The Canadian Red Cross Request for Proposals for data cleaning and conversion

The Canadian Red Cross is looking for a consultant with experience in statistics, epidemiology, biostatistics or public health. The work consists of cleaning and organizing the integrated community case management program data to make it analyzable. The duration of the work is 20 working days between April 1 and 30 April 2019.

All interested parties should submit their CV, references and financial proposal to CRCLOG.OTTAWA@redcross.ca no later than midnight EST on 17 March 2019.

Candidates must have a Business Number or Tax Number, Personal & Professional Liability Insurance and provide information on whether they are an organisation or a sole proprietor.

Candidates are expected to be in Ottawa for 3-5 days in the beginning and 3 days at the end of the assignment.

Candidates will be evaluated according to:

- The strength of the resume
- Evidence of previous work provided
- Financial offer

Please see Terms of Reference below.

Thanks & Regards,
**TERMS OF REFERENCE**

**Title**  
CONSULTANT – Database

**Location of Assignment**  
Remote, and partly in Ottawa

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Remote, and partly in Ottawa

**Languages required**  
English (fluent) and French (working knowledge)

**Duration of consultancy**  
20 working days between April 1 and 30 April 2019

**BACKGROUND & RATIONALE**

The Canadian Red Cross (CRC), in partnership with the Mali Red Cross (MRC) is implementing a health project in Mali on integrated community case management (iCCM). Different types of data are being collected but in separate Excel files making it difficult to analyse. This ToR is to solicit interest in a short-term consultancy to clean and organize the iCCM program data to make it analysable.

**DESCRIPTION OF PROJECT**

The project started in early 2017 and will finish by 30 March 2020. It is being implemented in 441 sites (villages) in 6 districts. Each site has one community health workers (CHWs) and the project has had more than 460 CHWs so far as some have left and were replaced. CHWs provide services for treating sick children with uncomplicated malaria, diarrhoea, cough/cold, pneumonia and malnutrition, surveillance of danger signs for newborn, distribution of family planning commodities and promotion of health messages in different topics.

**DESCRIPTION OF COLLECTED DATA**

The following types of data are being collected:

- **CHWs monthly ICCM reports**: CHWs collect data and compile standard monthly paper-based reports that have around 300 variables (see attached monthly report template). The unit base is individual CHWs. Reports from the 441 CHWs (records) are digitized per individual CHW by 16 counsellors in separate Excel files, then put together in one master file aggregating all variables on monthly basis. The data has been collected from around July 2017 and will continue till March 2020. Some records have missing data.

- **Supervision data**: Supervisors collect data on the quality of work when they supervise the 441 CHWs using a standard data collection paper form that have around 170 variables. The unit base is individual CHWs. Supervision reports of
the 441 CHWs are digitized per individual CHW by 16 counsellors in separate Excel files, then put together in 6 files (one for each district) for each supervision cycle. It is envisaged that each CHWs could have up to 10 supervision visits during the project duration. The data available is from September 2017 and will continue to be collected on supervision cycle basis till at least March 2020. Some records have missing data.

- **Sociodemographic data:** Each iCCM site has specific information such data: site name, District, health area name, name of primary health care facility associated with it, distance from iCCM site to facility, site population, CHWs (name, sex, years of service, telephone number), etc. The unit base is individual CHWs. It is estimated that there are around 30 variables of demographic data. The project does not have code numbers for CHWs but it is good to have a provision for that.

- The variables do not have a unique site identifier at the moment.

- Heading of all variables are in French. There could be a need to communicate with the project staff in Mali, which needs to be in French.

- CHWs monthly reports collect service data based on the iCCM site while supervision data is about the performance of the individual CHW.

**Purpose of Consultancy**

- Database organization and cleaning of the routine program data collected as part of the iCCM program to enable data analysis.

More specifically:

- The data in the Excel sheets needs to be converted into analysable datasets (for CHW monthly ICCM reports, supervision data and CHW sociodemographic data) for analysis and linked using unique site identifiers. Since the data has been collected monthly since September 2017, the use of timeseries / longitudinal methods would be appropriate for the analysis of the data.

- The datasets will enable the following analyses (examples):
  
  - CHWs monthly ICCM reports: aggregate among variables across the 441 CHWs; aggregate variables within each district; analyse variables against sociodemographic and supervision data.
  
  - Supervision data: track performance of individual CHWs over supervision cycles; aggregate variables among one cycle; comparison of variables among different cycles; analyse variables against sociodemographic and monthly ICCM data.

**Key competences, technical background, and experience required**

- An advanced university degree in statistics, epidemiology, biostatistics, public health.
- Knowledge of programming in R / Python /Stata would be useful.
• Experience working with data from programs in low resource settings preferred.
• Ability to speak and write fluently in English is required and working knowledge of French.
• Detail oriented.

OTHER REQUIREMENTS:
Applicants must have a business or tax number.

EXPECTED RESULTS
• Dataset templates for CHWs monthly report, supervision data and sociodemographic data.
• Step by step instructions for cleaning of Excel database files into datasets fit for analysis.
• Final datasets for CHW monthly ICCM report data, supervision data and sociodemographic data based on cleaning process.
• Unique identifiers for the iCCM sites consistent throughout the monthly datasets.
• Analytical plan for missing data.
• Detailed codebook with data dictionary and DoFile.
• Template for database and data entry for longitudinal analysis.

DUTY STATION
Remote-based for the most part of the work. Expected to be in Ottawa for 3-5 days in the beginning (explanation of the data, missing data, unique identifiers, type of database) and 3 days at the end of the assignment (presenting the products, testing data entry, testing analysis of some indicators). CRC will pay for the travel cost.

OFFER SUBMISSIONS
Interested parties should submit their offer to the Canadian Red Cross with the following information:
- Resume
- Evidence of experience in database that resembles the tasks listed in this ToR
- Cost of consultancy

CRC is not obliged to award the contract to the lowest cost.

Please send your offers to CRCLOG.OTTAWA@redcross.ca

Deadline for applications is March 17 2019