Request for Expressions of Interest (EOI) v11Feb2025
Data management system for WHO coordinated study
Efficacy of probiotic supplementation in preterm and small for gestational age infants. A multi-centre, placebo- controlled, individually-randomised trial
(Probiotics in preterm and small for gestational infants, PROPS trial)

Posting date Tuesday 11th February 2025 Geneva time
Closing date for submissions Monday 3rd March 2025 5pm Geneva time

1. Background

The World Health Organization (WHO) Department of Maternal, Newborn, Child, Adolescent Health and Aging (MCA) is coordinating a trial to assess the effect of probiotic supplementation in 14,000 preterm and small for gestational age (SGA) infants in five low- and middle-income countries (LMICs) (Bangladesh, Ethiopia, Kenya, Nigeria, Pakistan).

The overall aim of the trial is to assess the effect of probiotic supplementation on mortality, morbidity, and growth in preterm and term SGA infants in the first six months of life in South Asia and Sub-Saharan Africa. The primary objective is to assess the effect of probiotic supplementation on (i) mortality at six months in preterm infants and (ii) underweight (low weight-for-age) free survival at 6 months in term SGA infants. Other secondary outcomes are suspected and confirmed sepsis, and necrotizing enterocolitis.

The trial will be implemented in urban and rural settings in the five sites over four years. It will involve recruitment in hospital in the first two days of life and follow up in the community through home visits. The probiotic supplement will be specially prepared for the trial and given orally or by feeding tube. It will be given to infants by their mothers in hospital or at home from day 2-30 of life. The mothers will be directly observed and supported by specially trained field workers (directly observed therapy, DOT). The trial will be implemented under strict International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use Harmonised Guideline for Good clinical practice (ICH GCP) compliant protocols.

Infants will be enrolled over 18 months and followed up to 6 months of age. We anticipate the first infants will be enrolled in the trial in July 2025. We anticipate trial data management activities will start in April 2025.

Further information about the trial can be found at the following website.
https://www.who.int/publications/m/item/the-who-props-trial-(probiotics-in-preterm-and-small-for-gestational-age-infants

WHO/MCA is seeking technical support for ICHGCP compliant data management activities for the duration of the trial.

We invite expert clinical trial data management system developers to submit an Expression of Interest (EOI). The EOI guidance below should be followed with submission no later than Monday 3rd March 2025 5pm Geneva time. EOIs should be sent by email to Karen Edmond (edmondk@who.int). EOIs received after this date will not be considered for selection.

2. Summary of requirements / work to be performed

The following activities are needed to develop and maintain a PROPS ICHGCP compliant clinical trial data management system for all sites in five countries (Bangladesh, Ethiopia, Kenya, Nigeria, Pakistan).

Specifically this should involve:
(A) Developing the systems for data entry, storage, retrieval, monitoring and security of data
(B) Setting up a secure ICHGCP compliant File Transfer Protocol (FTP) website including a common SharePoint
(C) Query identification, quality control and resolution
(D) Data monitoring
(E) Installation and training of all sites in use of the data management system.
(F) Online technical support throughout the trial until data are clean and the primary analysis is complete
(G) Development of a project plan, standard operating procedures (SOPs) and data dictionary

Details and examples are provided below of what is known to work well for the study context, however the developer has complete flexibility in development if they feel a different system or different elements would work better.

For these examples the prerequisite for installing the data management system on the site servers and computers is that software is available in the sites (e.g. Dot Net Framework, SQL Server 2008 R2 or higher) and the server and computers are connected in a LAN (local area network) (*further details below). If the developer feels that different software and hardware are needed in the sites, WHO will work with the sites to procure these. The sites will use handheld tablet computers for data entry into electronic case record forms (eCRFs) installed on the tablets. We are anticipating these will be Android based but this can be changed on request from the data management team.

The developer is required to use their own hardware and software or include in the budget all the hardware and software they require for developing, supporting and maintaining the data management system. For hosting the FTP website, a domain name (FTP website name) and web space on a web server will be needed and must be purchased by the developers and included in the project budget.

Details:
(A) Developing the systems for data entry, storage, retrieval, monitoring and security of data
- The front end can be designed in Android Studio Microsoft Visual Studio 2010 and the backend (database) can be SQLite locally on tablets and MS SQL Server 2008 R2 or higher in a cloud or local server.
-The data can be locally stored on the tablet in a system which can be a SQLite database and then synced with a MS SQL Server database residing on a cloud or local servers through mobile data or local Wi-Fi.
- Range and logical checks should be inbuilt into the tablet and an alert should be raised if entered values are out of the predefined ranges.
- Real-time alerts, email alerts, and dashboards should be developed for early identification and appropriate action.
- Each site should send clean data each month to WHO through a File Transfer Protocol (FTP) system described below.

-The data management team should work with local site IT team to install the data management system application on the site tablets and servers. A query management system and data monitoring system should also be installed on each site's server and computers.

(B) Setting up a secure ICHGCP compliant File Transfer Protocol (FTP) website including a common SharePoint
- A secure FTP website (Common SharePoint) should be developed with administration rights with WHO. All sites should have individual logins to upload and transfer data monthly to WHO.
- For hosting the FTP website, a domain name (FTP website name) and web space on a web server will be needed and must be purchased by the organisation data management system developers and included in the project budget. The FTP website should be maintained in a secure, access-controlled and monitored facility. The FTP website can have a SSL (Secure Socket Layer) Certificate from one of the leading SSL Certificate authorities (RapidSSL.com). The SSL can encrypt the data and protect it during transmission.
- Each site will upload cumulative clean data on FTP server every month. The sites should be assigned user Ids and passwords to log on the website. The FTP website (Common SharePoint) should have a defined folder structure and sites should not be able to access data from other sites. WHO as a coordinating centre should be able to access data from all sites. The website should be linked with email alerts for every upload and download.

(C) Query identification, quality control and resolution
- Each site should be provided with a query management system.
-The query management system developed can be a window based application.
-The data management team should set up a system of query identification, quality control and resolution which should be generic across all sites but also have customised elements as needed for each site.
- This should include inbuilt range and consistency checks in the tablet front end as well as interdatabase checks across the CRFs.
- After the data is transferred into the database, consistency checks (logical and across form checks) are needed to be generated by each site.
- Queries should be identified in the data management system and sent to the field team for resolution. The database should be updated with the responses received from the field. An electronic audit trail should be built, where all resolutions documented with a date and time stamp.
-The data management team should interact with each site about their queries and ensure resolution of all errors in real time and at latest within 4 weeks.

(D) Data monitoring
-The data management team should set up a system for the sponsor for real time read only access to deidentified cumulative data in each site including live births, enrolment, serious adverse events (SAEs), protocol deviations (PDs), end point achievement and other key monitoring data.
-The data management team should also set up a system for clean data monitoring for the sponsor and trial statistics team for all data points required by the DSMB and statistics team plus key data monitoring points such as: live births, enrolment, serious adverse events (SAEs), protocol deviations (PDs), end point achievement and other key monitoring data.

(E) Installation and training of all sites in use of the data management system.
-The data management team should provide online installation and training to the site data management staff on the data management system data collection, query resolution and uploading data in the FTP system for WHO. In case a site visit is required for installation and training, WHO will organize and support those visits.

(F) Online technical support throughout the trial until data are clean and the primary analysis is complete

-Ongoing online technical support should be provided to all sites throughout the trial period. Desk or team viewer sessions should be organized to resolve technical problems.

(G) Development of a project plan, standard operating procedures (SOPs) and data dictionary
- Prior to the start of the work a project plan should be developed (i.e. a plan of how the work will be done including a timeline). Before the first infant is recruited, SOPs and a data dictionary should be developed and shared with the sponsor / WHO. These documents should be developed in consultation with the sponsor / WHO.

*Example of the resources to be available in the sites:
-Android tablet with minimum 2GB RAM, 32GB storage, 8 inch screen, 7-8 hours battery backup, OS android Lollipop (5.0), sim slot for mobile data and power bank for backup (if required)
- Windows SSD Cloud server with minimum (or local server with static IP) 4 CPU Cores, 8 GB RAM, 100GB SSD Storage,4TB Bandwidth/month,1000mbps Port Speed,1 IPv4 Address,1 IPv6 Address, Windows 2019 64Bit OS, MS SQL Server 2017 or above, Weekly Snapshot Backup, CDP File Backup (with MSSQL), SSD Backup Cloud Storage
-Desktop with minimum i5 processor, 4 GB RAM, 40GB Storage, OS Windows 7 or above.(For query processing)

3. Characteristics of the provider

Essential
- Experience in developing, implementing and supporting data management systems for clinical trials of investigational medical products (IMPs) according to ICH-GCP
- Experience in developing, implementing and supporting data management systems in multicountry and multisite trials (3 or more countries) in low and middle income countries (LMICs)
- Experience in developing, implementing and supporting clinical trial data management systems that include infant growth data and use of infant growth reference standards
- Experience in developing, implementing and supporting clinical trial data management systems that include gestational age assessment
- Ability to communicate well in English both written and verbal
- Relevant qualifications in data management systems development (e.g. bachelors, masters or PhD)
- Proof of International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use Guideline for Good Clinical Practice (ICHGCP) training / accreditation
- The data management organisation and lead developer must based in a LMIC and have indepth knowledge of the challenges of implementing data management systems in low resource settings.

4. Format of the EOI to be submitted (size 11 font, normal margins)

4 pages maximum

I. Describe your experience and expertise in conducting the activities listed in section 2 (1 page maximum)
II. Describe the basic data management system you will develop (1 page maximum)
III. Describe how you meet each of the essential characteristics in section 3 (1 page maximum)
IV. Illustrative budget outline. In this EOI, we request you to provide an illustrative high-level budget outline (no budget justification required at this stage). Please base your budget on the outline provided in this EOI. While illustrative, the budget should be prepared carefully and reflect actual costs. It is anticipated that the bulk of the budget would be for staff

salaries. Please note all administrative costs should be itemised. Travel costs do not need to be included. Travel is not anticipated but if required any travel needs will be covered separately by WHO (1 page maximum).

In addition to the 3-page maximum

V. Short CV with professional qualifications, current position and affiliation, most relevant data management projects conducted (2 page maximum for each team member).
VI. Completed provider contact information form (Annex A).

5. What will happen after the closing date for submission of Expressions of Interest?

The received Expressions of Interest will be screened and scored independently by WHO staff using the criteria set out in section 3 above. The results of the selection process will be notified in March 2025.

Disclaimer

Submission of an Expression of Interest does not guarantee that a provider will be selected.

Any and all costs and expenses incurred in relation to, or ensuing from, the submission of an Expression of Interest will exclusively be borne by the applicant. The application and selection process set forth in this document will not be subject to claims for financial compensation of any kind whatsoever. WHO is acting in good faith by issuing this Request for Expression of Interest, however, this Request for Expression of Interest does not entail any commitment on the part of WHO, either financial or otherwise. WHO reserves the right to select research teams identified by WHO through means other than this Request for Expression of Interest; reject any or all Expression(s) of Interest, without incurring any obligation to inform the affected applicant(s) of that decision or the grounds thereof; and/or change or cancel the process at any time.

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Annex A – Provider Information Form

Contact information to be provided by the lead provider expressing interest	
Name and title of lead provider who is submitting the EOI:	…….
Signature:	
Institution name:	……
Date:	……
Mailing address:	…… …… ……
Email address:	……