and Development)
- Statistician/Biostatistician

- Anthropologist
- Health manager
- Student
- Study Coordinator
- Other*

*If you selected Other, please specify: *[Free Text]*

2) Which of the following best describes the establishment where you work/study primarily?

[single response]

- Academic Institution (University, College, etc)
- Biotechnology Company
- Contract Research Organisation (CRO)
- Community Health Centre/Facility
- Consultancy
- Government Ministry
- Government Scientific Research Institute
- Hospital
- Immunisation Program
- Intergovernmental Organisation (IGO)
- Journal/Publishing Company
- Non-Governmental Organisation (NGO)
- Pharmaceutical Company
- Public Health Institute
- Regional Healthcare Authority
- Regulatory Authority
- Research Funding Organisation
- Other*

*If you selected Other, please specify: *[Free Text]*

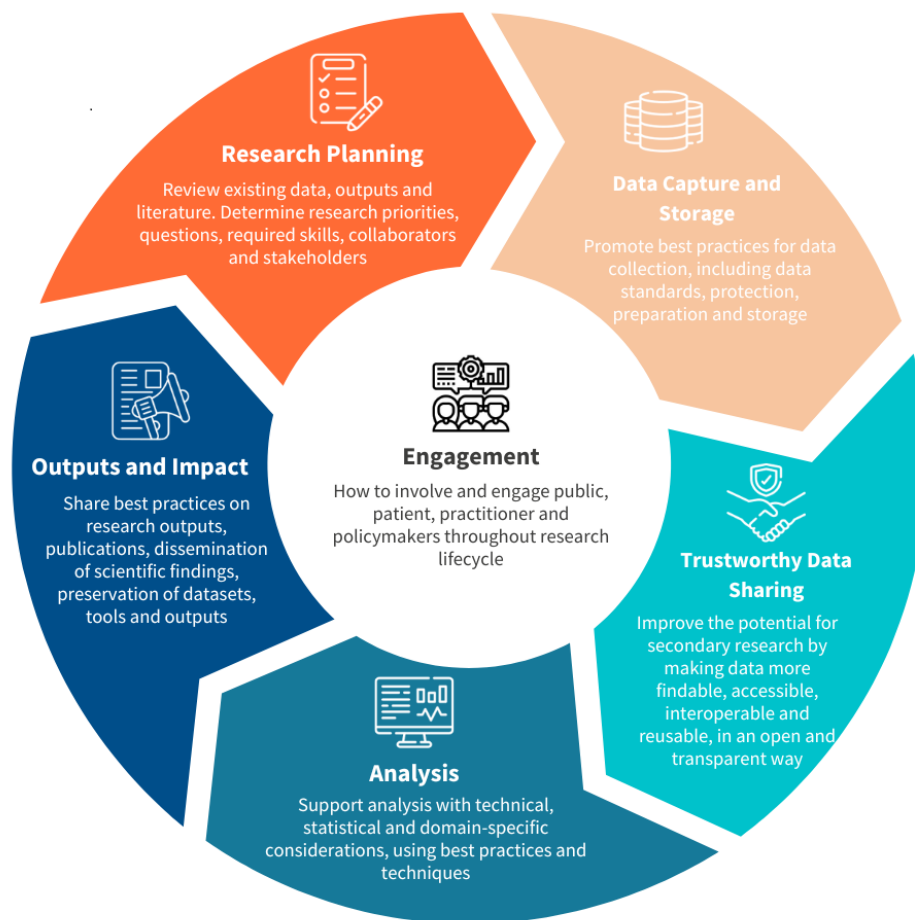
3) Which country do you work in? If you work in more than one country, please select the country in which you work primarily.

[UN Countries List Drop-Down Box]

4 Please tell us about any important data science capacity development programmes which you are involved in or are aware of in your region. Please provide the following details for each initiative you tell us about.

- Title
- Description (including lead organisation)
- URL
- Target stakeholders
- Data Science skills targeted*

**Please use the categories contained in the data re-use project life cycle diagram below*



5) Please tell us about any data science training materials, resources, toolkits or training courses which you have accessed, developed or are aware of in your region. Please provide the following details for each resource you tell us about:

- Title
- Description (including owner)
- URL
- Data science skills targeted

6) Please tell us about key knowledge and skills gaps, or practical barriers, that prevent stakeholders from doing more research or developing their own research skills and experience? What solutions to these can you suggest?

Knowledge and skills gap

Barriers

Solution

Thank you for participating in this survey. The information you have provided will be used to inform the development of a further survey which will seek to build a crowd consensus on what are the essential data science skills. When consensus is reached, we will develop a curriculum which will

enable anyone working in global health data science to develop their skills and knowledge. If you wish to be kept informed on the survey findings, please let us know:

- Yes
- No

[If answer is 'Yes']

- Name
- Email Address