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
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

- **Tertiary Care**
  - Main Hospital and 8 Centres, AIIMS, New Delhi

- **Secondary Care**
  - Sub-district Hospital, Ballabgarh
  - 2 Primary Health Centres
  - 12 Sub Centres
  - 28 Villages

- **Primary Care**
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

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>1947</td>
<td>Ballabgarh Health Society formed</td>
</tr>
<tr>
<td>1960</td>
<td>AIIMS decided to train students in rural setup</td>
</tr>
<tr>
<td>1961</td>
<td>Sub centre Kurali was chosen as training centre</td>
</tr>
<tr>
<td>1965</td>
<td>Establishment of CRHSP at Ballabgarh</td>
</tr>
<tr>
<td>1967</td>
<td>PHC Dayalpur established</td>
</tr>
<tr>
<td>1969</td>
<td>PHC Chhainsa established</td>
</tr>
<tr>
<td>2013</td>
<td>CHC Fatehpur Billoch construction started</td>
</tr>
</tbody>
</table>
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

Director, AIIMS

Prof. and Head CCM

Professor In-Charge, CRHSP Ballabgarh, CCM

Faculty members CRHSP-Ballabgarh, CCM

PHC Dayalpur

PHC Chhainsa

Secretary (Health) & DGHS, Govt. of Haryana

CMO, Faridabad

SMO, Ballabgarh
CRHSP Ballabgarh

Collaborative project between

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
Sub-district Hospital, Ballabgarh
(7 Acre Campus)

PHC Dayalpur

PHC Chhainsa

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

PHC DAYALPUR
(49 K population)

PHC CHHAINSA
(49 K population)
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

- MBBS & Interns
- Postgraduates
- PhD
- Nursing

- Preventive
- Promotive
- Curative
- Rehabilitative

Health Care
Research
National Programmes
Teaching & Training
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
Paediatrics OPD
Ophthalmology OPD
Auto Refractometer and keratometer
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 calibration
- Without using gas or cartridge model
- Eschweller Combiline (fast and economical expandable system)
Total no. of surgeries: 2880 (2016)
First Laparoscopic Surgery by AIIMS Director - Dr. M.C. Misra at SDH Ballabgarh
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)
Opthalmic 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
Laboratory
Deep Freeze Refrigerators
Pharmacy
Store
New OPD 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

<table>
<thead>
<tr>
<th>District</th>
<th>SDH/CHC</th>
<th>Award Winning rank 1st @ 15 lakh /SDH or CHC Commendation Award @ 1 lakh/SDH or CHC</th>
<th>District wise Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karnal</td>
<td>CHC Indri</td>
<td>1st Rank</td>
<td>15 Lakh</td>
</tr>
<tr>
<td>Kaithal</td>
<td>CHC Kaul</td>
<td>Commendation award</td>
<td>1 Lakh</td>
</tr>
<tr>
<td>Faridabad</td>
<td>SDH Ballabhgarh</td>
<td>Commendation award</td>
<td>1 Lakh</td>
</tr>
</tbody>
</table>

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ISO 9001:2008 Certification

Certificate of Registration

This is to certify that
Quality Management System
of
CRHSP (AIIMS), CIVIL HOSPITAL
Near Ballabghar Bus Stand, Ballabghar-121004, Haryana, INDIA.

complies with the requirements of

ISO 9001:2008

This certificate is valid concerning all activities related to:

Delivery of Health Diagnostic and Therapeutic
Services for General Public
ANZSIC Code: 08611

Apr. 02, 2011
Date of issue

Mar. 23, 2014
Valid until

6934
Certificate No.

Managing Director/Director

TRANSPACIFIC CERTIFICATIONS LIMITED

57
Surgical Procedures Performed (2001 – 2016)
<table>
<thead>
<tr>
<th><strong>Frequency</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Outdoor Cases</td>
<td>331367</td>
</tr>
<tr>
<td>Number of Indoor Cases</td>
<td>12018</td>
</tr>
<tr>
<td>Number of Patients Counselling at ICTC</td>
<td>8832</td>
</tr>
<tr>
<td>Number of Casualty Cases</td>
<td>63402</td>
</tr>
<tr>
<td>Number of Lab investigations</td>
<td>266638</td>
</tr>
<tr>
<td>Number of X-rays done</td>
<td>18533</td>
</tr>
<tr>
<td>No. of Ultrasound conducted</td>
<td>4469</td>
</tr>
<tr>
<td>Total number of surgical procedures performed</td>
<td>2880</td>
</tr>
<tr>
<td>Tuberculosis cases treated under RNTCP</td>
<td>750</td>
</tr>
</tbody>
</table>
Intensive Field Practice Area
PHC Dayalpur & PHC Chhainsa
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
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
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

<table>
<thead>
<tr>
<th>District</th>
<th>Award Winning rank 1st @ 2 lakh /PHC</th>
<th>Commendation Award @ Rs. 50,000 /PHC</th>
<th>District wise Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambala</td>
<td>PHC Majri</td>
<td>PHC Saha</td>
<td>2.5 Lakh</td>
</tr>
<tr>
<td>Faridabad</td>
<td>PHC Chhainsa</td>
<td>PHC Dayalpur</td>
<td>3 Lakh</td>
</tr>
</tbody>
</table>
Monitoring and Supervision by Doctors in the field
Meeting with Village Sarpanch
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
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)
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
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
**Monthly Work plan generated from HMIS**

<table>
<thead>
<tr>
<th>Name</th>
<th>DOB</th>
<th>Age</th>
<th>Problem</th>
<th>FP Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jagan Mohalla</td>
<td>05-01-1990</td>
<td>24</td>
<td>Needنطق</td>
<td>Contraception</td>
</tr>
<tr>
<td>Sanjay Op</td>
<td>03-01-1995</td>
<td>28</td>
<td>Needsmpz</td>
<td>Contraception</td>
</tr>
<tr>
<td>Sunita</td>
<td>17-01-2000</td>
<td>21</td>
<td>Needsmpz</td>
<td>Contraception</td>
</tr>
<tr>
<td>Hemender</td>
<td>06-01-1992</td>
<td>28</td>
<td>Needsmpz</td>
<td>Contraception</td>
</tr>
<tr>
<td>Kamal Singh</td>
<td>14-01-1993</td>
<td>26</td>
<td>Needsmpz</td>
<td>Contraception</td>
</tr>
<tr>
<td>Jagdish Singh</td>
<td>12-01-1994</td>
<td>25</td>
<td>Needsmpz</td>
<td>Contraception</td>
</tr>
</tbody>
</table>
CRHSP Activities:
Teaching & Training
CRHSP – Teaching Activities

Undergraduate

International Students

Postgraduate

Nursing Students

Interns

Senior Residents
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
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
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 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
Nursing Education at PHC
Role Play by UG Students on Neonatal Care
CRHSP Activities:

Research
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

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

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

Shashi Kant⁴, Partha Haldar⁴, Arvind Singh⁴, S. Archana⁴, Puneet Misra⁴, Sanjay Rai⁴

¹ Centre for Community Medicine, All India Institute of Medical Sciences, New Delhi, India
² Comprehensive Rural Health Services Project, Ballabgarh Health and Demographic Surveillance System, Faridabad, India

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

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

REPRODUCTIVE HEALTH
<table>
<thead>
<tr>
<th>S no.</th>
<th>Primary Domain</th>
<th>Number*</th>
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<tbody>
<tr>
<td>1</td>
<td>Child Health</td>
<td>56</td>
</tr>
<tr>
<td>2</td>
<td>Non Communicable Diseases</td>
<td>47</td>
</tr>
<tr>
<td>3</td>
<td>Communicable Disease</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>Women’s Health</td>
<td>28</td>
</tr>
<tr>
<td>5</td>
<td>Health Systems/ Operational Research</td>
<td>32</td>
</tr>
<tr>
<td>6</td>
<td>Verbal Autopsies</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Demographic Surveillance</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td>Medical Education</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>Others</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>216</td>
</tr>
</tbody>
</table>

*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, INCLEN, 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

Source: http://www.indepth-network.org/
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

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

*Corresponding author. Centre for Community Medicine, All India Institute of Medical Sciences, New Delhi 110029, India. E-mail: doctormisra@gmail.com

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
Operational / Health System Research

- Multipurpose Purpose Health Worker Scheme -1972
- Addition of Curative services to MPWs – 1973
- Computerized Health management information system-1988
- 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
• New courses

• New training and distance education facility

• Addition of research naïve population for cohort

• Collaboration with foreign universities
• 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
• 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
Contact us at…

Prof. Shashi Kant
Head, Centre for Community Medicine, AIIMS
Phone: 011-26593553
Email: skant76@gmail.com

Professor In-charge, CRHSP, Ballabgarh
Phone: 0129-2241362
Email: crhsp.ballabgarh@gmail.com