

**Request for Quote (RFQ)
For mHealth Application for
Infection Prevention and Control**

IPConnect

University Research Co., LLC

Issuance Date: February 07, 2017

**Email quote to PanganaiD@urc-chs.com with a
copy to SiphoN@urc-sa.com and BrightonK@urc-sa.com**

Managed by:
University Research Co., LLC

TABLE OF CONTENTS

1	INTRODUCTION	3
2	IPCONNECT KEY COMPONENTS	3
3	IPCONNECT MODULES	4
3.1	Occupational Risk Exposure/Incident Reporting:.....	4
3.2	IPC Push Notifications:	5
3.3	Case-Specific Queries:	5
3.4	IPC Facility Assessment	5
3.5	CO ₂ Monitoring.....	5
4	USER MANAGEMENT	5
4.1	Super-user/Administrator	5
4.2	Infection Control Nurse.....	5
4.3	Supervisors and M&E staff.....	6
4.4	Health Workers.....	6
5	VALIDITY	6

1 INTRODUCTION

Infection prevention and control (IPC) is key to reducing infections in healthcare facilities as well as other congregate settings. University Research Co., LLC's (URC) IPConnect suite of mobile health (mHealth) applications will help strengthen administrative IPC procedures and allow National Department of Public Health (NDOH) staff gather and analyze data for more targeted IPC resources and response.

The IPConnect Suite will include five components:

1. Occupational risk exposure: health workers can report exposures, either anonymously or identified, and receive feedback on next steps depending on the type of exposure
2. IPC push notifications: all health workers will receive periodic IPC updates (e.g. new TB IPC guidelines, scheduled trainings, etc.)
3. Case-specific queries: health workers may seek case-specific IPC information to ensure proper protocol
4. IPC facility assessment: linked to another URC application, the allows health facility staff to receive reports of identified IPC gaps at their facility
5. Patients/ Client feedback: patients and facility visitors may anonymously report IPC violations such as undisposed waste, lack of staff masks, etc.

IPConnect's five applications will provide the NDOH a comprehensive overview of facility-specific IPC gaps, both physical and knowledge, and identify focused response actions, allow for mass distribution of guideline updates, trainings, and other information, education and communication (IEC) materials, and provide real time data for immediate and accurate action. Automatic geo-tagging and time capture will further ensure accurate response.

2 IPCONNECT KEY COMPONENTS

Component	Info Flow	Description	Users
Component 1: <i>Occupational risk exposure</i>	Two-way	Occupational risk exposure reporting has three components: anonymous incident reporting, non-anonymous incident reporting, and infection outbreak reporting. Information flows to and from the health worker. Incident information entered by the health worker is then reviewed by the infection control nurse and appropriate response actions are generated. Outbreak reporting is sent to the server and the system administrator is alerted.	<ul style="list-style-type: none"> • Health Workers • Managers
Component 2: <i>IPC push notifications</i>	One-way	Generated by the system administrator, IPC push notifications are one way and will be automatically sent to health workers. This requires no response from health workers.	<ul style="list-style-type: none"> • Health Workers • Managers

Component	Info Flow	Description	Users
Component 3: <i>Case-specific queries</i>	Two-way	Initiated by the health worker, the server will receive specific questions and generate immediate responses for the health worker with general information and step-by-step instructions for response.	• Health Workers
Component 4: <i>IPC facility assessment</i>	One-way	The facility assessment tool allows supervisors to quickly and accurately input specific IPC-related observations such as infrastructure, staffing, waste management, etc. and flag areas for follow-up. This information is sent to the server and immediately available.	• Supervisors
Component 5: <i>Guidelines and other resources</i>	One-way	This will house a number of guidelines and other resources that will be available for downloading to mobile devices. The app may also provide updates to registered users if new guidelines are available.	

3 IPCONNECT MODULES

IPConnect will be one system, with two different interfaces – an Android application and a web-based portal.

The web interface will contain all modules, an administrative interface for user management, real-time monitoring of activities and dissemination of alerts based on authenticated reports on infection outbreaks. A data dashboard will also be included highlighting key M&E indicators.

The Android application will maintain all components, limiting access to certain ones based on user. Certain modules will be available without a login (Occupational Risk Exposure/Incident Reporting, IPC Push Notifications, and Case-Specific Queries).

Prospective vendors may review the existing pages of the current web-based apps on www.ipconnect.org to get an idea of what is needed for programming. All apps should be available in open source code and the code will have to be provided to URC once the app is completed.

3.1 Occupational Risk Exposure/Incident Reporting:

Most of IPConnect’s features do not require registration. Health workers and managers can report incidents related to any exposure, including blood borne and airborne pathogens, at their workplace. When reporting incidents, health workers receive a unique incident number and an option to create a four-digit PIN. This allows workers to update their status or seek advice regarding post-exposure prophylaxis (PEP) and post-exposure care from an infection control nurse without disclosing their identity. Advice on post exposure care will be auto generated, relevant to the type of incident reported.

If health workers do not wish to receive a unique incident number, they are able to report an incident anonymously and receive auto generated advice from the system, based on their report.

In addition, health workers will be able to report any incident that has been observed by him/her in relation to IPC or to report an outbreak nearby or at the health facility. A feature will allow system administrators to alert all health facilities, within the IPC network or other networks, of a reported outbreak. Outbreak information will only be disseminated by a system administrator based on the authenticated infection outbreak report from a health worker.

3.2 IPC Push Notifications:

Using this application, a health worker will be able to receive notifications regarding updates to overall IPC standards and best practices (CDC, WHO) and country-specific guidelines. A search option is available to browse for case-specific questions, updated guidelines and overall IPC articles. Health workers will also be able to search for post-exposure care.

3.3 Case-Specific Queries:

Health workers can ask specific questions and receive feedback based on IPC scenarios. Feedback will include general information, risk level, ways to reduce risk of infection going forward, and next steps. This feature will allow health care staff to receive important information on IPC measures immediately, decreasing risk of initial and further infection.

3.4 IPC Facility Assessment

Supervision assists staff during routine supervisory visits to ensure comprehensive health facility review and flag areas for improvement and follow-up. The IPC Facility Assessment tool will increase reporting of IPC measures with real time, geo-tagged data helping to ensure successful response and follow-up and ensure visibility of successful outcomes.

3.5 Guidelines and other resources

This app will house a number of guidelines and other resources that will be available for downloading to mobile device. The app could also provide updates to registered users if new guidelines are available.

4 USER MANAGEMENT

4.1 Super-user/Administrator

Super admin will be able to create all users including additional admin. Create and define roles, disseminate updates and infection outbreak alerts within the IPC network.

4.2 Infection Control Nurse

- The Infection Control Nurse will monitor the dashboard of incidents reported anonymously by health workers. Answer questions for exposed health workers and guide them accordingly.
- The Infection Control Nurse will receive periodic notifications to follow-up with exposed health workers.

4.3 Supervisors and M&E staff

These users will mostly be involved in supervisory visits (facility assessments), data analysis, generation of reports and real-time monitoring.

4.4 Health Workers

- Health workers will be able to browse guidelines either on their mobile app at the health facility or on their own mobile device.
- Health workers will be able to report incidents anonymously or by providing their details.
- Health workers will be able to report exposure to infection or an infection outbreak incident.
- By reporting anonymously, a health worker will receive a unique id and a pin code to be used to communicate with the IC nurse and receive advice related to prophylaxis or steps to follow in the case of exposure.
- Health workers will have the option to browse a library related to exposure to infectious disease or post exposure care.

Proposal:

- a) A Title Page with name of the organization, contact person's name and title, full address including telephone, fax and email;
- b) Application and website specifications;
- c) A section on organizational experience and capacity.
- d) A summary of plans for rapid design and deployment
- e) Please be sure to review and confirm that all **amounts and formulas are correct**. The cost proposal shall include the following:
 - i. A summary budget by line item
 - ii. A detailed budget giving adequate breakdowns of all costs showing the formulas used for cost calculations and specific costs for each app.;
 - iii. All VATs and Taxes associated must be identified separately;
 - iv. Provide budget narratives explaining applicability and costs determination;
 - v. Monthly maintenance costs for upkeep of IPConnect.

5 VALIDITY

The quote should remain valid for not less than 60 calendar days after the deadline specified above. The quote must be signed by an official authorized to bind the OFFEROR to its provisions.