



**YENEPOYA**

(DEEMED TO BE UNIVERSITY)

Recognized under Sec 3(A) of the UGC Act 1956

Accredited by NAAC with 'A' Grade

## Details of the Collaborative Activity

2020-21

**Name of the Collaborating Institute:** Samanvay Research and Development Foundation, Bangalore

**Name of the Collaborating Department from YDU:** Department of Community Medicine, Yenepoya Medical College

**Year of MoU:** 2019

### Activities:

- **Joint Project:**

A joint project was formulated by Department of Community Medicine, Yenepoya Medical College and Mr. Vivek Singh, Samanvay (Software partner) for project “Kutumba Arogya SarvekshanaHagu Rakshana Yojane” for establishing IT platform for Health and Demographic Surveillance system. A Project plan document was approved by Dr. AbhyaNirgude, Professor, Dept of community medicine, YMC and Mr. Vivek Singh, Samanvay (Software partner).

- **Joint Event Organized:**

Dept. of Community Medicine, YMC organized a webinar entitled “Fundamentals of Establishing Technology Enabled Health and Demographic Surveillance System (HDSS)” in collaboration with Samanvay (Software Partner) on 30<sup>th</sup> Jul. 2020 with 550 registrations from more than 200 institutions.

- **MoU:**

An official MOU was signed between both the parties in 2019 for developing electronic data capture tools in the area of Health and Demographic Surveillance system.

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Collaborative activities: 3.7.1/YDU



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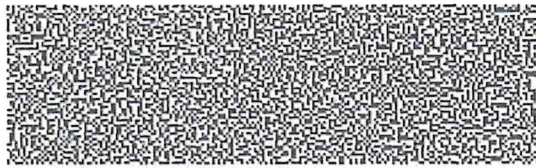
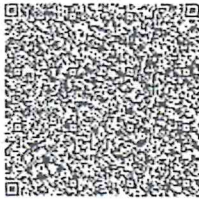
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### Memorandum of Understanding

Between

Yenepoya (Deemed to be University), Mangalore  
and

Samanvay Research and Development Foundation, Bangalore

Whereas, both parties have decided to collaborate to work towards the objectives envisioned in the annexed MOU and that, it has been progressing well in letter and spirit, the furtherance of the collaboration is reaffirmed by way of execution of this document adhering to terms of reference cited in original documents dated 28.11.2019 for a period of three years.

  
Registrar



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Statutory Alert:

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## **Memorandum of Understanding**

**Between**

**Yenepoya (Deemed to be University), Mangaluru, India**

**AND**

**Samanvay Research and Development Foundation, Bangalore, India**

This MoU is signed on 28/11/2019.

**Yenepoya (Deemed to be University), University Road, Deralakatte, Mangaluru - 575018,**  
represented by its Registrar, Dr.K.S.Gangadhara Somayaji, hereinafter called as the First Party.

**AND**

**Samanvay Research and Development Foundation, 20, T.P. Venugopal Layout, Anandnagar,**  
Hebbala, Bangalore - 560024, represented by its Director, Arjun Khandelwal, hereinafter  
called as the Second Party.

Whereas, the first party is a deemed to be university accredited "A grade" by National  
Accreditation Assessment Council (NAAC) with Yenepoya Medical College being one of the  
constituent colleges, hereinafter called YMC, engaged in the treatment of patients, teaching,  
research and service.

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Department of Community Medicine under YMC is an undergraduate and postgraduate training department involved in community-oriented training, research and service to the community. The department is also providing promotive, preventive and curative health services to the community through different tiers of health care delivery systems. It caters to the 1 lakh population. Department has been awarded with certificate of appreciation as “Department with research potential” by our Institute. Department has several extramural and intramural funded projects. Priority research areas include surveillance, operational research in tuberculosis, non-communicable diseases, and maternal-child health including adolescent health.

Department of Community Medicine will be the coordinating department from the first party.


Samanvay Research and Development Foundation is a section 8 technology company, incorporated in November 2016. Samanvay team has vast experience in software product development and its implementations in the corporate and development sector, especially public health. Samanvay team has developed software products like Avni (avniproject.org), Bahmni (bahmni.org), Gunak (for NHSRC) and done several projects for nonprofit organisations.

In order to develop electronic data capture tools, IT platforms and facilitate capacity building of public health professionals through research and service activities, Samanvay Research and Development Foundation & Yenepoya University, Mangaluru, India agree to enter into a memorandum of understanding (MoU) on following articles within the extent of each country’s regulations & facilities.

1. Development of electronic data capture tools
2. Development of IT platform for collection, compilation and analysis of digital data.
3. Explore the possibilities of research collaboration between the two institutions.

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4. Provide technical support in software solutions.
5. Capacity building of students, faculties, researchers and filed staff in efficient and quality data capture.
6. To promote the development of training modules and course maternal by involving faculty/ researchers from two institutions.
7. Explore the possibility of developing and implementing software solutions for research and community service.
8. In case that research result impacting upon matters of intellectual property rights are expected to arise in the course of collaborative projects within the scope of this protocol, the parties shall enter into an additional protocol governing the conditions regarding the treatment of intellectual property rights sp arising, prior to the start of the collaborative project in question.
9. This protocol shall be in effect for three years following the date of signature. This protocol may be complemented or amended by the written and common consent of authorized representatives of both institutions and additional protocols to this protocol. The addenda or amendments will not be valid unless it is written and signed. The protocol may be extended for another two years by written and signed consent of the parties.
10. Each organization shall reserve the right to terminate the protocol by issuing a written notice six months in advance to the other party. In that case, on-going projects shall complete.

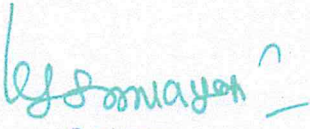


This is a legally non-binding agreement which outlines an intention to promote academic and research collaboration between the two institutions.

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This protocol shall become effective after signing by the authorized representatives of both the institutions.

First Party: Signature and Seal	Second Party: Signature and Seal
<p data-bbox="151 544 574 582">Dr. K.S.Gangadhara Somayaji</p>  <p data-bbox="391 745 497 775">Registrar Yenepoya (Deemed to be University) University Road, Deralakatte Mangalore 575 018</p> <p data-bbox="151 835 686 913">Registrar, Yenepoya (Deemed to be University)</p>	<p data-bbox="845 539 1161 577">Mr. Arjun Khandelwal</p>  <p data-bbox="845 853 1420 963">Director, Samanvay Research and Development Foundation</p> 

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# Project Plan Document for Department of community medicine, YMC, Yenepoya (Deemed to be University) Mangaluru

Prepared by: Samanvay

Date: 08-April-2020

This document was created with inputs from discussions and requirements for the project. It describes in detail the features that the end product will contain. It also contains the timeline of feature delivery so you can plan in advance when to test those features.

## NGO Name and Description

Department of community medicine is working with a vision to excel in community-oriented medical education along with preventive, promotive and curative community care and research with following objectives

1. Assess the health needs of the community and plan and implement appropriate need-based health interventions.
2. To provide quality community-oriented medical education to the undergraduate and postgraduate medical students
3. To create social physicians capable of providing comprehensive care
4. To provide preventive, promotive and curative services to the community through community outreach centres and outreach activities in collaboration with public and private institutions.
5. To conduct socially relevant field-based research
6. To facilitate the implementation of National Health Programmes in coordination with district health and family welfare departments.
7. To develop academic and research collaboration with institutes of public health importance.

## Project Description (what problem is it solving)

To establish an IT platform for Health and Demographic Surveillance System. This will enable :

1. Change from paper-based data capture to paper-less (Electronic format)
2. Community-based efficient, quality data capture, analysis and reporting.
3. The transition from survey to surveillance.

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4. Geospatial mapping of health problems and diseases with respect to time, place and person distribution.
5. Understanding of the disease trends by collecting longitudinal data
6. Addition of new projects and variables in the established IT platform.
7. Monitoring and supportive supervision of field staff.
8. Capture data from special groups on a periodic basis like Pregnant mothers, lactating mothers, children less than 5 years, adolescents, individuals with DM, Individuals with HT, NCD risk factors (>18-60 years), Geriatric population and fever survey (last 15 years)
9. Surveillance studies it is empirical to have real-time, continuous data monitoring and relational data capture through IT platform for assessing health needs and planning health services

This will be done as an implementation of Avni.

Following enhancements would be done to Avni product

1. Household/Groups Support
2. Notification to beneficiaries using SMS

## Users and Roles

(Total 39 users)

Role	Responsibility	Function In System	Details
Field Level	Data collection in the field at defined intervals	Android Application	Paramedical staff - well trained in EDC tools Age Group - 20-50 years Number of Users - <b>40</b>
Supervisors	Supervise data collection in the field Monitoring of field staff by verification of 5% to 10% of households visited by the field staff Submission of timely reports to program coordinator about data collection in the field		Number of Users - <b>10</b>
Program Coordinator	Supportive supervision and overall	Metabase User/ Web Admin User	Number of Users - <b>4</b>

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	<p>quality-assurance of data collected at the field level</p> <p>Training of field staff and supervisors</p> <p>Ensure timely submission of reports</p> <p>Coordination between the program manager and field staff, supervisors</p>		
Program Manager	<p>Overall implementation of the project</p> <p>Training and supportive supervision of program coordinator, supervisors and field staff</p> <p>Review the reports generated time-to-time</p> <p>Interpret the data that has been analyzed</p> <p>Liaison and coordinate between various stakeholders like software developers, funders, university and faculty members</p> <p>Conduct weekly review meetings and make necessary steps to ensure smooth functioning of the project</p> <p>Prepare and submit report of the entire project to the funders and software developers</p>	Metabase	Number of Users -6
Statistician	<p>Quality-control and validation of data generated by the software</p>	Metabase	Number of Users - 1

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	Analysis of data using software Notify program coordinator in case of errors in the data entered		
Principal Investigators	Who will have access to the data. Overall Incharge. To ensure data safety and confidentiality with respect individual identity. only one from either side will have access to the full data.	Metabase User/ Web Admin User	Number of user 2 1 from Yenepoya (Dr Abhay) 1 From Samanvay (Mr Arjun)

### Features NOT Implemented

1. The complete application will be bound by the features provided by the Avni platform. Apart from the ones mentioned in the above section, no new features will be added to the platform.
2. GIS reports showing clusters.

### Legacy Data

There is no legacy data.

### Project Timeline

Milestone	Deliverables	Duration	Date
Scope Finalization	Scope Document		04-Feb-2020
Requirements Gathering and Project Plan	Project Plan		08-Apr-2020
Annual Household Survey	- Product enhancement to support Households - Household & Individual Registration - Household Annual Survey - Individual Annual Survey - Fever Survey - 5 Forms - 8 Reports+ Report about	20.75 days	20-Apr-2020

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	Influenza like illness (No 23 report) - Visit Schedule - Program Summary		
Maternal & Child Health	- Pregnancy & Child Program enrolments from ANC to PNC - 8 Forms - 10 Reports - Visit Schedule - Program Summary	23.5 days	
Non Communicable Diseases	- NCD Risk Assessment - Diabetes, Hypertension Program enrolments - 6 Forms - 9 Reports - Visit Schedule - Program Summary	16.25 days	
User Training	Onsite Training		

### Technology Stack

Avni Product Enhancement: React Native, ReactJS, Java, Postgres  
Avni Implementation

### Project Cost

Deliverable	Cost
Requirements Gathering & Project plan	60400
App development	622052
Reports	531360
User Training	28200

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Product Enhancements	679833
Custom App Development	0
Legacy Data Import	
Environment charges	6000
<b>Total in INR</b>	<b>1927845</b>
<b>Total in USD</b>	<b>\$27,541.00</b>

**License**

AGPL

**Approvals Received**

POC - Dr Abhay Nirgude



*Vivek Singh*

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## **Report of Webinar on “Fundamentals of Establishing Technology Enabled Health and Demographic Surveillance System (HDSS)”**

Department of Community Medicine, Yenepoya Medical College and Samanvay foundation, Bengaluru organized a webinar on “**Fundamentals of Establishing Technology Enabled Health and Demographic Surveillance System (HDSS)**” on 30<sup>th</sup> July 2020 between 1.30-4.00pm. The webinar received an overwhelming response from all parts of India with 550 registrations from more than 200 institutions. The webinar was held on google meet where more than 250 participants joined along with live youtube streaming as well. The session began with a brief introduction by Dr Abhay S Nirgude, Associate Dean, Yenepoya Medical College. Dr M Vijayakumar, Vice Chancellor, Yenepoya (Deemed to be University) gave the opening remarks for the webinar. Dr Abhay S Nirgude, Associate Dean, Professor and Deputy Director, Centre for Health Professions Education, Dr Poonam Naik, Professor and Head, Deputy Director RHCDC, Dr Akshaya KM, Additional Professor, Rural Health Training Centre In- charge, NSS Program Officer, Dr Pracheth R, Associate Professor and Urban Health Training Centre In- charge, NSS Program Officer, Dr Navya N, Assistant Professor, Dr Pavithra H, Senior Resident, Ms Garima Dosar Lead Analyst, Samanvay Foundation and Mr Arjun Khandelwal, Co-founder Samanvay foundation were the resource persons for the webinar.

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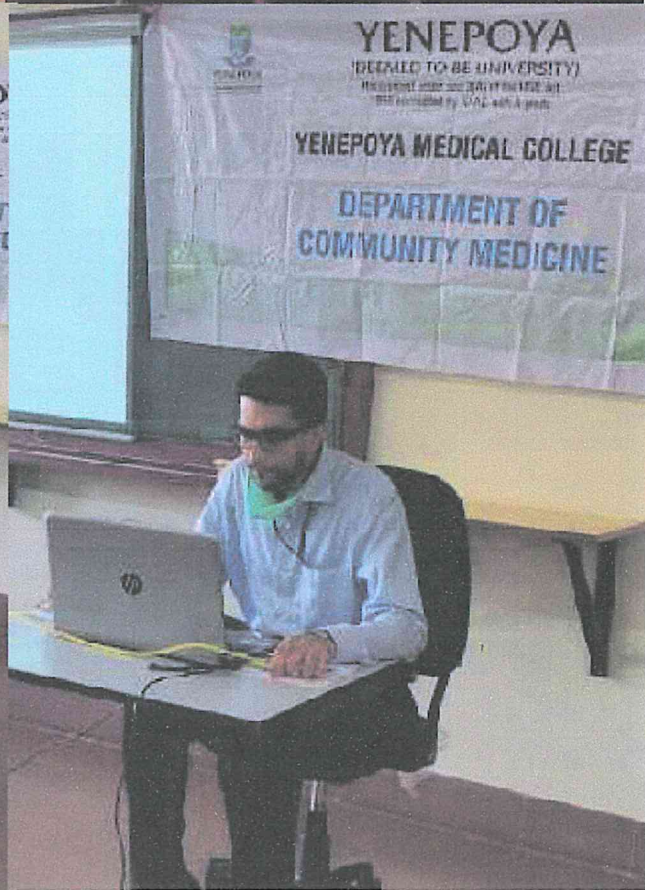
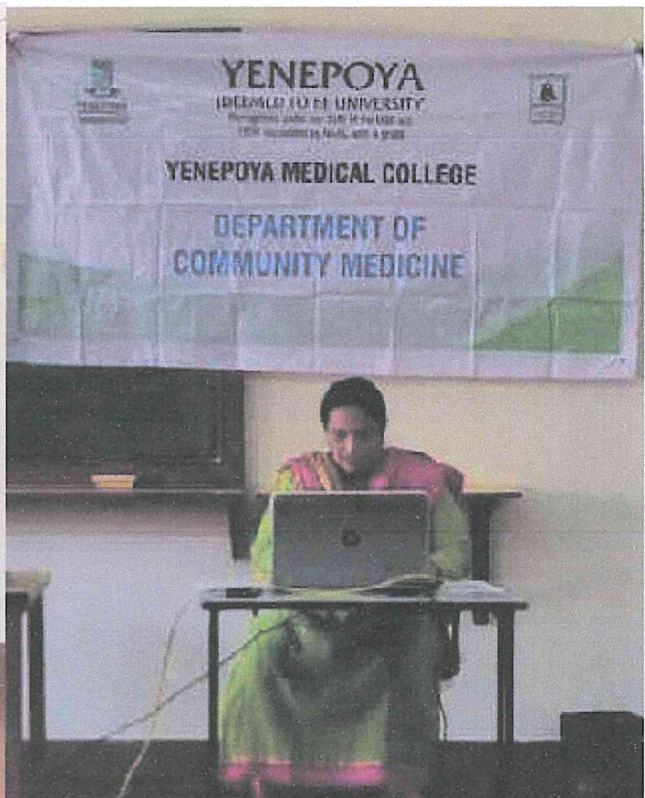
The details of the programme are as follows:

Time	Topic	Speakers
1.40 pm to 1.47 pm	Opening Remarks	Dr. M Vijayakumar, Vice Chancellor, Yenepoya (Deemed to be University)
1.50pm to 2.00 pm	What is health demographic surveillance system and its relevance in medical college setting?	Dr Poonam Naik, Professor and Head, Deputy Director RHCDC
2.05 pm to 2.15pm	How EDC tools and IT platform boost/ amplify the benefits of HDSS?	Dr Pracheth R, Associate Professor and Urban Health Training Centre In- charge, NSS Program Officer
2.20 pm- to 2.30 pm	Pre- requisite for development of HDSS	Dr Pavithra H, Senior Resident
2.35 pm to 2.45 pm	Steps in Development of HDSS	Dr Navya N, Assistant Professor
2.50- 3.00 pm	Steps in Development of HDSS	Dr Abhay S Nirgude, Associate Dean, Professor and Deputy Director, Centre for Health Professions Education.
3.05 pm to 3.15 pm	From technology based HDSS to clinical trials and longitudinal studies	Dr Akshaya KM, Additional Professor, Rural Health Training Centre In- charge, NSS Program Officer.
3.20pm to 3.35 pm	Demonstration of IT platform (Avni) developed for technology enabled HDSS	Ms Garima Dosar, Lead Analyst Samanvay Foundation
3.35 pm – 3.45 pm	Reviewing from IT Operations Lens	Mr Arjun Khandelwal, Co- founder Samanvay foundation

At the end of all sessions, questions were submitted in chatbox for google meet and google form which was shared with the participants who were watching the webinar through youtube. The questions were addressed by Dr Abhay S Nirgude and Mr Arjun Khandelwal. Participants actively participated in the webinar and asked more than 30 questions and appreciated the work.

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*[Signature]*

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