LINCOLN INTERNATIONAL INSTITUTE FOR RURAL HEALTH
SEMINAR SERIES

Professor Sanjay Juvekar

Professor and Head, Vadu Rural Health Program, KEM Hospital Research Centre, Pune

Friday 28th January 2022 at 10:30 UK time.

UNIVERSITY OF LINCOLN

The North-South Collaborations: approach and opportunities in conducting global health research in rural India

Welcome to the session, we will begin shortly.

Please ensure your microphone & video are muted.

There will be an opportunity for Q&A at the end of the Seminar.

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KEM Hospital
PUNE
Quality and ethics in patient care

KEM Hospital Research Centre Pune

Vadu Rural Health Program

The North-South Collaborations: approach and opportunities in conducting global health research in rural India

Rutuja Patil & Sanjay Juvekar

28th January 2022, Lincoln International Institute for Rural Health

This presentation includes:

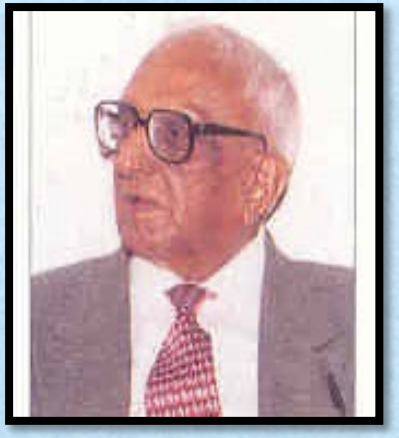
- Introduction to Vadu Rural Health Program & learnings
- Challenges of researchers working in rural India
- Overcoming challenges using ongoing research program
- Contribution of Northern Collaborations in overcoming challenges
- RESPIRE example to showcase North-South collaboration
- Opportunities for collaboration
- **Future research to address major health challenges**
- Engaging for showcasing

KEM Hospital Pune

- Established in 1912
- Largest ‘not-for-profit’ Hospital in Pune
- Societies' Registration Act 1860 and the Bombay Public Trusts Act 1950
- 550-bedded, tertiary-level teaching institution
- Serves Pune urban & rural as well as patients from neighbouring states

KEM Hospital Research Centre Pune (KEMHRC)

- 1973: Started research centre to commemorate Golden Jubilee celebrations of KEM Hospital
- 1985: Registered as an independent charitable trust
- 1988: ICMR Center of National Importance
- 1988: DSIR, Scientific and Industrial Research Organization
- 1988: Initiated **Vadu Rural Health Program**
- 1999: NIHFW recognized as Collaborating Training Institute (CTIs) for RCH program



Learnings from Vadu Rural Health Program…

Biggest learning: Convert scarcity into opportunity

…it was scarcity of everything @Vadu in 2002

History of VRHP

1973: Vadu Primary Health Unit

1986: Shirdi Saibaba Rural Hospital (tripartite partnership)

1988: VRHP as outreach program

2002: Vadu HDSS

2004: Vadu Research Unit

...contd History of VRHP

2005: Initiated vaccine Trials

2009-10: Research laboratories

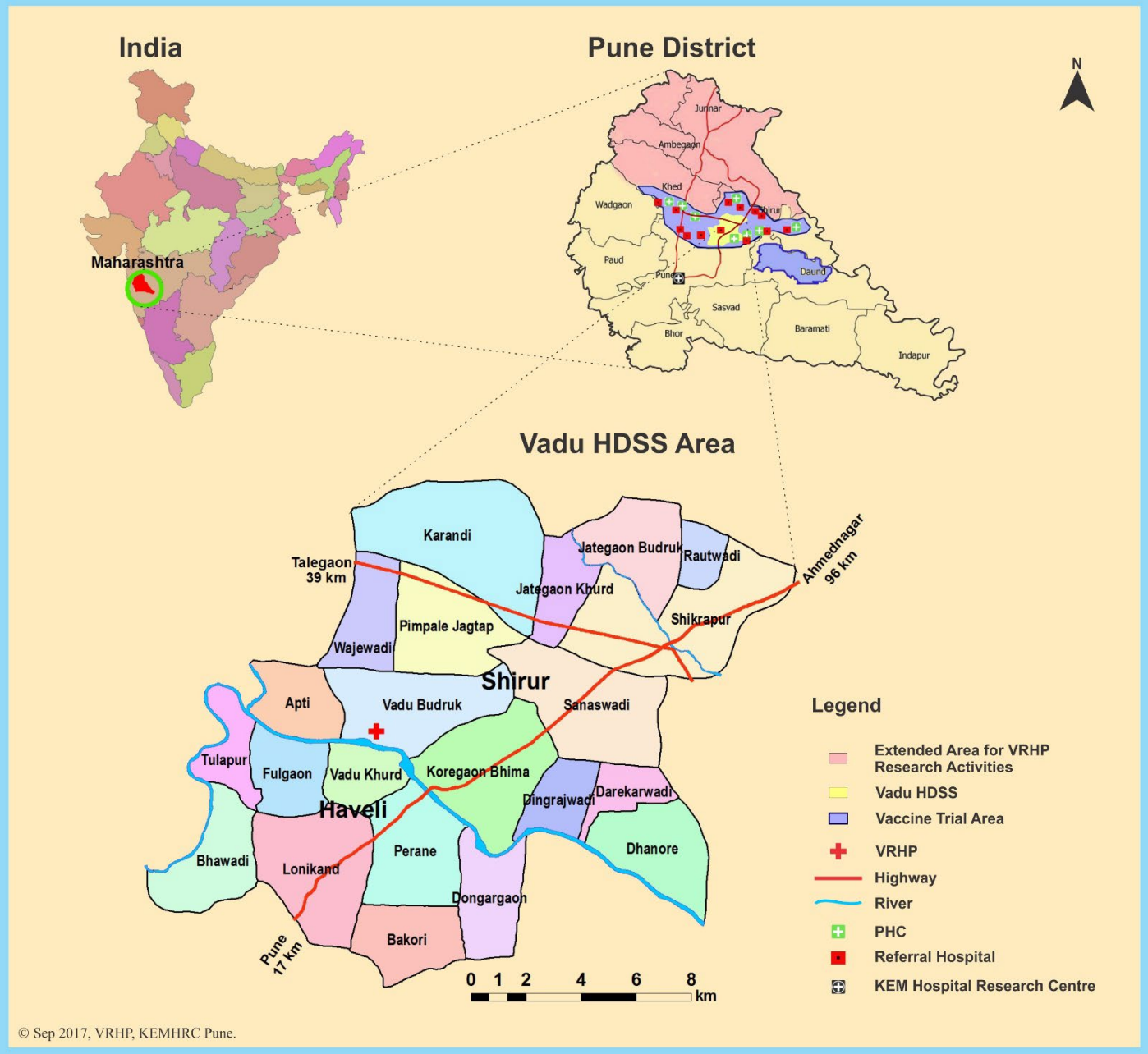
2010: Expansion of study area

2011: Core Vaccine Research Unit

2015: Joint Field unit with Govt. and implementation research

2022: Amidst COVID-Community Health Research Unit (CHRU)

Vadu Rural Health Program (VRHP) Area



- Population covered
  - Vadu HDSS: 1,80, 000
  - Vaccine Trial area: 5,00,000
  - Extended Area: 10,00,000

Clear Mission is important for team building

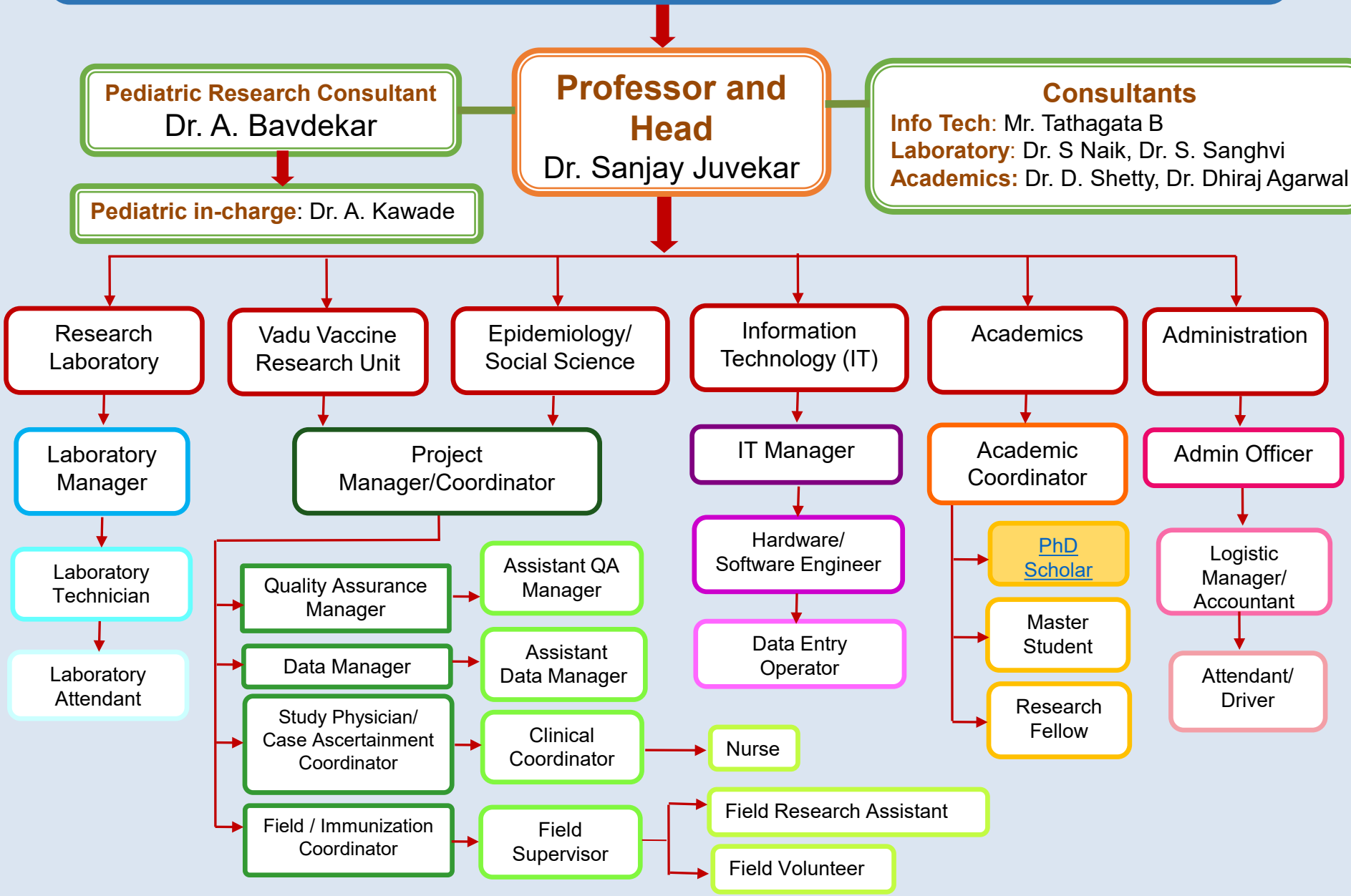
"Provide evidence-based, sustainable and rational health care solutions for the rural population using globally relevant community-based ethical research"

Challenges of researchers working in rural India…

- Infrastructure building and maintenance (laboratory, clinics, *etc.*)
- Community/ local politics
- Identifying, procuring and maintaining equipment
- Phone & Internet connectivity
- Distance and access to better facilities (education, training & health)
- Unavailability of roads and travel options
- Identifying qualified local team
- Keeping local medical fraternity interested & involved
- Lesser capacity building opportunities

Overcoming challenges using ongoing research program…

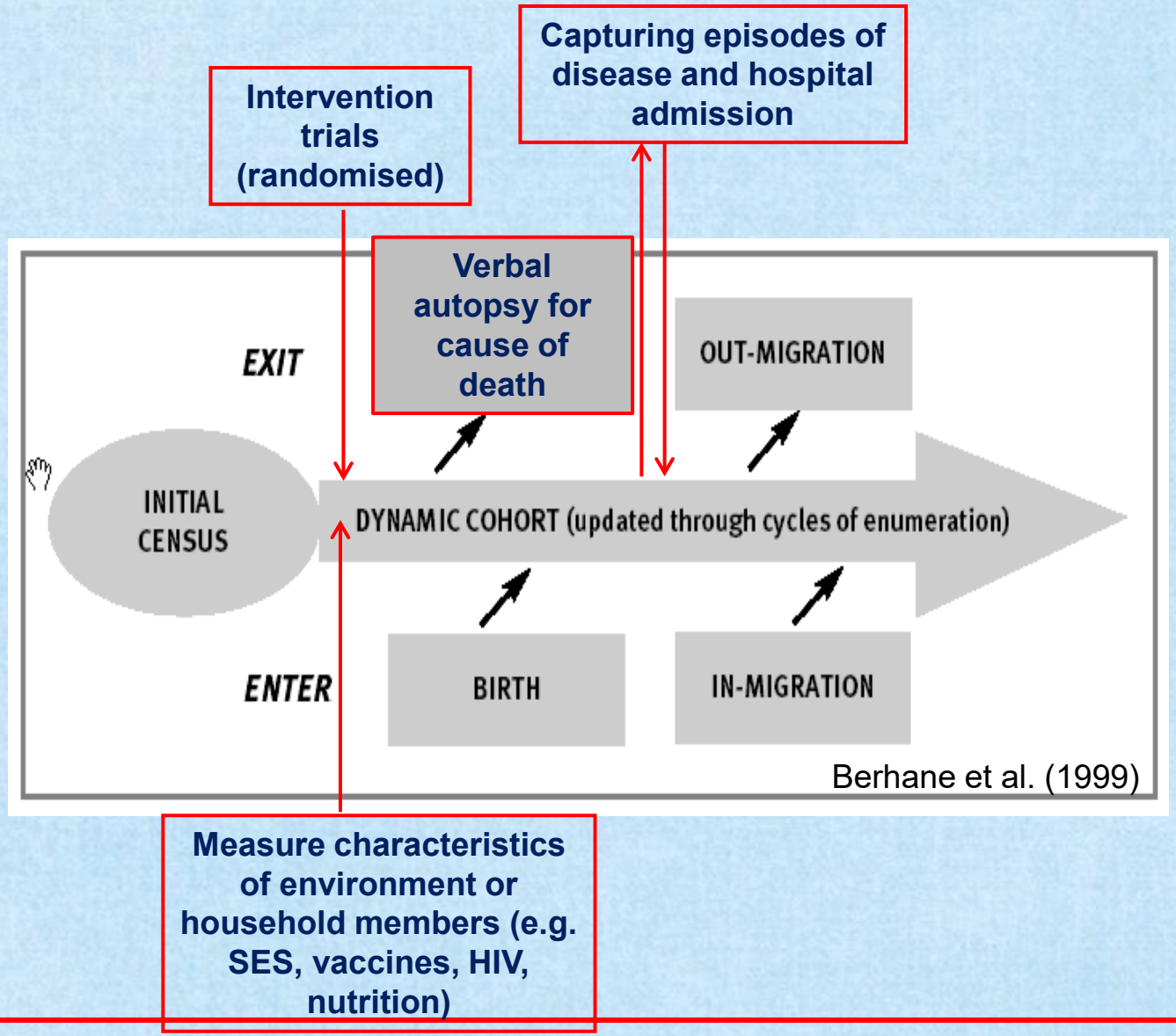
Vadu Rural Health Program, KEM Hospital Research Centre Pune, Site Organogram



Vadu HDSS

Initiated- 2003

(Gates Institute, Hopkins- Seed money)



Vadu Health and Demographic Surveillance System - Conceptual Framework

- Research Tools Development
- Hardware Readiness
- Logistics Management
- Software Development

Community meeting
Stake holder meeting
Peer reviewed papers
Policy briefs
INDEPTH
- INDEPTHStats
- IDMP (iSHARE)

Websites
- Vadu website
- Kemhrc website
- Kem Hospital website
- INDEPTH website

Reports
- For Villages
- For Ethics Committee
- For KEMHRC
- For Health Systems

Routine Six Monthly
- Birth
- Death
- Migration
- Verbal Autopsy

Variable Periodicity
- Socio Economics Status
- Disease Specific Modules
- Clinical Research

Demography
- Fertility
- Mortality/ Cause of death
- Population structure

Epidemiology of Disease
- Disease Burden
- Morbidity

- Electronic Data Collection and/or Data Entry
- Raw Data Cleaning
- Data Snapshot Extraction for Planning Studies
- Data Versioning and Archival

Current Research Domains

Observational Research	# of studies
Disease Burden	10
Social studies	25
Laboratory based studies	6

Intervention Research	# of studies
Vaccine Trials	40
Micronutrient supplement intervention	6

Implementation Research	# of studies
Formative studies	15
Collaborative implementation of new/ modified programs	8

Development and Technology Research	# of studies
Use of technology in health and research	8

Contribution of Northern collaborations in overcoming challenges…

List of previous Northern Collaborations

Year	Title	Design	Sample	Northern Collaborator
2004-05	**Sprinkles I**	**RCT**	**432**	**HSC, Toronto**
2004-05	NCD Risk Factor Surveillance	Cohort	2500	INDEPTH, WHO
2004-05	Health Equity	Cohort	14690	INDEPTH
2005-06	Hand washing & Acute Respiratory Infections	Cross sectional	700	LSHTM, WHO
2006-07	Study on aging (SAGE)	Cohort	500	INDEPTH, WHO
2006-ongoing	**iSHARE ongoing: Data sharing**	**Development**	**Participating DSS's Population**	**INDEPTH, SIDA Sarec, Wellcome Trust, now self funded**

Year	Title	Design	Sample	Northern Collaborator
2007-10	**Men PSA-TT**	**Vaccine trial**	**340**	**MVP, WHO**
2007-08	Sprinkles II	Effectiveness study	18000	Heinz, Helen Keller International
2008-10	**IMVAC (BOLD)**	**Cross Sectional**	**3600**	**Imperial College London**
2008-11	Measles	Vaccine Trial	2000	WHO and Serum Institute of India
2014- 15	Women, WASH and Health	Mixed methods	Survey (300), 9 FGD, 21 KI	LSHTM, UK

Year	Title	Design	Sample	Northern Collaborator
2014-16	Care seeking Behaviors of Mother	Observational	780	Johns Hopkins, UoE UK
2008-13	**Influenza Disease Burden Study**	**Hospital Based Surveillance**	**HDSS Population**	**ICMR/NIV and CDC, USA**
2016-19	Promoting LPG in pregnancy	Feasibility trial	210	Implementation science network through UC Berkley
2016-19	PSBI	Implementation research	2 blocks	WHO
2018-19	PMUY assessment	Mixed methods	260	ICMR, UC Berkley
2017-19	Nanofortified Oil	RCT	444	Saving Brains Canada
2017-20	Typhoid burden	Disease burden	6000	BMGF

Year	Title	Design	Sample	Northern Collaborator
2021-22	Barriers and Challenges in Pandemic by HCPs	Qualitative Research	64	IPCRG and RESPIRE
2016-23	PRERNA-Platform	Capacity building	NA	WHO, Univ Bergen
2019-21	**WHO RAISE**	**Implementation Research**	**NA**	**HPSR, WHO**
2021-22	ARISE- Adolescent health	Cohort	1200	Harvard
2022-22	Feasibility of Drone	Cross sectional	NA	FDCO, UK
2021-22	Pneumococcal carriage	Cohort	805	BMGF
2018-22	UoE RESPIRE Network	Multiple	NA	NIHR, UK

Women, WASH and Health in Rural Pune district- identifying stress and unmet needs

Basic needs
- Defecation-urination
- Nutrition-hydration
- Menstruation

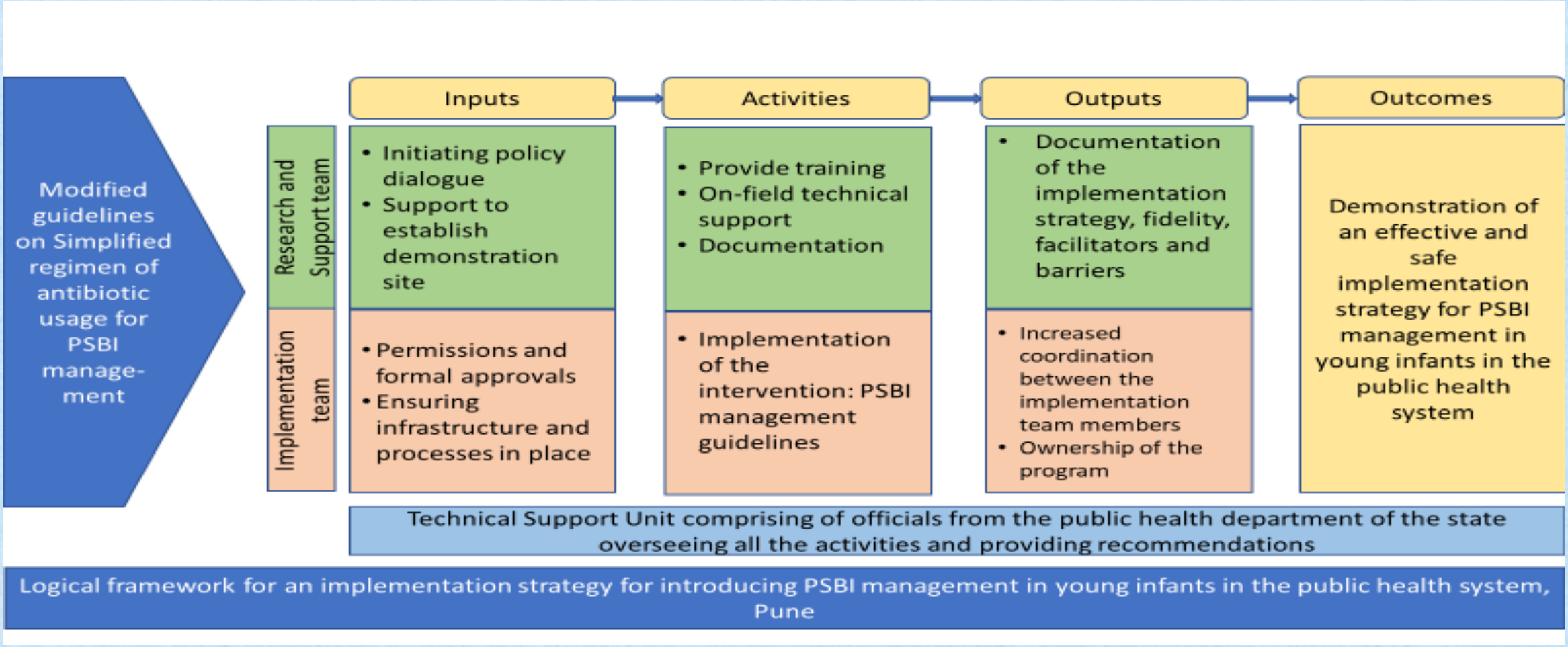
Facilities and resources
- Toilets and fields
- Water and food
- Absorbent materials

Use-mitigating factors
- Personal prior experience
- Family and community experience and expectations
- Social and cultural values

Practice
- WASH-related behaviour
- Indicated adjustments to dietary and fluid intake
- Menstrual hygiene

Health impact
- Self-perceived health problems or benefits of reported practice
- Psychosocial effects: personal, family and community

An innovative approach to jump start simplified Management of Sick Young infants with PSBI Where Referral is Not Possible for potential scale-up



Original research

BMJ Global Health

Bridging research integrity and global health epidemiology (BRIDGE) statement: guidelines for good epidemiological practice

Sandra Alba ,[1] Kristien Verdonck,[2] Annick Lenglet,[3,4] Susan F Rumisha,[5,6] Martijn Wienia,[7] Imre Teunissen,[1] Masja Straetemans,[1] Walter Mendoza,[8] Daniel Jeannetot,[1] Daniel Weibel,[9] Harriet Mayanja-Kizza,[10] Sanjay Juvekar[11]

BRIDGE

To cite: Alba S, Verdonck K, Lenglet A, *et al*. Bridging research integrity and global health epidemiology (BRIDGE) statement: guidelines for good epidemiological practice. *BMJ Global Health* 2020;**5**:e003236. doi:10.1136/

ABSTRACT

Background Research integrity and research fairness have gained considerable momentum in the past decade and have direct implications for global health epidemiology. Research integrity and research fairness principles should be equally nurtured to produce high-quality impactful research—but bridging the two can lead to practical and ethical dilemmas. In order to provide practical guidance to researchers and

Analysis

BMJ Global Health

Bridging research integrity and global health epidemiology (BRIDGE) guidelines: explanation and elaboration

Sandra Alba ,[1] Annick Lenglet,[2] Kristien Verdonck,[3] Johanna Roth,[4] Rutuja Patil ,[5] Walter Mendoza,[6] Sanjay Juvekar,[5] Susan F Rumisha[7,8]

To cite: Alba S, Lenglet A, Verdonck K, *et al*. Bridging research integrity and global health epidemiology (BRIDGE) guidelines: explanation and elaboration. *BMJ Global Health* 2020;**5**:e003237. doi:10.1136/

ABSTRACT

Over the past decade, two movements have profoundly changed the environment in which global health epidemiologists work: research integrity and research fairness. Both ought to be equally nurtured by global health epidemiologists who aim to produce high quality impactful

Summary box

- Over the past decade, two movements have profoundly changed the environment in which global health epidemiologists work: research integrity and research fairness.

iSHARE 2
an INDEPTH project

iSHARE – INDEPTH Sharing and Accessing Repository

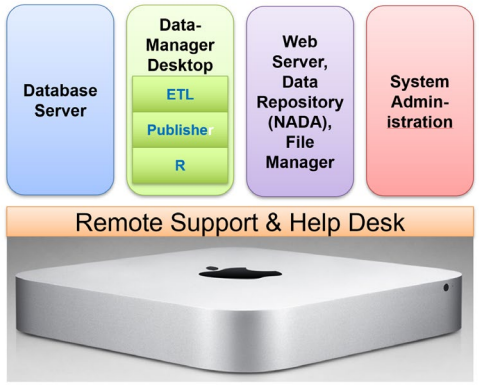
https://www.indepth-ishare.org/

Objective

Enhance the research data management capacity of INDEPTH member centers and enable them to develop, document, extract, harmonise and quality-assure analytical datasets from their operational databases

Output

Centre-in-a-Box



CiB– An all-encompassing research data management appliance

Year: 2013 – 2018
Member Centers: **47**
Workshops: **7**
Refresher Workshops: **5**

INDEPTH Data Repository

INDEPTH Data Repository – Platform for member centers and associated researchers to contribute and share fully documented, high-quality datasets with the scientific community

Published Datasets: **134**
Core Micro Datasets: **119**
Other Datasets: **15**
Total Downloads: **5668**
Users: **1575**

Events:

- Enumeration
- Birth
- Internal movements
- Migration
- Death
- Lost to Follow-up
- Last observation

Summary:
Centers: **47**
Individuals: **14.19 M**
Events: **27.24 M**
Live Population: **8.34 M**
Total Person Years: **112.05 M**
Earliest Event: **1970-01-01**
Latest Event: **2017-12-31**

www.ed.ac.uk/usher/respire @RESPIREGlobal

improving global
RESPIRE
respiratory health

Learnings from RESPIRE: An Example of North South Collaboration

THE UNIVERSITY of EDINBURGH

FUNDED BY NIHR | National Institute for Health Research
UKaid from the British people

RESPIRE highlights

- Global Network across five countries –
  - UK, Bangladesh, India, Malaysia and Pakistan
- Acute and Chronic Respiratory Conditions (26 studies, 12 PhDs, and 4 Post doc Fellowships)
- Including multi-country studies (7 studies, 2 PhDs and 1 Post doc Fellowship at KEMHRC, Pune)
- PhD programme that has embedded UoE trained PhDs across Southern countries (together with clinical fellows)
- Over 31 total (12 Vadu) peer-reviewed publications

4CCORD-Estimating Chronic Respiratory Diseases burden in adults in Asian low and middle-income countries: a feasibility pilot study

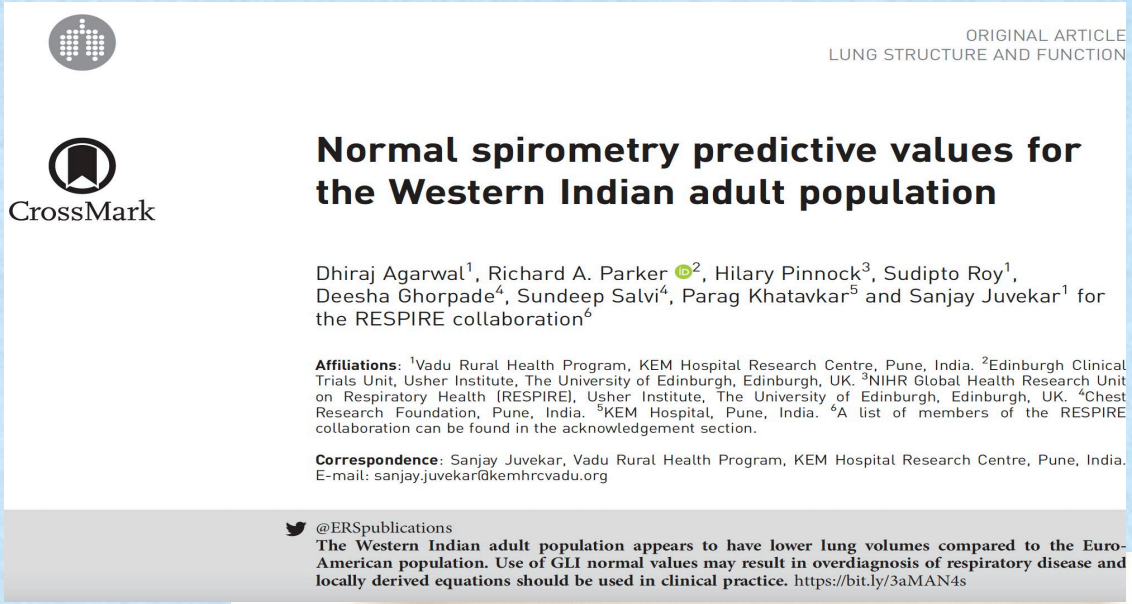
- Coordination of multi-country study
- Fulfilling ethical and regulatory requirements of all sites involved
- Coordinating the trainings
- **Publications:** 1. Scoping Review protocol 2. Scoping Review 3. Clinical algorithm
- **Impact:** Testing CRD screening questionnaire and clinical algorithm for diagnosis of CRDs which could be used in future surveys


KEMHRC, VRHP @ 2019


KEMHRC, VRHP @ 2019

Development of Spirometry predictive values for Indian population

- Capacity building of LMIC researcher in statistical Data Analysis
- Possibility of including data from other Indian sites which will help to generate comprehensive equation for Indian population
- **Impact:** Predictive values for Western Indian population



ORIGINAL ARTICLE
LUNG STRUCTURE AND FUNCTION

CrossMark

Normal spirometry predictive values for the Western Indian adult population

Dhiraj Agarwal[1], Richard A. Parker[2], Hilary Pinnock[3], Sudipto Roy[1], Deesha Ghorpade[4], Sundeep Salvi[4], Parag Khatavkar[5] and Sanjay Juvekar[1] for the RESPIRE collaboration[6]

Affiliations: [1]Vadu Rural Health Program, KEM Hospital Research Centre, Pune, India. [2]Edinburgh Clinical Trials Unit, Usher Institute, The University of Edinburgh, Edinburgh, UK. [3]NIHR Global Health Research Unit on Respiratory Health (RESPIRE), Usher Institute, The University of Edinburgh, Edinburgh, UK. [4]Chest Research Foundation, Pune, India. [5]KEM Hospital, Pune, India. [6]A list of members of the RESPIRE collaboration can be found in the acknowledgement section.

Correspondence: Sanjay Juvekar, Vadu Rural Health Program, KEM Hospital Research Centre, Pune, India. E-mail: sanjay.juvekar@kemhrcvadu.org

@ERSpublications
The Western Indian adult population appears to have lower lung volumes compared to the Euro-American population. Use of GLI normal values may result in overdiagnosis of respiratory disease and locally derived equations should be used in clinical practice. https://bit.ly/3aMAN4s

KEMHRC, VRHP @ 2019

Practices & perceptions of public & private, general medical practitioners (primary care physicians: “GPs”) in rural India for diagnosis & management of asthma & COPD (RESPIRE Fellowship project)

Impact

- Built research capacity of the young researcher through training and networking
- Gave opportunity to conceptualise and implement a research study/project independently in the field of respiratory health
- Identified themes related to Clinical care of respiratory conditions, Delivery of care, and Training and upskilling. These are important factors that form the context for initiatives seeking to improve the quality of community-based care for people with CRD in Maharashtra state in India.

KEMHRC, VRHP, @ 2020

KEMHRC, VRHP @ 2021

ASHA workload study

- Engagement of public health personnel/ stakeholders
- Precise exchange of qualitative skills between UoE and KEMHRC
- **Publications:** 1.Publsihed ASHA's workload perception and its' determinants 2. Motivation for ASHA work (In progress)
- **Impact:** The results would be useful for policy and recommendation for future involvement of ASHA in health care provision and facilitations.

Formulating and testing a strategy for introducing Pulmonary Rehabilitation (PR) for COPD management in a rural Indian setting

Impact

- The PR Centre at Vadu is first of its kind in the rural setting of entire Maharashtra state and may be in **RURAL** India.

- An example showing how initial handholding has made it possible for the hospital to take it over as a service providing center by the rural hospital

Improving global RESPIRE respiratory health
Funded by NHS National Institute for Health Research

Assessment of feasibility of introducing pulse oximetry in IMNCI services in primary health facilities in Pune district

Impact

- Help the public health system to close the gaps related to service readiness (equipment, logistics and supply). Give an opportunity to look into requirement of training of their PHC staff so that adapted IMNCI guidelines can be scaled up across the Maharashtra state.
- Implementation of PO in IMNCI services will decrease the misclassification of severe cases (SpO2<90%) as ‘Pneumonia’ (non-severe) and ensure appropriate management of these cases through inpatient care in appropriate referral facilities.

Establishing sentinel sero-surveillance to monitor the trend of SARS-CoV-2 infection transmission in the general population in rural Western India

Impact

- The COVID-19 pandemic has hit Pune district hard, with Pune reporting the highest number of cases among all districts in India in the last few months. During this time KEM Hospital Research Centre (KEMHRC) Pune successfully enrolled 14,294 individuals residing in 150 villages.
- A crucial factor for this success has been a massive stakeholder engagement exercise conducted between January 2021 to June 2021 wherein the study team held 150 meetings with community representatives such as village heads, nurses, community health workers and local government members.


KEMHRC, VRHP @ 2021


KEMHRC, VRHP @ 2021

PhD study 1- Feasibility of using a teleconsultation facility (Micro-Health Centre) in management of CRDs in remote rural area

- Capacity building
- Holistic approach with research and its implementation
- **Publications:**
  - Legalities and regulation review published
  - Doctor to doctor consultation in CRDs (in progress)
- **Impact:** Study created evidence for formulating a policy on ‘Management of overall chronic diseases at remote rural area in India using teleconsultation’.

Other opportunities

- **Good Financial Grant Practices (GFGP)**
  - One day training at KEMHRC, Pune in Aug 2018
  - Three days workshop at Malaysia in Jun 2019
  - Helps organization to standardize operational procedures related to Accounts & Finance, HR & Payroll, Risk & Fraud and Project operations
- **Impact:** Development of research /potential in India to work towards respiratory health research of national importance

Opportunities for collaborations

Academics as means of North South Collaboration

Projects	Number of Students Completed projects	Institute/University (National/International)
Post-Graduates Dissertations	50+	WITS University South Africa; SPPU, Pune; TISS Mumbai; I2IT, Pune; SKNCOP, Pune; Symbiosis, Pune; John Hopkins;
Doctorate (PhD)	13 (Vijendra, Siddhi, Utkarsh, Dhiraj, Manisha, Aditi, Shilpi, Stephen, Andrew, Rasmila, Asya, Shrish)	Umea University, Sweden; SPPU, Pune; IIT, Mumbai; IGIB, Delhi; University of California, Berkeley; ISGlobal, Barcelona;
Post-Doc Fellowship	1	University of Edinburgh

Capitalize on existing Networks

- RESPIRE: Global Health Research Unit focusing on respiratory health in Asia
- BOLD: Burden of Obstructive Lung Diseases
- ICMR- PMUY Taskforce
- DBT CoE: **Collegium of Clinical Research Excellence**
- PRERNA: **Platform for Research Excellence Related to National Aims**
  - CHRD - SAS, New Delhi.
  - CMC, Vellore.
  - KEMHRC Pune.
- INDEPTH: **International Network** for the **Demographic** Evaluation of Populations and their Health

Possible collaborations with national HDSS network

- Initiative for establishment of a National Network of HDSS in India which will include around 21 old and new HDSS sites throughout the country
- These centers aim to create scientific evidence through longitudinal data collection of national importance
- Data from all HDSS can provide estimates for regional as well as national level health and demographic indicators
- First meeting of HDSS sites proposed; IGIB Delhi has agreed in principle to fund the meeting

Possible collaborations with Asian HDSS network

- Asia HDSS Network for exchange and promotion of health research
- Multi-site or multi-centre research utilizing longitudinal tracking of health and demographic indicators of Asian populations
- Improving, expanding and strengthening capacities of Asian scientists
- To generate evidence-based, reliable and comprehensive data for enabling effective translation of research into regional and/or global policies and programs.

Repurposing data collaboratively

- Demography:
  - Socio Economic Status
  - Ageing (SAGE)
  - NCD Risk Factor
  - Parental Heights
  - Child Nutritional status
- Genomic and/or Biochemical investigations
  - Iron atta Supplementation
  - Pune Microbiome study
  - Ayurgenomics
  - TRISUTRA
  - COPD
- Air pollution and lung diseases:
  - Behaviour intervention of improved cookstove
  - Handwashing Compliance and Risk of Acute Respiratory infections
  - COPD prevalence and phenotypic characterization of smoking and non- smoking COPD
- Disease burden
  - Influenza
  - Enteric Fever
- Technology
  - Care seeking location
- Other
  - Sprinkles
  - Preparedness for Marriage
  - Women WASH and hygiene

Future collaborative research to address challenges in rural India

- Establishing state of the laboratory for enhancing Lab research especially around infectious diseases
- Leveraging existing data for better research outcomes
- Digital Health interventions
- Use of technology for research
- Interventions for better health outcomes (Anemia, Chronic diseases)
- Mother and child health research also focusing Nutrition
- Implementation research
- COVID-19 related research for global health

Engaging for showcasing

Engagement of public health System

Kangaroo Mother care in public health hospital

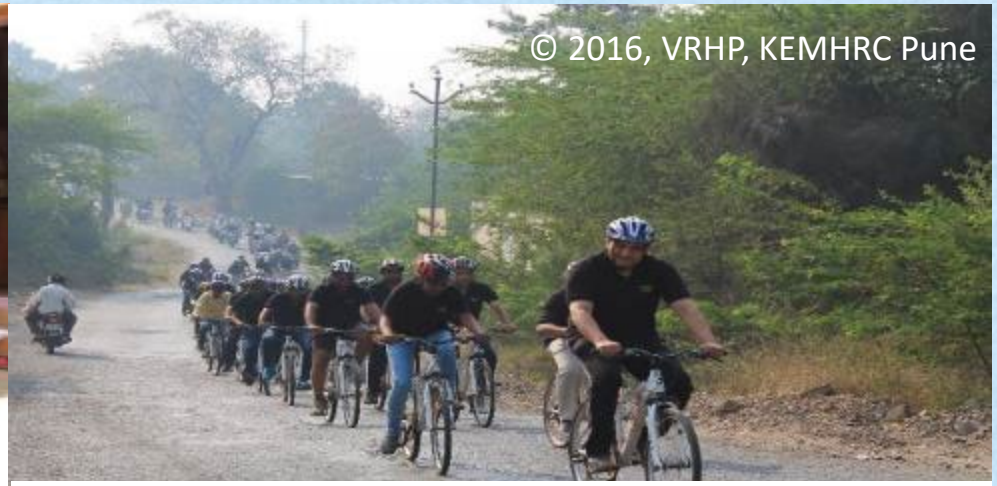
RotaVac immunization Rollout

Training and orientation of health staff

Community engagement and dissemination

Programs Implemented in Community

Haemoglobin and Blood sugar estimation camps for women



Cycle Rally to promote cycling

Street Play for spreading awareness of Influenza illness in community

Rally organized for creating awareness on hygiene and health

52

KEM trains PMC medical officers on maternal immunisation

EXPRESS NEWS SERVICE
PUNE, JUNE 7

A TRAINING session on mater... nal immunisation and s... monitoring for medica... working in the Pun... Corporation w... Hospital R... Wedne...

The t... at KEM Ho... dates on ma... vaccines and ... challenges and b... proving the cove... fluenza vaccine in ... women. Over 100 medi... cers and researchers pa... pated in this training p... gramme.

The PMC had started vaccinating pregnant women for influenza-related complications at some PMC hospitals since 2015. Seasonal influenza is a year-round disease burden and pregnant women and neonates are at greater risk of influenza-related complications than the general population. Vaccination of pregnant women with influenza vaccine protects both mothers and infants from influenza. But in Pune, there have been high fa-

The ... ...s been ... ...regnant

Me... Chadh... tor of ... Virology, ... from acade... institutes, co... gramme and ... challenges and ba... tive implementation... nal influenza vaccine ... said M Hanif Shaikh of ... which funded the program...

IN PUNE'S TRIBAL AREAS

ICMR study to assess challenges in giving LPG connections under govt scheme

ANURADHA MASCARENH...
PUNE, OCTO...

THE IN... Research... on a study... faced by LPG... cipients und... Mantri Ujjwala Y... tribal areas of Pu... study – 'Short term ... inform accelerated d... ve, and promoti... use of Liq... Gas (LPG) thr... ri Ujjwala Yo... conducted ... ckin Pune

The Indian EXPRESS Fri, 08 June 2018
epaper editions epaper.indianexpress.com/c

Study to asses LPG use in villages

Researchers say the long refill time is pushing rural families back to using the traditional chulha, a health hazard and ...

Himanshu.Nitnaware
@timesgroup.com
TWEETS @ThePuneMirror

To counter the traditional use of firewood for cooking, the government of India will be encouraging use of a second LPG cylinder among rural families, increasing the use of a cleaner source of energy. A joint study is being conducted by the KEM Hospital, Pune and the Indian Council of Medical Research (ICMR) among 120 families across six villages in the Junnar taluka.

Beneficiaries of the government scheme, Pradhan Mantri Ujjwala Yojana (PMUY), which provides a connection of LPG cylinders to below poverty line (BPL) families, only get a single cyl... inder at a time. However, the long wait for a cylinder refill has pushed these families back to the use of traditional *chulhas* (earthen stove) for cooking.

Due to this d... ...ral families have not been able to cor... ...se of LPG, a cleaner source ... ditional cook... Anthrop... research cen... is aimed a... schemeal... for cookir... reasons ... scheme ... lines. It ... ier to ... back... kilo... m... p... F...

...inders for the first time. However, the continuity has been a challenge. "The distributors may not see it feasible to supply LPG cylinders to a small community," Juvekar said.

Villagers from Nitgude, Khangaon, Tejur Tambe, Padali and Belsar have volunteered to participate in the study which will start later t... month.

...her investigator from KEM Hospital, Su... "The wait time for a refill is at least ...ks, depending on the availability of cylin... bution centre ... and oth... w...

...er the study, various families will b... ...ded with a second cylinder to av... ...d use

UK's NHS and KEM to study respiratory conditions in the city

With University of Edinburgh, researchers will collect data on COPD, asthma and more, with aim to reduce the deaths caused

Himanshu.Nitnaware
@timesgroup.com
TWEET @ThePuneMirror

The gravely deteriorating quality of the air around has become a matter of serious contention in recent years, propelling both public and private bodies to closely look into ameliorating the situation. Now, in an effort to understand the burden of respiratory diseases caused mainly by air pollution and lifestyle changes, a study has been initiated in the city under the Research Unit on Respiratory Health (RESPIRE) project. Tied up with the King Edward Memorial (KEM) Hospital, the study is being helmed by the University of Edinburgh, while research is being funded by the NHS National Institute of Health Research (NIHR) of the United Kingdom, conducted across nations like India, Pakistan, Bangladesh and Malaysia. Here, it will take place at two locations — Vellore and Pune.

"The programme aims to collect data on emerging respiratory disorders, like chronic obstructive pulmonary disorder (COPD), asthma, lung cancer, pneumonia and more, obtain evidence and possible interventions that could be adopted to reduce deaths cause," said Rutuja Patil, one of the researchers who also works at the KEM Research Centre, adding that once the data of the actual burden in known, strategies on interventions at the local level, best delivery mechanisms for

REPRESENTATIVE PIC

reducing the toll and supporting implementation efforts can be achieved. Interestingly, she added that respiratory diseases among rural and urban populations due to air pollution are almost the same.

Principal project coordinator from KEM Dhiraj Agarwal added, "There is very little data on deaths and the impact of respiratory diseases on human health in India. Moreover, existing data is not very helpful, as the methodology used is not robust." He further said that the majority of urban and rural India is exposed to air pollution due to industrialisation, urbanisation, occupational hazards, particles, biomass use and more factors. "Over 50 per cent of the population suffers from respiratory disease," he said, informing that more than 70 per cent of the rural population is still dependent on biomass in India.

"Through intensive case studies, questionnaires and algorithms, the study would help realise how many people are actually suffering from these diseases. Exact diagnoses would be determined and also the misdiagnosis that happens on a substantial scale could be ruled out," Agarwal told *Mirror*, adding that outcomes of the study would enable formulation of policy and chalk out a strategy to combat the issue.

The expert also said that different risk factors causing chronic respiratory diseases could be discovered. "With increasing air problems, it is crucial to know what types of pollutions and factors cause specific respiratory ailments. There needs to be good knowledge on the same," Agarwal asserted.

"The burden of COPD and other respiratory diseases in India is increasing. The study on a nationwide scale would be economically unviable, so it is being carried out at two centres," informed principal investigator Sanjay Juvekar, also from KEM, adding that many factors that cause a serious health impact, like a sedentary lifestyle, often go undocumented. "We really need to know about all diseases that spread in the form of infections and non-infections," he said.

Researchers have found that over 50 per cent of urban and rural people suffer from respiratory diseases, and the numbers of those afflicted in both zones are more or less the same

Film on harmful effects of biomass cooking screened at KEM hospital

...ESS NEWS SERVICE
...RCH 16

...ward winning ... the adverse ... biomass ... es the ... l at ...

working in the tribal area of Junnar taluka to study air pollution.

While working here, the team realised the problems and complications that pregnant women faced due to the use of chulhas.

The team provided the families that used purely biomass fuel with LPG cylinders.

"Our initiatives brought a ...eally positive effect. W...

wanted this to reach the masses, which is why we d... cided to make a film on th... sue," said Dr Ma... Ghorpade, clinical ... at KEM Vadu.

"We ma... women w... the use ... oni...

...rna

Annapurna – a short film on harmful effects of biomass in cookin...

...Researchers ... tal and re... ma...

...he said.

...ally means "the goddess ... provides food" and Indi... have been worshipping coo... stoves as Annapurna for age... Although the harmful effects of ... biomass use for cooking (respi... ratory, pulmonary and vision) ... are known, acceptance of mod... ern fuels, like Liquid Petroleum ... Gas (LPG) by the community is ... still a challenge, says Rutuja ... Patil, a young scientist at the ... KEM hospital who conceptu... alised the film.

Exposure of pregnant women to indoor air pollution (IAP) results in lower birth weights leading to further com... ...Women and chil... ...hly affected by IAP ...portant to imbibe ...anging cooking ...arifying the per... ...se in the com... Government ...encouraged ...uel, yet the ...ation still ...primary

HEALTH RESEARCHER'S REPORT IN LANCET

'Household air pollution a major risk factor for respiratory diseases, cataracts'

ANURADHA MASCARENHAS
PUNE, NOVEMBER 27

HOUSEHOLD AIR pollution caused by biomass fuel used for cooking is associated to a range of diseases, according to report published in the 'Lancet Respiratory Medicine'.

A biotechnologist-turned-public health researcher, 33-year-old Rutuja Patil, who wrote the cover story for December 1 edition of the journal said that there should be collective steps to reduce the domestic use of biomass fuels.

"Household air pollution from

"Household air pollution from biomass fuel used for cooking is associated with 2.4 of 5.6 million cases of chronic bronchitis, 0.3 of 0.76 million cases of TB, 5.07 of 51.4 million cases of cataract among adult Indian women, and 0.02 of 0.15 m stillbirths across India"

– RUTUJA PATIL
PUBLIC HEALTH RESEARCHER


twitter


Vadu Rural Health Program, KEMHRC Pune
210 Tweets
Vadu Rural Health Program, KEMHRC Pune @kemvadu · Jul 12
Our team with the team from #CMCVellore at the @DHSCgovuk
@NIHRresearch meeting at #Chennai representing @RESPIREGlobal
We appreciated the way a funder reached out to discuss ground level issues with the grantees.
@sanjayjuvekar @dhirajagarwal99 @Ru2ja
2
13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Demographic surveillance over 12 years helps elicit determinants of low birth weights in India
Background Low birth weight is an important predictor of maternal and child health. Birth...
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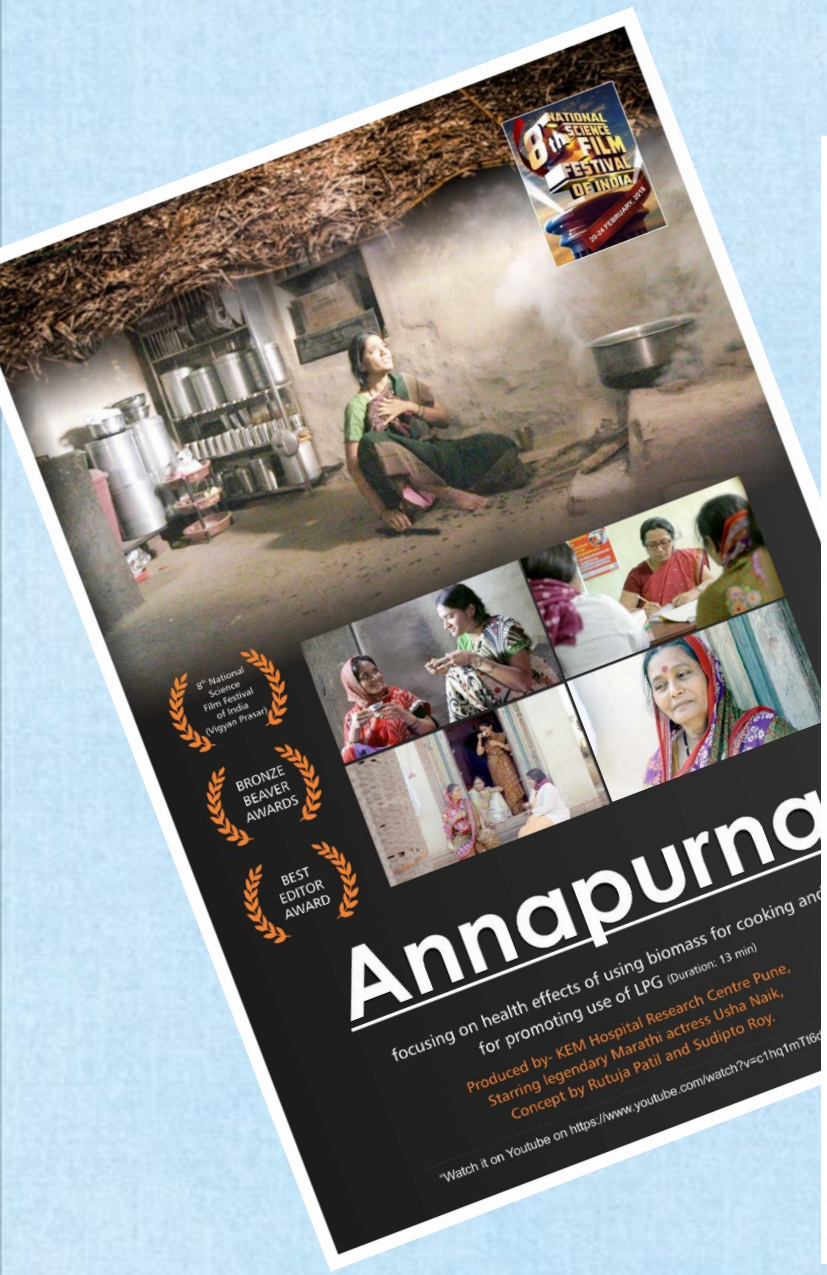
We have an urgent opening for Study Physician/Research Coordinator


8th National Science Film Festival of India
Annapurna
focusing on health effects of using biomass for cooking and for promoting use of LPG (Duration: 13 min)
Produced by- KEM Hospital Research Centre Pune,
Starring legendary Marathi actress Usha Naik,
Concept by Rutuja Patil and Sudipto Roy.
*Watch it on Youtube on https://www.youtube.com/watch?v=c1hq1mTI6c
8th National Science Film Festival of India (Vigyan Prasar)
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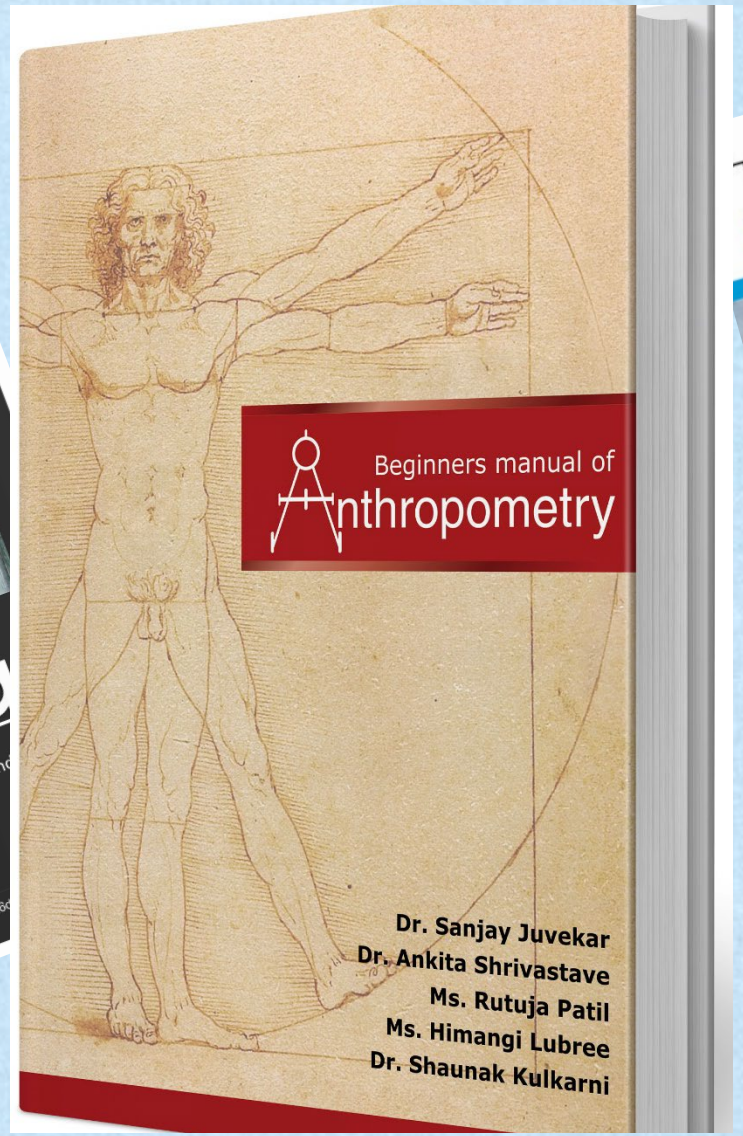
Beginners manual of
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Dr. Sanjay Juvekar
Dr. Ankita Shrivastave
Ms. Rutuja Patil
Ms. Himangi Lubree
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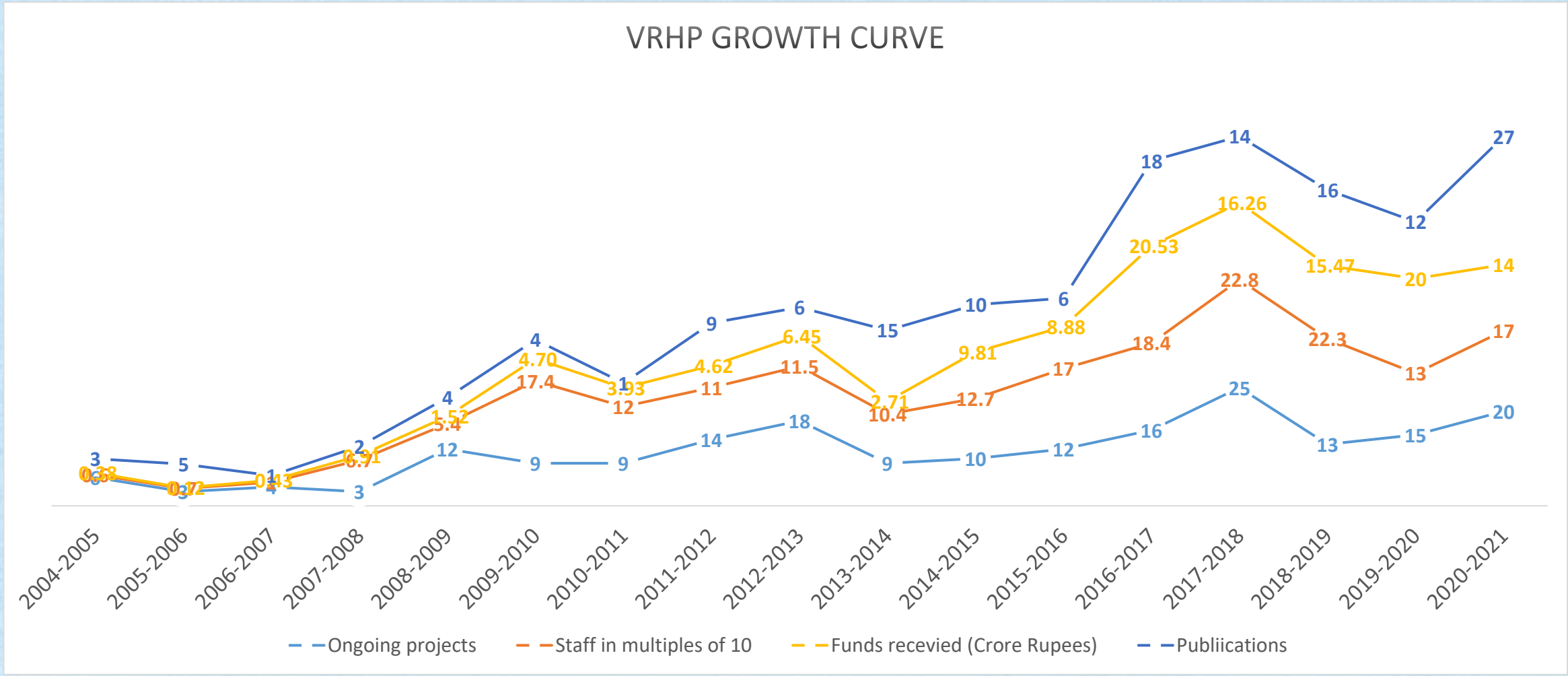
THE LANCET
Respiratory Medicine
www.thelancet.com/respiratory
Volume 6 · Issue 12 · December 2018
Rutuja Patil
Articles
Machine learning for real-time prediction of complications in critical care
See page 905
Articles
Effectiveness of influenza vaccination over time on hospitalisations among children in Hong Kong
See page 925
Series
Non-invasive ventilation in acute respiratory failure and after extubation in critically ill patients
See pages 935 and 948

What can be achieved with Effective North South Collaboration?

Sustainable global research…



Next photo, I will expect colleagues from North in it…

Thank You