



Comprehensive Rural Health Services Project, Ballabgarh : a bird's eye view



Outline of Presentation

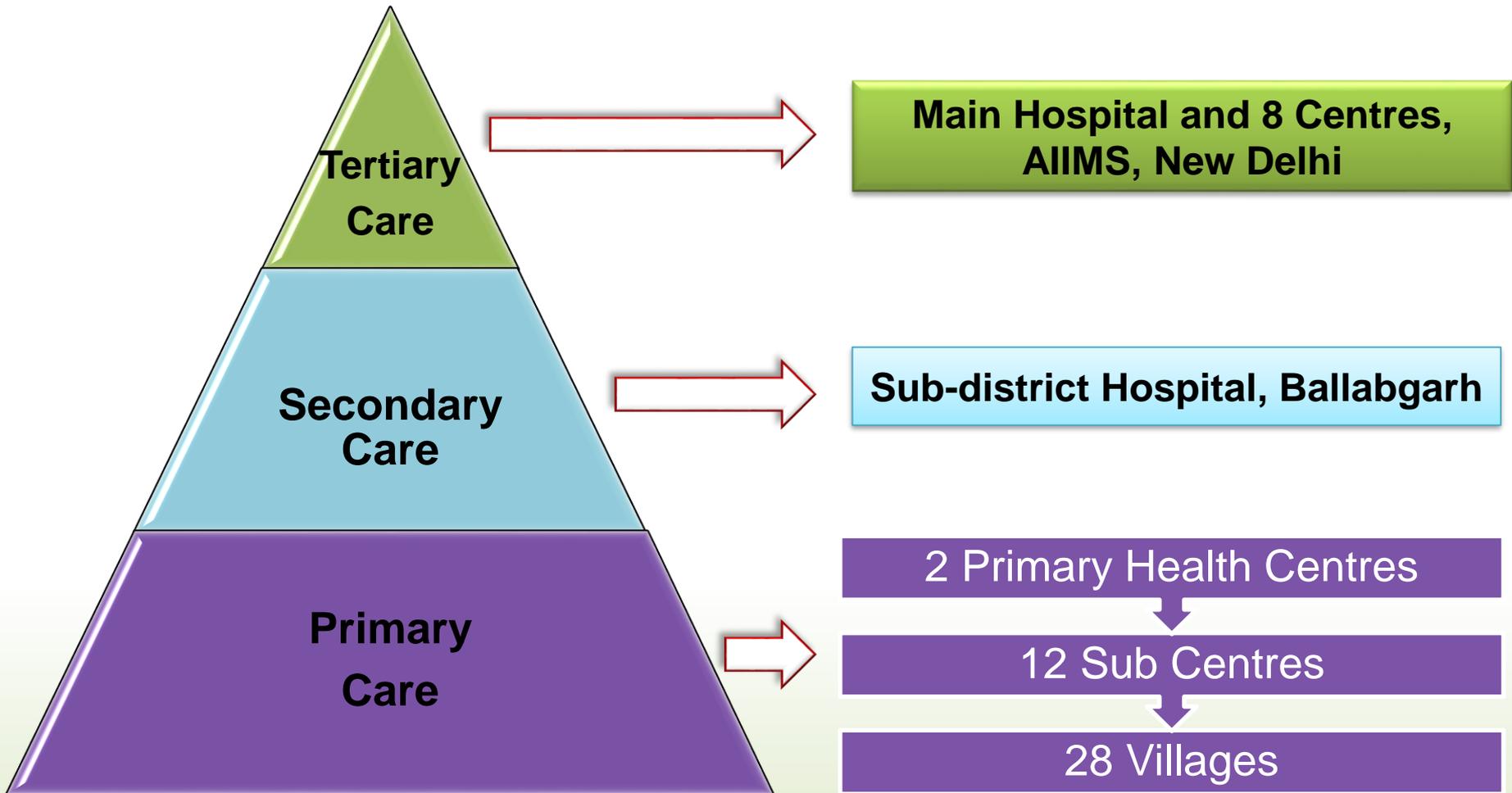
- ❖ **Evolution of CRHSP, Ballabgarh**
- ❖ **Vision, Mission and Objectives of CRHSP, Ballabgarh**
- ❖ **Introduction to CRHSP, Ballabgarh**
- ❖ **Sub-district Hospital, Ballabgarh**
- ❖ **Intensive Field Practice Area- Primary Health Centres (Dayalpur and Chhainsa)**
- ❖ **Teaching and Training at CRHSP Ballabgarh**
- ❖ **Research Activities and Collaborations**
- ❖ **Contribution of CRHSP, Ballabgarh to Public Health**
- ❖ **The Way Forward**

Section 14 of AIIMS Act (25 of 1956)

- f) The Institute shall establish and maintain One or more medical colleges with different departments, including a department of **preventive and social medicine**, sufficiently staffed and equipped to undertake not only undergraduate medical education but also postgraduate medical education in different subjects;

Rural and urban health organizations which will form centers for the **field training** of the medical, dental and nursing students of the Institute as well as for research into community health problems

Levels of health care at AIIMS, New Delhi



A Brief History of Ballabgarh



- ❖ Ballabgarh town and tehsil (sub-district) in Faridabad District of Haryana
- ❖ Ballabgarh princely state was founded by Raja Balram Singh in year 1739

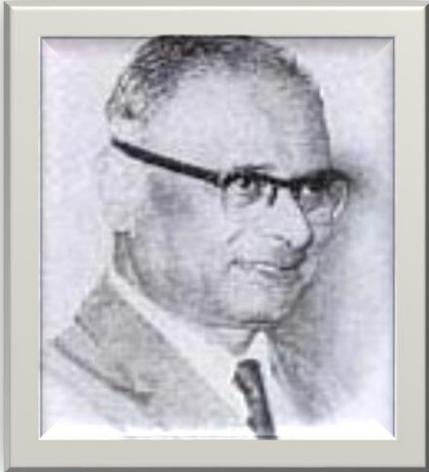
- ❖ Ballabgarh strategic town controlling the movement on Delhi-Agra highway
- ❖ Raja Nahar Singh (1823–1858), the last king of the Ballabgarh, was martyred in year 1857 valiantly fighting the British rule.



Rani ki Chhatri and Baoli



A Brief History of Ballabgarh



Dr. B. B. Dikshit
1st Director of AIIMS (1956-64)



Ms. Rajkumari Amrit Kaur,
Union Health Minister, Govt. of India (1947-57)



Dr. LeRoy R Allen,
Rockefeller Foundation



Mr. Pratap Singh Kairon
Chief Minister of Punjab (1952-64)

Evolution of CRHSP

1947

- Ballabgarh Health Society formed

1960

- AIIMS decided to train students in rural setup

1961

- Sub centre Kurali was chosen as training centre

1965

- Establishment of CRHSP at Ballabgarh

1967

- PHC Dayalpur established

1969

- PHC Chhainsa established

2013

- CHC Fatehpur Billoch construction started

Vision & Mission

Vision

To respond to the evolving national needs, in keeping with global standards, with focus on rural health

Mission

To achieve excellence in public health by undertaking teaching, research and patient care in rural setting

Objectives

- ❖ To teach and train medical, dental and nursing students in community based primary and secondary health care
- ❖ To develop a model of comprehensive and holistic primary and secondary health care replicable at national level
- ❖ To conduct research addressing national health priorities and to generate evidence for program and policy formulation

Geographical Location



AIIMS,
N. Delhi

35 kms

SDH,
Ballabgarh

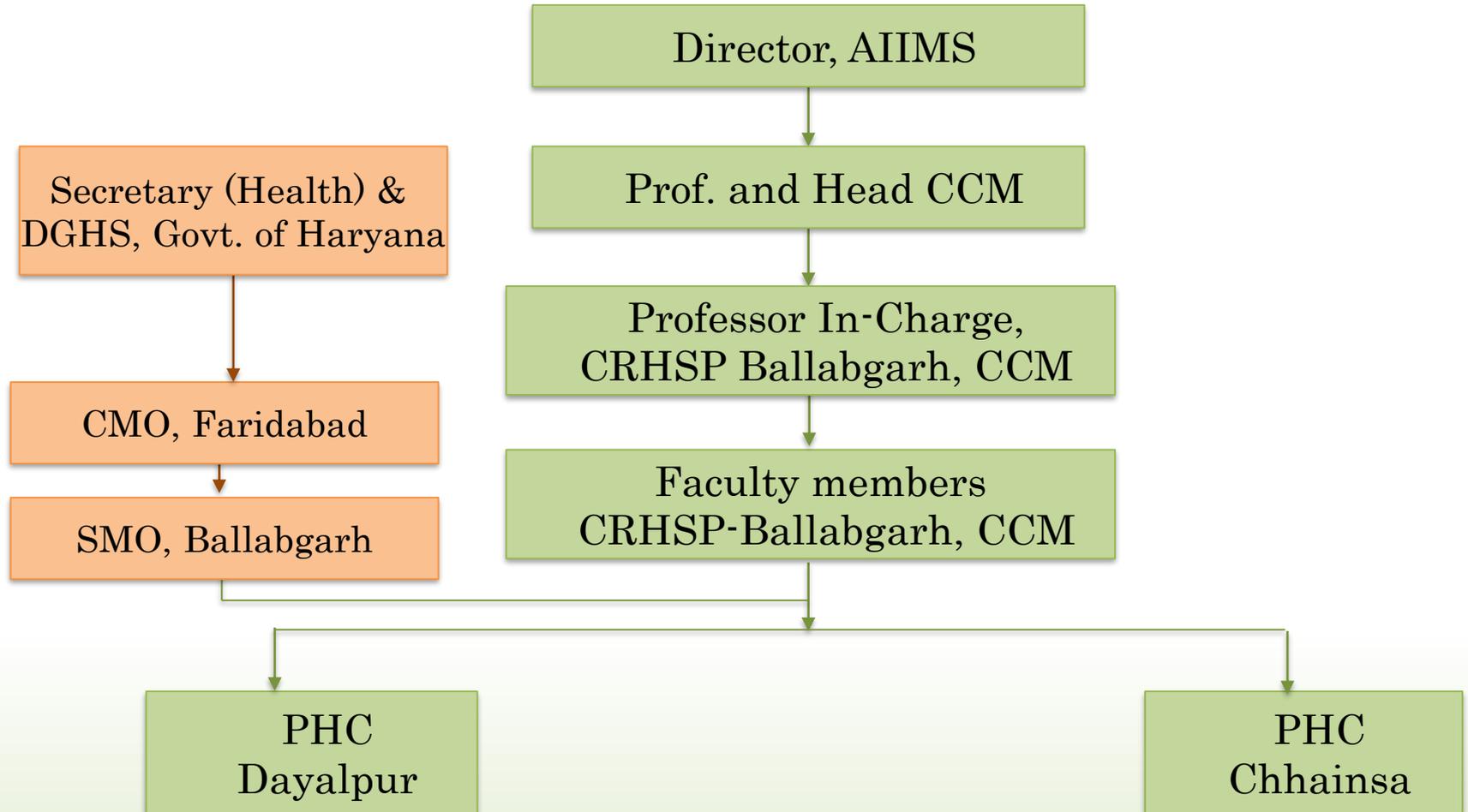
10 kms

PHC,
Dayalpur

10 kms

PHC,
Chhainsa

Administrative Structure



CRHSP Ballabgarh



All India Institute of Medical
Sciences, New Delhi



Haryana
Government

**Started in 1961 with aid of Rockefeller foundation
Primarily an academic and health delivery set up**

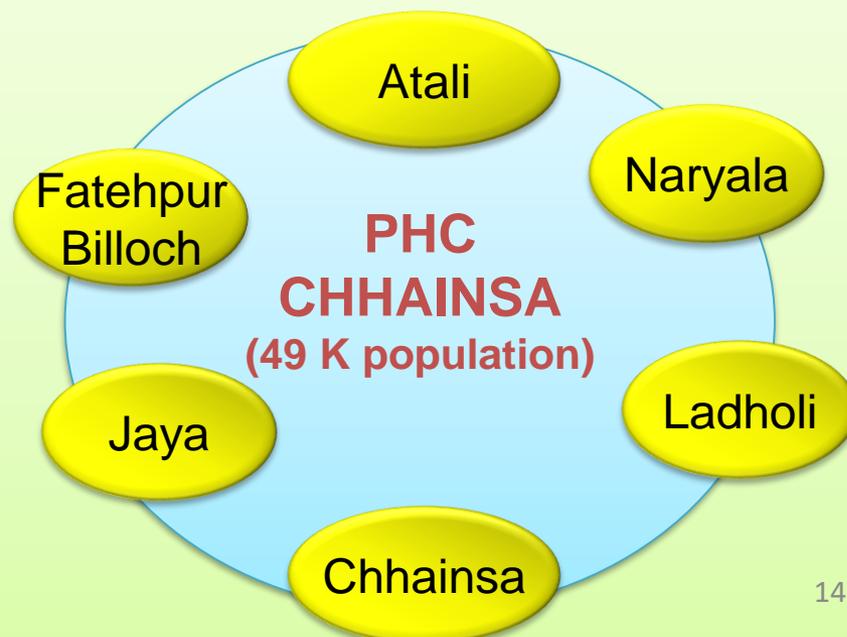
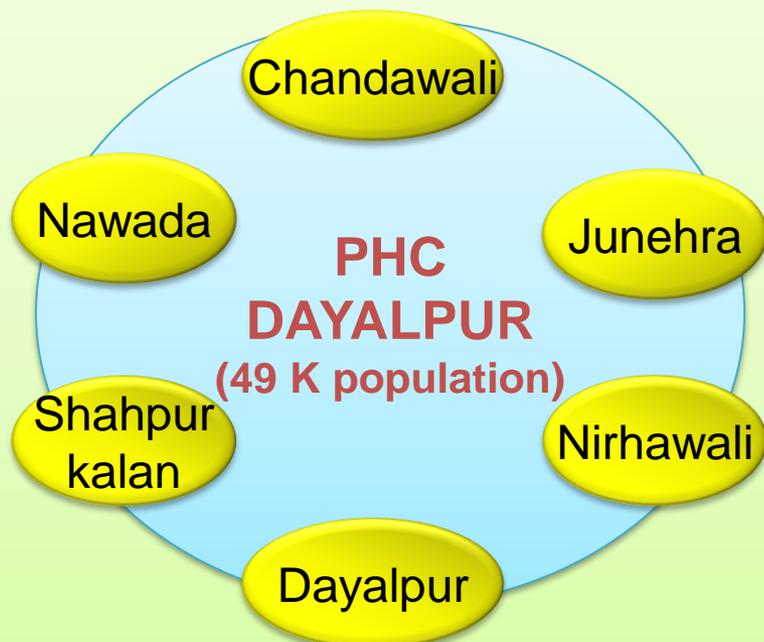
CRHSP - Infrastructure

Sub-district Hospital, Ballabgarh
(7 Acre Campus)

PHC Dayalpur

PHC Chhainsa

Intensive Field Practice area: 2 PHCs, 12 Subcenters, 28 villages



Current Faculty at CRHSP



Dr. Shashi Kant,
Head of Department (CCM)
Professor-in-charge(CRHSP)



Dr. Sumit Malhotra,
Associate Professor



Dr. Partha Haldar,
Assistant Professor

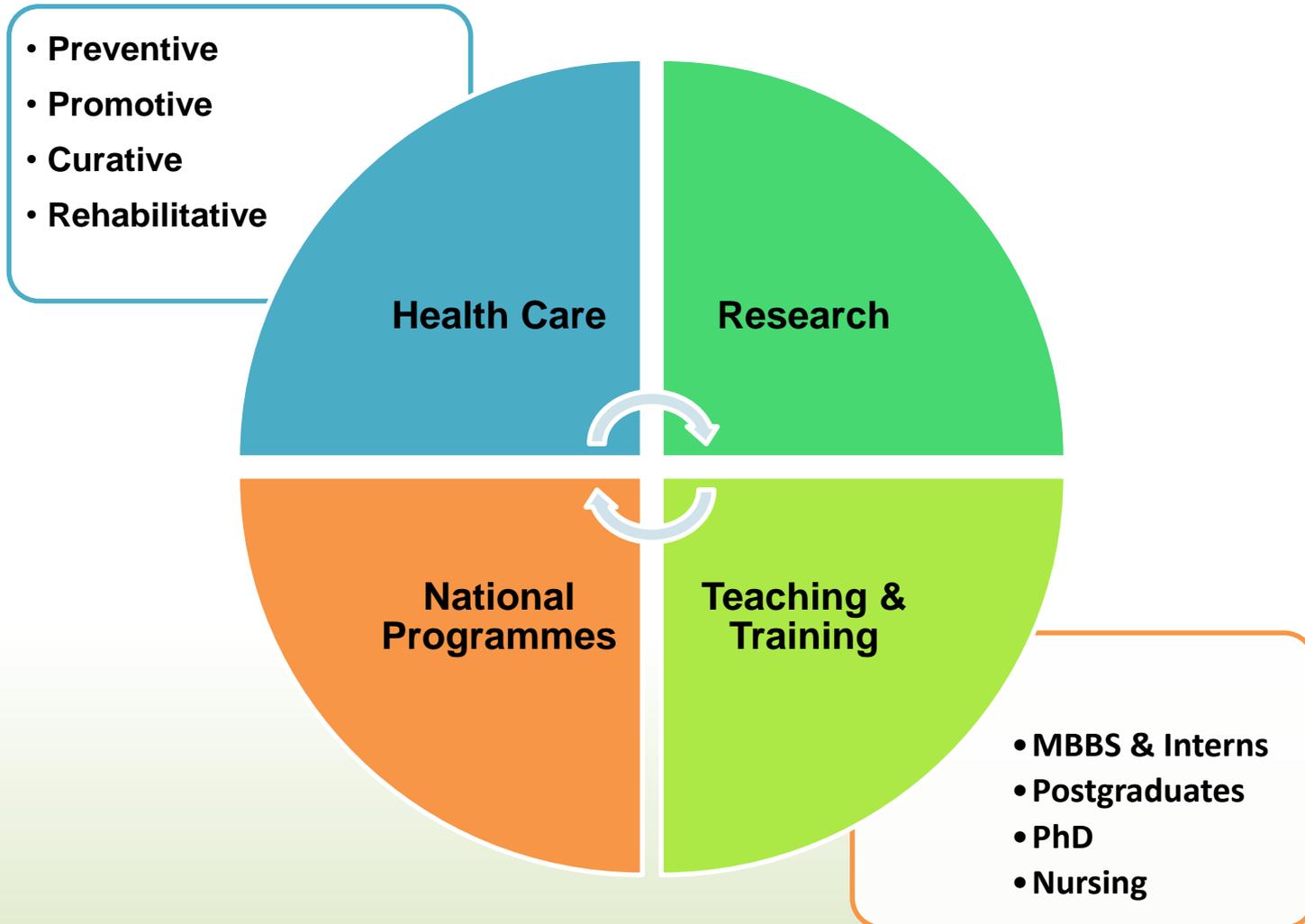


Dr. Ravneet Kaur,
Assistant Professor



Dr. Rakesh Kumar,
Assistant Professor

CRHSP - Activities





**CRHSP Activities:
Health Care Services &
Implementation of National Programmes**

Health Care Services at SDH Ballabgarh

- ❑ Sub-district Hospital, Ballabgarh (50 bedded)
- ❑ 13 departments from AIIMS, New Delhi collaborate to provide health care services at CRHSP, Ballabgarh
- ❑ Free of cost deliveries
- ❑ Free of cost provision of essential medicines
- ❑ 24X7X365 functioning Primary Health Centres
- ❑ Out Reach Speciality OPD at PHCs
- ❑ Extension Health Centre at Sub-centres



Around 1,500 patients visit SDH, Ballabgarh every day

Patient care at SDH, Ballabgarh

- ❑ Out patient services
- ❑ In-patient services
- ❑ Emergency services
- ❑ Surgical services
- ❑ Laboratory services
- ❑ Radiological services

- ❑ Blood storage facility
- ❑ Telemedicine facility
- ❑ Pantry services
- ❑ Medical social services
- ❑ Counselling centre
- ❑ Ambulance services

Daily OPD Clinic

- ❑ General Medicine
- ❑ General Surgery
- ❑ Obstetrics & Gynaecology
- ❑ Pediatrics
- ❑ Ophthalmology
- ❑ Orthopedics

- ❑ Psychiatry
- ❑ Dentistry
- ❑ AYUSH
- ❑ Immunization
- ❑ Tuberculosis clinic

Special OPD Clinics (Once to thrice a week)

- ❑ Antenatal Clinic
- ❑ Non Communicable Disease (NCD) Clinic
- ❑ Tobacco Cessation Clinic
- ❑ Ear, Nose and Throat

- ❑ Dermatology
- ❑ Physical Medicine and Rehabilitation (PMR)
- ❑ Pediatric Surgery

General Medicine OPD



Paediatrics OPD



Ophthalmology OPD



Auto Refractometer and keratometer



A Scan



Dental OPD



Typical Day at OPD



Total patients attended – 3,31,367 (2016)

Inpatient Services

- ❖ Medicine
- ❖ Surgery
- ❖ Obstetrics and Gynecology
- ❖ Ophthalmology
- ❖ Pediatrics
- ❖ Ear, Nose, and Throat



Average Bed Occupancy Rate 191.6% (2016)

IV Iron Sucrose Administration



Nurses' Duty Station



Labour Room



Total no. of deliveries conducted – 3,515 (2016)

Obstetrics labour Table (Motorised)



Newborn Stabilization Unit



ICU Ventilator Model V-8800 (Oricare , USA)



Blood Gas Analyser



- ❖ Fully automatic
- ❖ Upgradable
- ❖ Blood gas cum electrolyte analyser
- ❖ Based on liquid collbration
- ❖ Without using gas or cartridge model
- ❖ Eschweller Combiline (fast and economical expandable system)

Operation Theatre



Total no. of surgeries: 2880 (2016)

First Laparoscopic Surgery by AIIMS Director - Dr. M.C. Misra at SDH Ballabgarh



Fully Automatic Operating Table



Laparoscopic Equipments



- ❖ Reusable Liner cutter/stapler (JJ-55H),
- ❖ Linear cutter knife (JJ-55K),
- ❖ Cartridges (JJ-55B and 55G),
- ❖ Endoscopic clip applier (EL- 5ML),
- ❖ Laparoscopic applicator for titanium clip EL- 214, EL-314, EL- 414,
- ❖ Curved dissector 5-DCD, and
- ❖ Self retaining Hassan Laparoscopic port (Disposable) (H12LP)

Ophthalmic Surgical Microscope



ENT Surgical Microscope



Harmonic Scalpel



Emergency Services



- ❖ 24 × 7 × 365 services managed under Haryana Government
- ❖ Medical Officers (5-6) under Haryana Government
- ❖ Senior Residents from various specialties of AIIMS provide consultation whenever required

Digital X-Ray Room



Laboratory



Deep Freeze Refrigerators



Pharmacy



Store



New OPD at SDH Ballabgarh



New Hostel Inauguration at SDH Ballabgarh



Health Education Session at SDH Ballabgarh



Nutrition Exhibition at SDH Ballabgarh



Sapling Plantation at SDH Ballabgarh



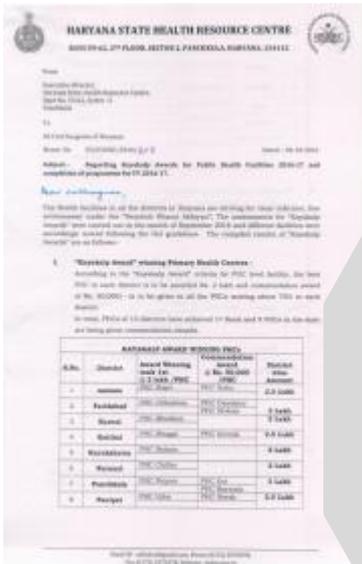
Support from AIIMS Administration



Telemedicine



Kayakalp Award for Quality - 2016

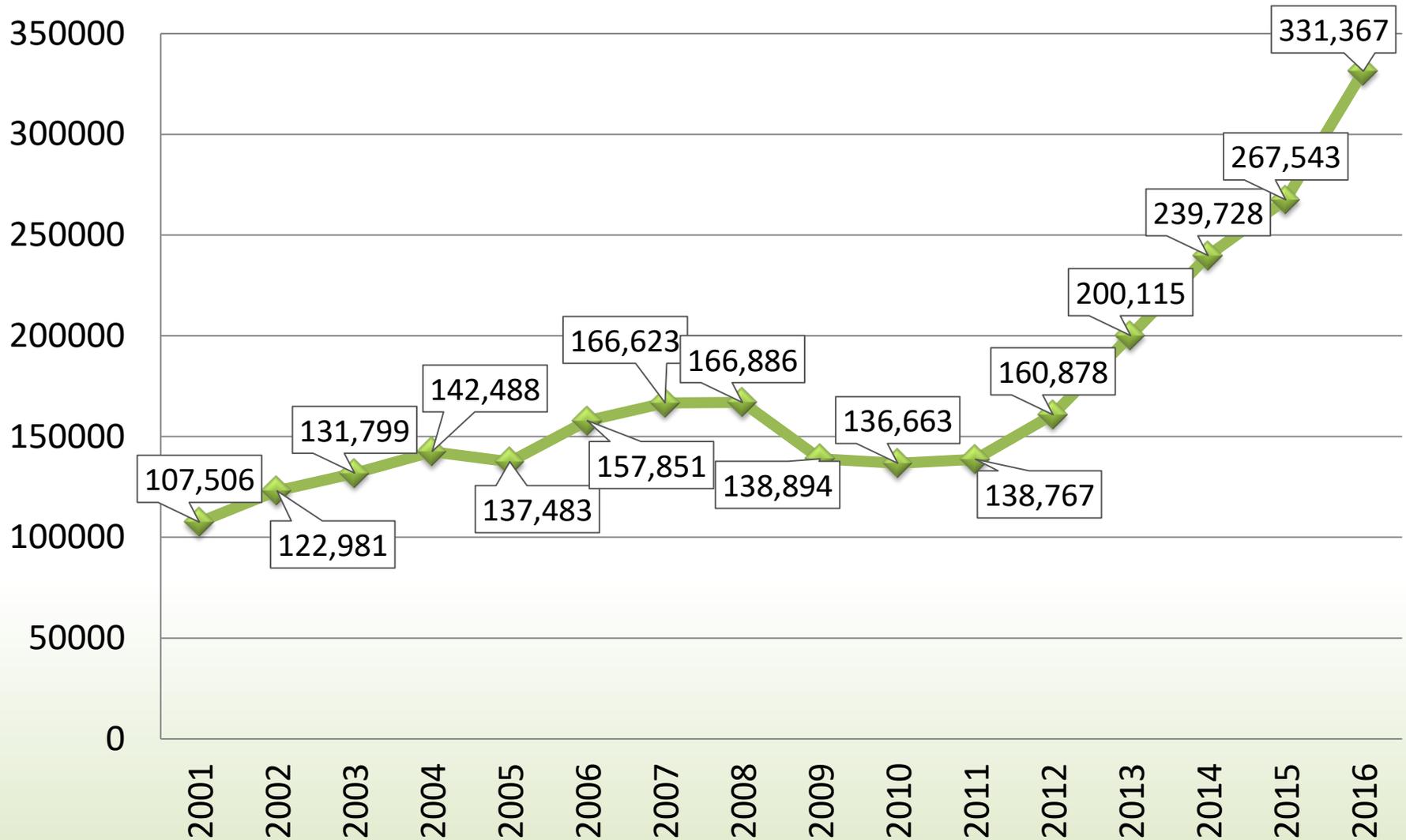


KAYAKALP AWARD WINNING SDH/CHCs			
District	SDH/CHC	Award Winning rank 1st @ 15 lakh /SDH or CHC Commendation Award @ 1 lakh/SDH or CHC	District wise Amount
Karnal	CHC Indri	1 st Rank	15 Lakh
Kaithal	CHC Kaul	Commendation award	1 Lakh
Faridabad	SDH Ballabhgarh	Commendation award	1 Lakh

ISO 9001:2008 Certification



OPD Registration (2001 – 2016)

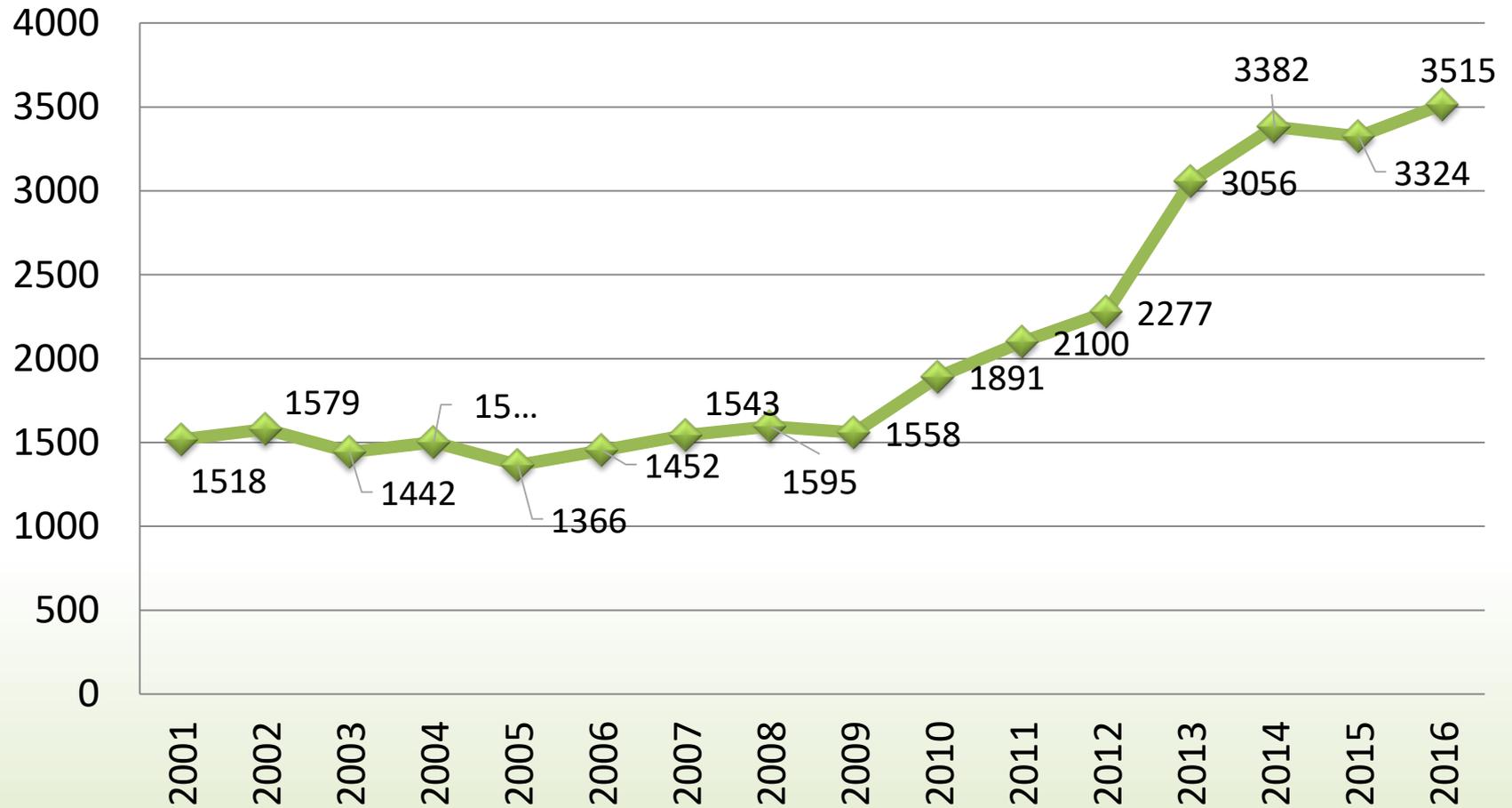


Bed Occupancy Rate (2001 – 2016)



Hospital Deliveries (2001 – 2016)

Deliveries



Surgical Procedures Performed (2001 – 2016)



Key Hospital Statistics – 2016

	Frequency
Number of Outdoor Cases	331367
Number of Indoor Cases	12018
Number of Patients Counselling at ICTC	8832
Number of Casualty Cases	63402
Number of Lab investigations	266638
Number of X-rays done	18533
No. of Ultrasound conducted	4469
Total number of surgical procedures performed	2880
Tuberculosis cases treated under RNTCP	750

**Intensive Field Practice Area
PHC Dayalpur & PHC Chhainsa**

PHC Dayalpur Campus



PHC Chhainsa Campus



PHC based Activities

- ❑ Daily OPD services
- ❑ 6 Bedded ward
- ❑ Weekly maternal and child health Clinic
- ❑ Delivery Hut (Free Delivery)
- ❑ Basic laboratory investigations
- ❑ Essential drugs provided free of cost
- ❑ Monthly sterilization camp
- ❑ Designated Microscopy centre at PHC Dayalpur
- ❑ Out Reach Specialty OPD (ORSO)



Field Based Activities

- ❑ Domiciliary visits by male and female health workers every fortnight
- ❑ Extension Health Clinics once a week in all the villages
- ❑ Ante-natal and immunization clinics at regular intervals
- ❑ Family welfare services
- ❑ Supervision of activities by health supervisors and resident doctors
- ❑ Implementation of all national health programmes
- ❑ Registration of Births and Deaths
- ❑ Use of verbal autopsy for ascertaining the cause of death
- ❑ Periodic in service training of ASHAs, health workers, and health supervisors
- ❑ Disease control and school health services

Community Participation

- ❑ Health care action plans are based on the feedback and demand of the community
- ❑ Land and infrastructure at sub-centres donated by the community
- ❑ Regular meetings with Panchayati Raj Institution members
- ❑ Intensive community based IEC activities
- ❑ Regular health education activities in schools
- ❑ Village Health and Sanitation Committee

Reaching the unreached- Clinics at brick kilns



Delivery hut at PHC



Sub Centres



- ❖ Population covered by each subcentre - 6500 to 11,000
- ❖ Manned by one male and one female health worker
- ❖ Services: Immunization, Out patient care, ANC services, Home visits

Hypertension Screening Camp



Supervision activity by Faculty members during hypertension camps

Field Activities



Immunization Activity



HBPNC Visit by ASHA

Census activity 2015-16 (in same family)



ANC clinic at a Sub Centre



- ❖ Home visits Monthly twice in one sub centre
- ❖ High risk pregnancy tracking and referral
- ❖ Identification of eligible patients for IVIS
- ❖ Nutritional counseling

OPD at Sub Centre



Computer facility at Subcentre



Training of School Students



ORSO (Out Reach Speciality OPD)

- Started since 2013
- Weekly visit of specialists:
 - SR Obstetrics and Gynecology
 - SR Pediatrics
 - SR Ophthalmology
 - SR Psychiatry
- Prior appointment for patients from field
- Tracking of high risk pregnancies & appointment for USG and LSCS



Kayakalp Award for Quality - 2016

KAYAKALP AWARD WINNING PHCs			
District	Award Winning rank 1st @ 2 lakh /PHC	Commendation Award @ Rs. 50,000 /PHC	District wise Amount
Ambala	PHC Majri	PHC Saha	2.5 Lakh
Faridabad	PHC Chhainsa	PHC Dayalpur	3 Lakh
		PHC Mohna	

Monitoring and Supervision by Doctors in the field



Meeting with Village Sarpanch



ASHA Meeting at Seminar Room PHC, Chhainsa



Visit by International Dignitaries



Dr. Shashi Kant accompanying **Kathleen Sebelius** (United States Secretary of Health and Human Services) and **Tom Freiden** (Director, CDC) for village visit (2012)

Residential Accommodation at PHC



PHC Chhainsa



PHC Dayalpur

A view from roof top of PHC Chhainsa



Blood Donation Camp



Extension Health Clinic

- Every day (excluding Sunday) doctors from PHCs visit one of the sub-centres to conduct OPDs
- Ante natal care camps, by the doctors of Primary Health Centre are organized in every village
- Services to hard to reach areas e.g. brick kilns
- ORSO clinic, a unique initiative where doctors reach the patients

CRHSP Activities:
HMIS

Health Management Information System (HMIS)

RHMIS--MAIN SELECTION SCREEN



media Lab ASIA
innovating for Digital Inclusion



AIIMS

MODULES

REPORTS

ACTIVITY PLAN

DATA TRANSFER

CUSTOMIZATION

BACK

Activity Plan

Select PHC : Dayalpur

Select Sub-centre : Chandawli

Villages :

- Chandawli
- Mujeri
- Nawada

Selected Villages :

- Chandawli

Total : 3 Total : 1

HMIS

Activity Plan (Sup) Activity Plan (HW) Exit

start Microsoft PowerPoint ... RHMIS--MAIN SELEC... 11:41 AM

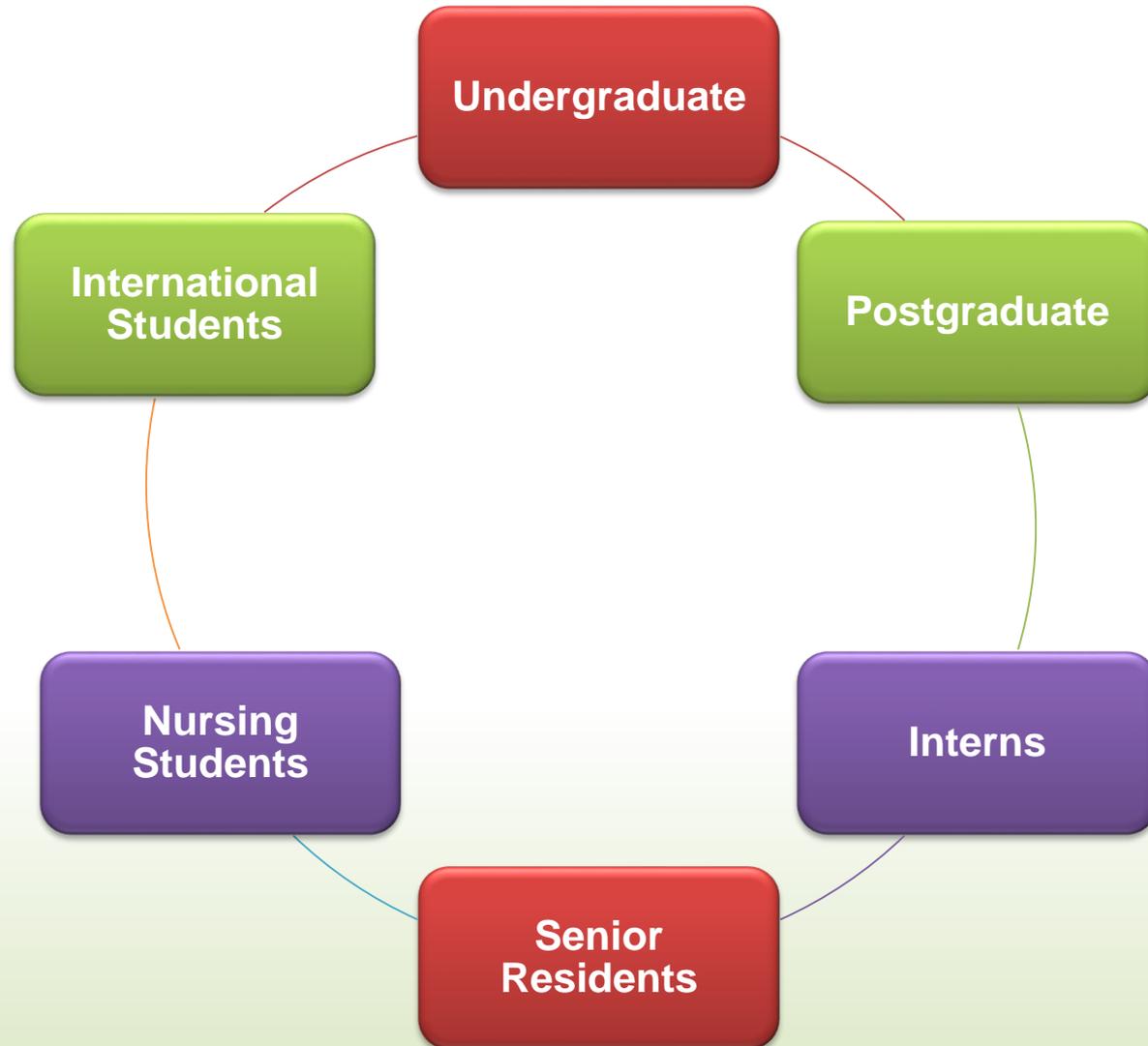
HMIS: Data Collection

- ❑ Each house in IFPA visited once every 15 days by the health workers
- ❑ Data collected regarding
 - ❑ Demographic details
 - ❑ Morbidity and Mortality
 - ❑ Health services provided (vaccination, contraception, etc)
- ❑ HMIS updated once every month
- ❑ Various levels of checks for quality assurance
 - ❑ Health Supervisors
 - ❑ Medical Officers

HMIS: Applications

- ❑ Monthly work plan generated for health workers
- ❑ Monitoring and evaluation of health activities
- ❑ Research Work
 - ❑ Sampling frame
 - ❑ Demographic data
 - ❑ Maternal and child health data
- ❑ Model for prospective data management

CRHSP – Teaching Activities



Academic Activities: Undergraduates

- 7th Semester students in four batches (July to December)
- Compulsory residential posting for 6 weeks for each batch
- Lectures, practicals, hands on training, and field visits
 - Orienting UGs to Community Health (Qualitative research)
 - Epidemiological exercises
 - IMNCI training
 - Health system visits
 - Case and family presentation
 - Clinical Teaching



IMNCI teaching

Academic Activities (Nursing Students)

- ❖ Case and Family presentations
- ❖ Health system visits
- ❖ Ward postings
- ❖ IEC activities



Nursing students in pharmacy

Academic Activities (Postgraduates)

- ❖ Seminars and Case/Family presentations
- ❖ Monthly report (health workers) based exercise
- ❖ Management Information System based exercises
- ❖ Disease review: Desk review
- ❖ Hospital based exercise (Support service)
- ❖ Case study and mortality discussion (Verbal Autopsy)
- ❖ Health System Evaluation

Academic Activities (International Students)

- ❑ Observer ship /Internship or undertake short projects under guidance of faculty at CRHSP, Ballabgarh
- ❑ End posting reports are submitted
- ❑ Students reside at CRHSP, Ballabgarh
- ❑ Duration of stay is variable

National Students from other Institutes

- ❖ Armed Forces Medical College (AFMC), Pune
- ❖ Jawaharlal Nehru University (JNU), New Delhi
- ❖ National Institute of Epidemiology (NIE), Chennai
- ❖ Stanford Bio-design, New Delhi
- ❖ Other medical colleges of India

Library



UG Students interacting with PRI members



UG Students involved in School Health Activities



UG Students interacting with ASHA Workers



What is Value Addition for Students?

- Rural experience – outreach activity
- Hands-on experience – clinical as well epidemiological projects
- Differently focused teaching
- Good hostel and mess facility
- Make it enriching and unforgettable
- Rural, yet, connected to world by internet

AIIMS DHR Operational Research Workshop at CRHSP Ballabgarh, 16-19th January 2017



Nursing Education at PHC



Role Play by UG Students on Neonatal Care



CRHSP Activities:
Research

Research Activities

- ❑ CRHSP, Ballabgarh a research hub for community based research activities
- ❑ A prospective database (health and demography) maintained at CRHSP, Ballabgarh for more than two decades which provides the platform for research
- ❑ The intensive field practice area of CRHSP, Ballabgarh is a Health and Demographic Surveillance System (HDSS) site

Research Activities

- ❑ Research at CRHSP, Ballabgarh provided inputs for policy formulation at national level
- ❑ Various national and international organizations collaborate with CRHSP, Ballabgarh for research
- ❑ Thesis for postgraduate students and PhD students

Few Research Publications from Ballabgarh- Glimpses

Birth Defects Research Part A: Clinical and Molecular Teratology.

Prevalence of Neural Tube Defects in a Rural Area of North India from 2001 to 2014: A Population-Based Survey

Shashi Kant¹, Sumit Malhotra*¹, Arvind Kumar Singh¹, Partha Haldar¹, Ravneet Kaur¹, Puneet Misra², and Neerja Gupta³

CLINICAL ARTICLE Int J Gynecol Obstet (2016), <http://dx.doi.org/10.1016/j.ijgo.2016.01.012>

Profile of pregnant women using delivery hut services of the Ballabgarh Health and Demographic Surveillance System in rural north India

Shashi Kant^{a,b}, Partha Haldar^{a,b,*}, Arvind Singh^a, S. Archana^a, Puneet Misra^a, Sanjay Rai^a

^a Centre for Community Medicine, All India Institute of Medical Sciences, New Delhi, India

^b Comprehensive Rural Health Services Project, Ballabgarh Health and Demographic Surveillance System, Faridabad, India

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Partnerships for organizing blood donation camp: An experience from rural North India

Shashi Kant¹, Sumit Malhotra¹, Farhad Ahamed¹, S. Archana¹, Chandrakant S. Pandav¹

¹Centre for Community Medicine, All India Institute of Medical Sciences, New Delhi, India

Kant et al. *Reproductive Health* (2015) 12:51
DOI 10.1186/s12978-015-0040-9



July-September 2016 : Volume 5 : Issue 3

RESEARCH

Open Access

Induced abortion in villages of Ballabgarh HDSS: rates, trends, causes and determinants



Shashi Kant, Rahul Srivastava, Sanjay Kumar Rai, Puneet Misra, Lena Charlette* and Chandrakant S. Pandav

Research Publications

S no.	Primary Domain	Number*
1	Child Health	56
2	Non Communicable Diseases	47
3	Communicable Disease	17
4	Women's Health	28
5	Health Systems/ Operational Research	32
6	Verbal Autopsies	7
7	Demographic Surveillance	11
8	Medical Education	7
9	Others	12
	Total	216

*Upto January 2017

Research Wing at SDH Ballabgarh



Data Management Centre



Record room (Research Wing)

Research Wing at PHC Chhainsa





CRHSP Activities: **Collaborations**

Collaborations - National

- ❑ Ministry of Health and Family Welfare, Govt. of India
- ❑ Department of Health Research
- ❑ Indian Council of Medical Research (ICMR)
- ❑ Department of Science and Technology (DST)
- ❑ National AIDS Control Organization - Providing technical support in all activities to NACO

Collaborations - International

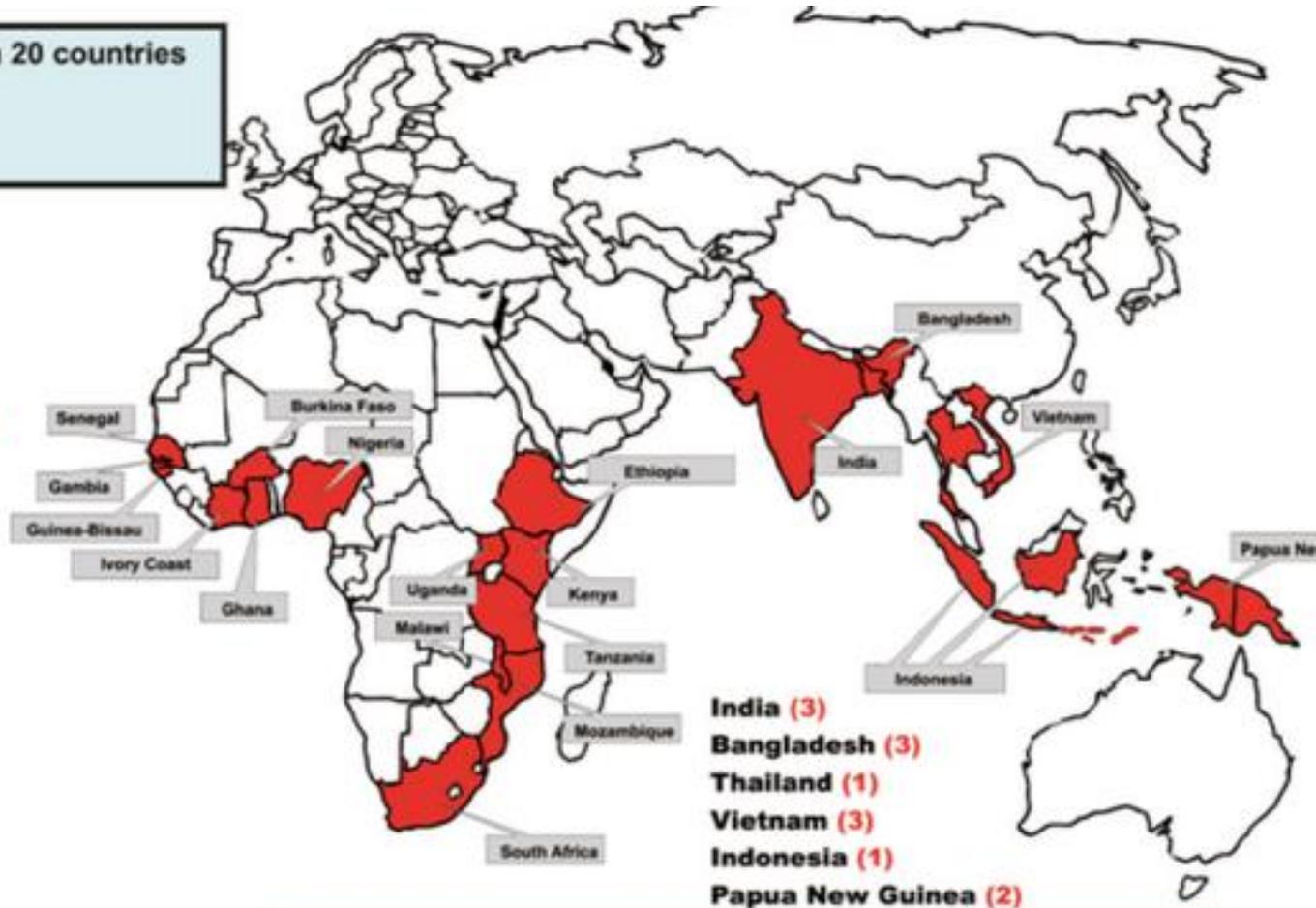
- ❑ Member of INDEPTH Network since 2003
- ❑ Other partners - CDC, UNICEF, INCLIN, WHO, University of Alabama, and University of Colorado, etc.



INDEPTH Network and CRHSP, Ballabgarh

Currently 52 HDSSs in 20 countries
39 HDSSs in Africa
11 HDSSs in Asia
2 HDSS in Oceania

Senegal (3)
The Gambia (2)
Guinea-Bissau (1)
Burkina Faso (5)
Ivory Coast (1)
Ghana (3)
Ethiopia (5)
Uganda (3)
Kenya (5)
Tanzania (3)
Malawi (1)
Mozambique (2)
Nigeria (2)
South Africa (3)



Over 3,800,000 people under surveillance

INDEPTH Network and CRHSP, Ballabgarh

Published by Oxford University Press on behalf of the International Epidemiological Association

International Journal of Epidemiology 2013;**42**:758–768

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doi:10.1093/ije/dyt055

HEALTH AND DEMOGRAPHIC SURVEILLANCE SYSTEM PROFILE

The Ballabgarh Health and Demographic Surveillance System (CRHSP-AIIMS)

Shashi Kant, Puneet Misra,* Sanjeev Gupta, Kiran Goswami, Anand Krishnan, Baridalyne Nongkynrih, Sanjay Kumar Rai, Rahul Srivastava and Chandrakant S Pandav

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E-mail: doctormisra@gmail.com

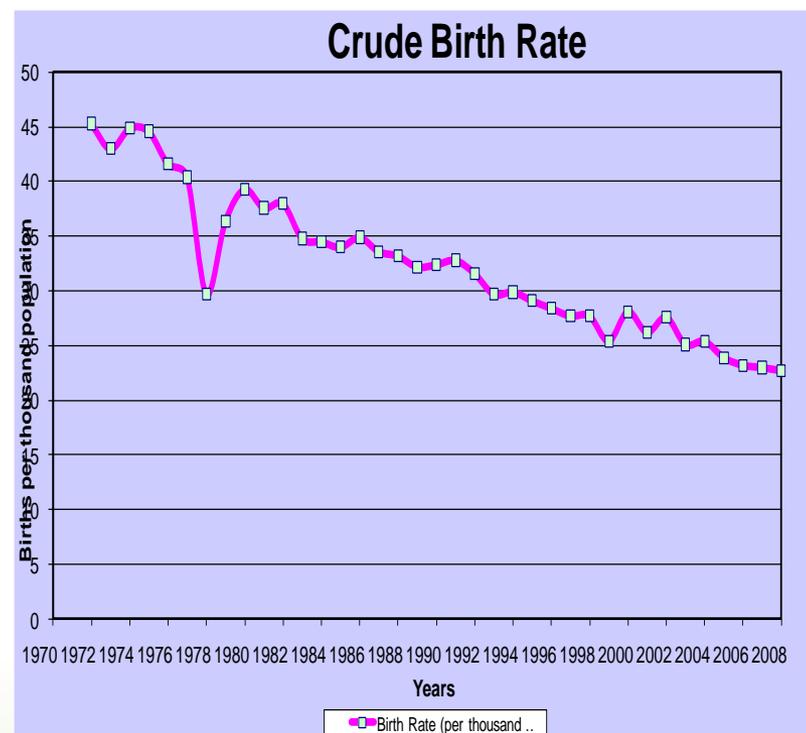
Kant S, Misra P, Gupta S, Goswami K, Krishnan A, Nongkynrih B, Rai SK, Srivastava R, Pandav CS. The Ballabgarh Health and Demographic Surveillance System (CRHSP-AIIMS). *Int J Epidemiol*. 2013 Jun;42(3):758-68. doi: 10.1093/ije/dyt055. PubMed PMID: 23620380.



Contribution of CRHSP Ballabgarh to Public Health

Contribution of CRHSP Ballabgarh to Public Health

- ❑ Demography
 - ❑ Focus on denominators
 - ❑ Documentation of rates and causes of death at different ages especially childhood
 - ❑ Birth and Death registration by MPWs



Contribution of CRHSP Ballabgarh to Public Health ...2

- ❑ Operational / Health System Research
 - ❑ Multipurpose Purpose Health Worker Scheme -1972
 - ❑ Addition of Curative services to MPWs – 1973
 - ❑ Computerized Health management information system-1988



Contribution of CRHSP Ballabgarh to Public Health ...3

- ❑ Pulse Polio strategy -1985
- ❑ Diarrhea epidemiology and control
- ❑ ARI epidemiology and control
- ❑ Measles Epidemiology and Control
- ❑ Field trial of High Dose Iron and Folic Acid for Pregnancy-1987

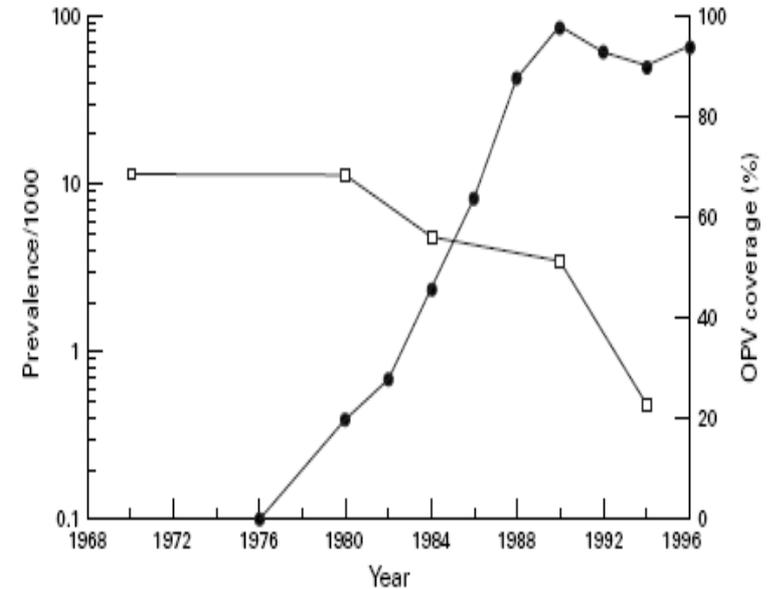


Figure 1 Polio prevalence (0-5 years) and OPV coverage (12-23 months) in Ballabgarh, India.



The Way Forward..

The Way Forward

- ❑ New intensive field practice area at CHC at Fatehpur Billoch
- ❑ A 100 year cohort for non communicable diseases
- ❑ Formation of a cohort of hypertensive and diabetic patients
- ❑ Research and training institution
- ❑ Strengthening collaborations with national and international institutions

The Way Forward

Upcoming infrastructure at CRHSP Ballabgarh

- ❑ A new OPD block at Sub-district Hospital, Ballabgarh
- ❑ A 30 bedded hospital (CHC) with advanced research wing at Fatehpur Billoch
- ❑ New residential block (students and staff) at Sub-district Hospital, Ballabgarh
- ❑ New hospital building at Primary Health Centres

Academic

- New courses
- New training and distance education facility
- Addition of research naïve population for cohort
- Collaboration with foreign universities

Research

- New research station at FTB
- Research facility at Ballabgarh
 - Augmentation of laboratory services
 - Archival facility of documents and biological specimens
 - Office for research staff
 - Dedicated patient examination zone

Patient care

- Expansion of range of departments
- Quantum
 - Modular OTs (4)
 - 27 New clinical SRs
- Quality
 - Latest equipment / technology (automation)
 - Emergency medicine – telemedicine connection with JPNATC

Academic teaching

- Wifi enabled campus
- Up gradation of library facility through e access

THANK YOU

Contact us at...

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