



RESPIRE Data Management Plan (DMP): Template (adapted from the University of Edinburgh)

Name:	Dr.Tabish Hazir
Project Title:	To document pneumonia case management practices in selected communities in Pakistan
Institute:	Maternal, Neonatal and Child Health Research Network (MNCHRN)
Start Date:	1 st April 2018
End Date:	20 th May 2019
DMP version number and date:	DMP_V01_20201130

Responsibilities & Resources (applicable across the sections below)

Who will be involved in the data management of this research?

Name	Role in the Data Management
Dr Hana Mahmood	Data deposit and oversight of implementation of the plan
Syed Yahya Sheraz	Data storage
Dr Razia Mumtaz	Data collection and management
Dr Saba Shahid	Data analysis and reporting
Sajid Khan	Data collection
Saman Mujeeb	Maintenance of data

1. Data Capture

What data will be generated or reused in this research?

Observational data on standard pneumonia case management practices for children under the age of five years has been collected across randomly selected sites from all provinces of Pakistan within three cadres of the healthcare system; (first level care facility, primary and tertiary). Data was collected on tablets whereby study physicians entered the data after the observation of healthcare providers on managing children with pneumonia. These were disguised observations (ethical clearance was obtained).

Monitoring of the data collection process was conducted through an online dashboard by the project manager. Data entered in the computer system by each study physician was sent to the central server which was accessed remotely and extracted by the data manager for analysis and reporting. The quantitative data was analyzed in SPSS whereas the qualitative data was analysed manually. This data (raw and anonymised) in the form of excel sheets and SPSS data files along with preliminary reports has been stored in password



protected folders and computers with access to authorised members of the research team only. These computers have also been encrypted using Bitlocker and folders using the 7-zip.

How much data will be generated?

Up to 20 GB of data will be generated.

2. Data Management

How will the data be documented to ensure it can be understood?

For the observation sheet, data in the form of excel sheets, SPSS data files and preliminary reports, following have been recorded in a text file:

- name of the file
- file location
- file size
- file format
- software used or required to create or run the file (e.g. Microsoft Word for transcripts and translated documents)
- date of creation
- file creator
- file version
- access rights set for the file

Where will the data be stored and backed-up?

Storage:

All data (raw and anonymised) in the form of excel sheets and SPSS data files along with preliminary reports have been stored in password protected encrypted folders and computers with access to authorised members of the research team only. These computers have been encrypted using Bitlocker and folders using the 7-zip.

Backup:

3 backup copies of the original data has been created and stored on different locations. Original copy has been stored on the password protected computer of the data manager located in the MNCHRN headquarters. One copy was backed up fortnightly on the main server located at the central field office of MNCHRN and two copies on cloud storage (My Cloud EX4100 secured by volume encryption, with enterprise-class WD Gold Hard Drives- 2 drives of 10TB each). These hard drives provide up to 2.5M hours MTBF, vibration protection technology, RoHS compliant, have SATA 6 Gb/s interface, 262 MB/s data transfer rate, 256 MB cache, 7200 RPM performance class.

File naming:

Files have been named as per the standard naming convention of the organisation i.e. MNCHRNname_projectID_type of data file e.g. MCNHRN_RES007_excelsheet.txt

Organization Of folders:

Province wise folders have been created for the data gathered. These folders are password protected with access to only authorized members of research team. Files have been placed in their respective folders.

Data transfer:

All data collected or generated by the study (including personal data) will not be transferred outside the research site. Only anonymised, non-identifiable data will be stored in the University of Edinburgh data repository (DataShare).

3. Integrity

How will you quality assure your data?

Following measures have been taken to assure the quality of the data:

- All versions of data collection tools have been saved for traceability.
- Data collection was through tablets/computers with incorporated observation sheet with automatic logical skips and data coding checks to provide error free or complete data entry.
- The manager had access to the dashboard for observing the performance of each study physician by noting the number of visits made per day, and outcome of visits.
- Remote meetings were conducted with research team through teleconferencing to give feedback on their performance and suggest ways to improve it.
- Data was stored in three different locations to prevent the loss of the data. Original copy was stored on the password protected computer of the data manager located in the MNCHRN headquarters. This was backed up fortnightly on the main server located at the central field office of MNCHRN and on cloud storage.

4. Confidentiality

How will you manage any ethical and Intellectual Property Rights issues?

Data from all observations have been de-identified using pseudonyms where required. Additionally, consents were taken from the caregivers of children under age of five years to be accompanied by the study physician indicating their voluntary participation per the participant information sheet.

5. Retention and Preservation

Which data do you plan to keep and for how long?

All data generated from this study will be kept for a minimum of 5 years after the study is finished. The tool used for data collection i.e. the finalized observation sheet has been archived locally.

How will the data be preserved?

The anonymised and cleaned data of observations, observation sheet and meta data have been preserved in stable file formats i.e. note pad for text files and comma-separated value (.csv) file for spreadsheets. These will be uploaded in University of Edinburgh's online digital repository –DataShare.

The University of Edinburgh undertakes to maintain the digital outputs of this project for the long-term and will utilise University infrastructure (namely the Edinburgh DataShare repository) to ensure preservation and continued access. Edinburgh DataShare is an online digital repository of multi-disciplinary research datasets

produced at the University of Edinburgh, hosted by the Data Library in Information Services. It acts as a trusted repository, ensuring that research data will be preserved.

6. Sharing and Publication

Which data will be shared and how?

The anonymised data generated from this study will be shared and archived in DataShare which is an open access data repository where data will be held indefinitely. The repository is optimised to be indexed by google scholar and google dataset search to promote data discovery.

Are any restrictions on data sharing required?

No, there are no restrictions on sharing of the anonymised data shared and archived in DataShare.