



**NATIONAL CENTRE FOR DISEASE INFORMATICS AND RESEARCH (NCDIR)**  
*Indian Council of Medical Research*

# **ANNUAL REPORT**

## **2016 - 2017**





Indian Council of Medical Research  
**National Centre for Disease Informatics and Research**  
**Bengaluru**



**Annual Report 2016 - 2017**

Nirmal Bhawan-ICMR Complex (II Floor), Poojanahalli, off NH. - 7,  
Kannamangala Post, Bengaluru - 562 110 (India).

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Bengaluru - 562 110 (India).*

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## PREFACE AND SUMMARY

I am pleased to present the activities of National Centre for Disease Informatics and Research (NCDIR) in this annual report for 2016 - 2017, upon taking charge as Director in May 2016. The work reported on is the continuation of the hard work put in by Dr. A. Nandakumar, former Scientist G and Director-in-charge along with the scientific, technical, administrative and financial staff. The cooperation, continuation and guidance provided by the National Cancer Registry Programme (NCRP) network, Scientific Advisory Committee NCDIR and Research Area Panel on Cancer is duly acknowledged.

Setting up of Punjab Cancer Atlas in 2011 was in response to the request by the State Government to assess cancer magnitude. The study was concluded in 2015 and data received till 2016 was analysed. The high burden of leukaemia and lymphoma cases reported in both sexes was revealing. Cancer of oesophagus and stomach were reported from several districts as leading sites. The rates for other sites were comparable with other NCRP registries. This initiative led to the establishment of a Population Based Cancer Registry(PBCR) in Government Medical College, Patiala.

A sub study titled “Verification of completeness of data obtained through Punjab Cancer Atlas (PCA) through a survey with the additional objective of knowing the magnitude of diabetes, CVD, and stroke in the respective region” was carried out during the conduct of the Punjab Cancer Atlas project. The results have shown high incidence for type 2 diabetes mellitus, hypertension, stroke and myocardial infarction. Appropriate detailed studies will enable to describe the details.

The PBCRs continued to collect and transmit data as per established norms. The data for 2012 - 2014 released in May 2016 showed the leading sites of cancers in males and female subjects across 27 PBCRs. The highest age adjusted annual incidence rates for all sites of cancer reported from Papum Pare district for males and Naharlagun in females. In males, lung cancer was reported as the leading site in 11 registries and nasopharynx was the leading site in Nagaland. Breast cancer was the leading site amongst females in 19 registries, followed by cervical cancer.

The north east registries reported high burden of tobacco related sites of cancer with East Khasi Hills district leading. Delhi urban registry reported highest proportion of childhood cancer cases.

The Hospital Based Cancer Registry reported 60 - 70% cases of cancers in age group of 35 - 64 years in both sexes with tobacco related cancer sites involvement in varying proportions. Radiotherapy as a treatment modality was reported in higher proportions in males than surgery, probably reflecting the advanced stage of diseases at consultation. Three seminal papers were published on Patterns of Cancer Care and Hospital survival for head & neck, breast and cervical cancers.

NCDIR has been advocating for making cancer as a notifiable disease, as is done in several developed countries, to augment and strengthen cancer registration. 9 States have notified cancer so far either as administrative order / Gazette notification. NCDIR is hosting the Karnataka and Haryana Cancer Atlas to monitor the cancer notification since 2015.

Software application development, maintenance and upgradation to support IT enabled collection, transmission, validation and analysis of data was achieved. The staff of NCDIR participated and organized several conferences, workshops, meetings etc. and presented papers and abstracts in scientific meetings. The CRAB 2016 was published and circulated.

In July 2016 the ICMR Bioethics Unit was transferred from ICMR Headquarters and was setup at NCDIR involving flurry of activities involving a series of meetings and consultations towards finalization of the "ICMR National Ethical Guidelines for Biomedical and Health Research Involving Human Participants, 2017".

There are several projects in pipeline on expansion of the NCRP activities. Newer initiatives on Stroke, Heart Failure, Medical Certification on Cause of Death and updating the core forms and software are being planned. We are committed to strengthen cancer registration, improve partnerships and collaborations, interact with policy and program managers and other stakeholders for the prevention and control of cancer, cardiovascular diseases, stroke and diabetes.



**Dr Prashant Mathur**  
Director

## COMMITTEES

### SCIENTIFIC ADVISORY COMMITTEE

| Chairperson  | Member Secretary  |
|--|---|
| <p><b>Dr. G K Rath</b><br/>Head, National Cancer Institute<br/>(2<sup>nd</sup> Campus AIIMS, Jhajjar, Haryana)<br/>&amp; Chief<br/>Institute Rotary Cancer Hospital,<br/>AIIMS, New Delhi.</p> | <p><b>Dr. A. Nandakumar</b><br/>(till May 24, 2016)<br/>Director-in-charge</p> <p><b>Dr. Prashant Mathur</b><br/>(from May 25, 2016)<br/>Director<br/>National Centre for Disease Informatics<br/>and Research, Bengaluru</p> |

### Members

|  |   |   |
|--|---|---|
| <p><b>Dr. P.C. Gupta</b><br/>Director<br/>Healis-Sekhsaria Institute<br/>of Public Health<br/>Navi Mumbai.</p>                                     | <p><b>Prof. K. Ramachandran</b><br/>(Ex Professor of<br/>Biostatistics AIIMS<br/>New Delhi)<br/>Bengaluru.</p>                    | <p><b>Dr. Kameshwar Prasad</b><br/>Professor &amp; Head<br/>Department of Neurology<br/>&amp; Director, Clinical<br/>Epidemiology Unit AIIMS<br/>New Delhi.</p> |
| <p><b>Mr. P. Gangadharan</b><br/>Consultant - Oncology<br/>Centre<br/>Amrita Institute of<br/>Medical Sciences and<br/>Research Centre, Kochi.</p> | <p><b>Dr. K.K. Talwar</b><br/>Chairman<br/>Department of Cardiology<br/>Max Healthcare Institute<br/>Ltd.,<br/>New Delhi.</p>     | <p><b>Dr. V. Mohan</b><br/>President<br/>Madras Diabetes<br/>Research Foundation<br/>Chennai.</p>   |
| <p><b>Dr. A C Katak</b><br/>Director<br/>Dr. B.B. Borooah Cancer<br/>Institute, Guwahati.</p>  | <p><b>Dr. P.P. Bapsy</b><br/>(Ex Director, KMIO<br/>Bengaluru), Chief Medical<br/>Oncologist, Apollo<br/>Hospital, Bengaluru.</p> | <p><b>Dr. R.A. Badwe</b><br/>Director<br/>Tata Memorial Hospital<br/>Mumbai.</p>  |
| <p><b>Dr. P. Satishchandra</b><br/>Senior Professor<br/>Dept. of Neurology<br/>NIMHANS, Bengaluru.</p>   | <p><b>Dr. A.K. Das</b><br/>Additional DGHS &amp;<br/>Director Professor of<br/>Medicine<br/>JIPMER, Puducherry.</p>               | <p><b>Dr. V.M. Katoch</b><br/>Ex- Director General<br/>ICMR &amp; Secretary<br/>Department of Health<br/>Research, Bengaluru.</p>                               |

## RESEARCH AREA PANEL ON CANCER

| Chairperson  | Member Secretary  |
|--|---|
| <p><b>Dr. G K Rath</b><br/>Head, National Cancer Institute<br/>(2<sup>nd</sup> Campus AIIMS, Jhajjar, Haryana)<br/>&amp; Chief, Institute Rotary Cancer Hospital<br/>AIIMS, New Delhi.</p> | <p><b>Dr. A. Nandakumar</b><br/>(till May 24, 2016)<br/>Director-in-charge</p> <p><b>Dr. Prashant Mathur</b><br/>(from May 25, 2016)<br/>Director<br/>National Centre for Disease Informatics<br/>and Research, Bengaluru</p> |

### Members

|  |   |  |
|--|---|--|
| <p><b>Dr. P.C. Gupta</b><br/>Director<br/>Healis-Sekhsaria Institut<br/>of Public Health<br/>Navi Mumbai.</p>                                      | <p><b>Mr. P. Gangadharan</b><br/>Consultant - Oncology<br/>Centre, Amrita Institute<br/>of Medical Sciences and<br/>Research Centre, Kochi.</p> | <p><b>Dr. A C Kataki</b><br/>Director<br/>Dr. B.B. Borooah Cancer<br/>Institute, Guwahati.</p>   |
| <p><b>Prof. R.C. Mahajan</b><br/>SN Bose INSA Research<br/>&amp; Emeritus Professor<br/>Department of<br/>Parasitology, PGIMER<br/>Chandigarh.</p> | <p><b>Dr. J. Mahanta</b><br/>Retired Scientist G &amp;<br/>Director<br/>RMRC, NE Region<br/>Dibrugarh.</p>                                      | <p><b>Dr. M.N. Bandyopadhyay</b><br/>Retired Consultant<br/>Oncologist &amp; In-charge<br/>Research Division<br/>Saroj Gupta Cancer<br/>Centre &amp; Research<br/>Institute Kolkata.</p> |
| <p><b>Dr. P.P. Bapsy</b><br/>Chief Medical Oncologist<br/>Apollo Hospitals<br/>Bengaluru.</p>  | <p><b>Dr. R.N. Visweswara</b><br/>Consultant-Pathology<br/>Anugraha, Second A<br/>Cross, Girinagar I Phase<br/>Bengaluru.</p>                   | <p><b>Dr. Elizabeth Vallikad</b><br/>Professor and Head<br/>Department of<br/>Gynaecologic Oncology<br/>St John's Medical College<br/>Bengaluru.</p>                                     |
| <p><b>Dr. Kumaraswamy</b><br/>Professor of Radiation<br/>Oncology, HCG Institute<br/>of Oncology Speciality<br/>Centre, Bengaluru.</p>             | <p><b>Dr. B. Rajan</b><br/>Chief Radiologist<br/>and Ultrasonologist<br/>Mahaveer Jain Hospital<br/>Bengaluru.</p>                              |  |

## RESEARCH AREA PANEL ON CVD

| Chairperson  | Member Secretary  |
|--|---|
| <p><b>Dr. K.K. Talwar</b><br/>Chairman, Department of Cardiology<br/>Max Healthcare Institute Ltd.,<br/>New Delhi.</p> | <p><b>Dr. A. Nandakumar</b> (till May 24, 2016)<br/>Director-in-charge</p> <p><b>Dr. Prashant Mathur</b> (from May 25, 2016)<br/>Director<br/>National Centre for Disease Informatics<br/>and Research, Bengaluru</p> |

### Members

|   |  |
|---|--|
| <p><b>Dr. Balram Bhargava</b><br/>Professor of Cardiology<br/>All India Institute of Medical Sciences<br/>New Delhi.</p>  | <p><b>Dr. C.N. Manjunath</b><br/>Director,<br/>Jayadeva Institute of Cardiovascular<br/>Sciences &amp; Research, Bengaluru.</p>                                      |
| <p><b>Dr. Prem Pais</b><br/>Professor of Medicine<br/>Division of Clinical Research &amp; Training<br/>St. John's Research Institute<br/>Former Dean, St. John's Medical College<br/>Bengaluru.</p> | <p><b>Dr. S. Thanikachalam</b><br/>Professor Emeritus in Cardiology<br/>Chairman &amp; Director<br/>Cardiac Care Centre<br/>Sri Ramachandra University, Chennai.</p> |

## RESEARCH AREA PANEL ON STROKE

| Chairperson   | Member Secretary   |
|---|--|
| <p><b>Dr. Kameshwar Prasad</b><br/>Professor &amp; Head, Department<br/>of Neurology &amp; Director, Clinical<br/>Epidemiology Unit, AIIMS<br/>New Delhi.</p> | <p><b>Dr. A. Nandakumar</b> (till May 24, 2016)<br/>Director-in-charge</p> <p><b>Dr. Prashant Mathur</b> (from May 25, 2016)<br/>Director<br/>National Centre for Disease Informatics<br/>and Research, Bengaluru.</p> |

### Members

|   |   |
|---|---|
| <p><b>Dr. Shyamal Kumar Das</b><br/>Professor and Head, Department of<br/>Neurology and Neurogenetics, Bangur<br/>Institute of Neuroscience and Institute<br/>of Post-graduate Medical Education and<br/>Research, Kolkata.</p> | <p><b>Dr. R. Kirthi Vasan</b><br/>Ex Professor of Neurology<br/>Amrita Institute of Medical Sciences<br/>Kochi.</p>           |
| <p><b>Dr. B. Rajan</b><br/>Chief Radiologist and Ultrasonologist<br/>Mahaveer Jain Hospital<br/>Bengaluru.</p>  | <p><b>Dr. S.G. Srikanth</b><br/>(Ex Professor of Radiology<br/>NIMHANS, Bengaluru)<br/>Banashankari 2nd Stage, Bengaluru.</p> |

## INSTITUTIONAL ETHICS COMMITTEE

| Chairperson  | Member Secretary   |
|--|--|
| <p><b>Dr. R. N. Visweswara</b><br/>Consultant-Pathology<br/>Anugraha, Second A Cross<br/>Girinagar I Phase, Bengaluru.</p> | <p><b>Dr. Sukanya R</b><br/>Scientist D<br/>National Centre for Disease Informatics<br/>and Research, Bengaluru.</p> |

### Members

|  |  |  |
|--|--|--|
| <p><b>Dr. Manjulika Vaz</b><br/>Lecturer, Health and<br/>Humanities Division<br/>St. John's Research<br/>Institute<br/>Koramangala, Bengaluru.</p>             | <p><b>Prof Shamnad Basheer</b><br/>Ex-Ministry of HRD<br/>Increasing Diversity by<br/>Increasing Access (IDIA)<br/>Bengaluru.</p>          | <p><b>Dr. Janet Parameshwar</b><br/>Social Welfare Officer<br/>Kidwai Memorial Institute<br/>of Oncology Bengaluru.</p>  |
| <p><b>Mr. B. S. Kumar</b><br/>Director, IT Centre<br/>ETDC Campus<br/>Standardisation<br/>Testing and Quality<br/>Certification Directorate<br/>Bengaluru.</p> | <p><b>Dr. Sanjay A Pai</b><br/>Consultant Pathologist and<br/>Head<br/>Columbia Asia Referral<br/>Hospital<br/>Malleswaram, Bengaluru.</p> | <p><b>Dr. Shashank Garg PhD</b><br/>Principal Architect<br/>IIMB Digital Innovation<br/>Lab, Indian Institute<br/>of Management<br/>Bannerghatta Road<br/>Bengaluru.</p> |
| <p><b>Dr. Elizabeth Vallikkad</b><br/>Professor-Gynaecologic<br/>Oncology<br/>St John's Medical College<br/>Bengaluru.</p>                                     | <p><b>Dr. Sarasu Esther<br/>Thomas</b><br/>Associate Professor<br/>National Law School of<br/>India University (NLSIU)<br/>Bengaluru.</p>  | <p><b>Dr. Vishal Rao</b><br/>Head &amp; Neck Surgeon<br/>HCG Institute of<br/>Oncology Speciality<br/>Centre Bengaluru.</p>  |
| <p><b>Mrs. F.S. Roselind</b><br/>Scientist D<br/>National Centre for Disease Informatics<br/>and Research, Bengaluru.</p>                                      | <p><b>Dr. Meesha Chaturvedi</b><br/>Scientist C<br/>National Centre for Disease Informatics<br/>and Research, Bengaluru.</p>               |  |

## ADVISORY COMMITTEE ON RESEARCH ETHICS

| Chairperson  | Member Secretary   |
|--|--|
| <b>Dr. Vasantha Muthuswamy</b><br>Senior Deputy Director General (Retd.),<br>ICMR and President, Forum for Ethics<br>Review Committees in India, Coimbatore<br>Tamil Nadu. | <b>Dr. Roli Mathur</b><br>Scientist E and Head, ICMR Bio-ethics<br>Unit, National Centre for Disease<br>Informatics and Research, Bengaluru. |

### Members

|  |  |   |
|--|--|---|
| <b>Dr. S D Seth</b><br>Chair in Clinical Pharmacology and<br>Advisor, Clinical Trials Registry, ICMR<br>New Delhi. | <b>Dr. Nandini K Kumar</b><br>Former Deputy Director General, Senior<br>Grade (ICMR), Adjunct Visiting Professor<br>Kasturba Medical College, Manipal. |   |
| <b>Dr. N K Arora</b><br>Executive Director<br>The INCLEN Trust<br>International<br>New Delhi.                      | <b>Dr. Urmila Thatte</b><br>Prof and Head<br>Department of Clinical<br>Pharmacology<br>Seth GS Medical College and KEM<br>Hospital, Mumbai.            | <b>Dr. Vijay Kumar</b><br>Scientist 'G' & Head<br>Division of Basic<br>Medical Sciences<br>ICMR, New Delhi. |

## CENTRAL ETHICS COMMITTEE ON HUMAN RESEARCH (CECHR)

| Chairperson  | Member Secretary   |
|--|--|
| <p><b>Dr. P. N. Tandon</b><br/>1, Jagriti Enclave, Vikas Marg<br/>New Delhi -110092.</p> | <p><b>Dr. Roli Mathur</b><br/>Scientist E and Head, ICMR Bio-ethics<br/>Unit, National Centre for Disease<br/>Informatics and Research, Bengaluru.</p> |

### Members

|  |   |
|--|---|
| <p><b>Late Dr. B. N. Dhawan</b><br/>Ex-Director<br/>Central Drug Research Institute<br/>3, Ram Krishna Marg, Faizabad Road<br/>Lucknow - 226 007-01.</p>   | <p><b>Dr. Vinod K. Paul</b><br/>Professor<br/>Division of Neonatology<br/>Department of Pediatrics<br/>AllIMS, New Delhi - 110029.</p>                                |
| <p><b>Dr. (Mrs) Mira Shiva</b><br/>HOD, Public Policy<br/>Tong Swasthya Bhawan, 40, Institutional Area<br/>South of IIT, Delhi-110016.</p>   | <p><b>Lt. Gen. D. Raghunath</b><br/>246, 2<sup>nd</sup> Main Road<br/>7th Block, Jayanagar<br/>Bengaluru- 560070.</p>   |
| <p><b>Dr. Vasantha Muthuswamy</b><br/>Senior Deputy Director General (Retd.)ICMR<br/>and President, Forum for Ethics Review<br/>Committees in India, A-101, Manchester<br/>Regent, Coimbatore Tamil Nadu – 641037.</p> | <p><b>Prof. (Dr) N R Madhava Menon</b><br/>‘REMAMADHAVAM’<br/>Maniyashri Temple West, Post Office<br/>Maravanthuruthu Vaikom, Kottayam<br/>(Kerala) – 686608.</p>     |
| <p><b>Dr. P. S. S. Sundar Rao</b><br/>Consultant, Biostatistics and Res.<br/>Methodology<br/>88, 4<sup>th</sup> Cross, Kuvempu Layout, Gubbi Cross<br/>Kothanur, Bengaluru 560 077.</p>                                | <p><b>Dr. C. A. K. Yesudian</b><br/>C-503, Runwal Centre<br/>Govandi Station Road, Deonar<br/>Mumbai – 400088.</p>  |
| <p><b>Dr. Sunil K. Pandya</b><br/>11, Shanti Kutir, Marine Drive<br/>Mumbai.</p>   | <p><b>Dr. G. Padmanabhan</b><br/>Emeritus Scientist &amp; Honorary professor<br/>Indian institute of science<br/>Bengaluru 560 012.</p>                               |
| <p><b>Dr. Amar Jesani</b><br/>Editor, Indian Journal of Medical Ethics<br/>310, Prabhu Darshan, 31 Swatantra Sainik<br/>Nagar, Amboli, Andheri West<br/>Mumbai 400058.</p>   | <p><b>Dr. N. Sarojini</b><br/>Sama- Resource Group for Women &amp; Health<br/>B-45, 2<sup>nd</sup> Floor, Main Road Shivalik<br/>Malviya Nagar, New Delhi-110017.</p> |
| <p><b>Dr. K.N. Chaturvedi</b><br/>Former Law Secretary<br/>C-41, Pkt-7, KendriyaVihar, Sector-82<br/>Noida 201306.</p>   | <p><b>Dr. Amita Singh</b><br/>Professor, Centre for the Study of Law and<br/>Governance, Jawaharlal Nehru University<br/>ArunaAsaf Ali Marg, New Delhi 110067.</p>    |
| <p><b>Sh. Sanjiv Datta</b><br/>Former Financial Advisor<br/>151, City View Apartments<br/>Plot 119, Sector-35, Noida – 201301 (UP).</p>  | <p><b>Dr. Vijay Kumar</b><br/>Scientist G and Head<br/>Division of BMS, ICMR<br/>New Delhi – 110029.</p>  |

## NCDIR STAFF

### List of Staff Members (April 2016 - March 2017)

| Sl. No.                     | Name                     | Designation                            |
|-----------------------------|--------------------------|--|
| <b>Scientific Staff</b>     |                          |  |
| 1                           | Dr. A. Nandakumar        | Director-in-charge (till May 24, 2016) |
| 2                           | Dr. Prashant Mathur      | Director                               |
| 3                           | Dr. Roli Mathur          | Scientist - E                          |
| 4                           | Dr. Sathya Prakash M     | Scientist - D                          |
| 5                           | Mrs. F S Roselind        | Scientist - D                          |
| 6                           | Dr. Sukanya R            | Scientist - D                          |
| 7                           | Dr. Meesha Chaturvedi    | Scientist - C                          |
| 8                           | Mr. K Vaitheeswaran      | Scientist - C                          |
| 9                           | Mrs. Priyanka Das        | Scientist - C                          |
| 10                          | Mr. Sudarshan K L        | Scientist - C                          |
| 11                          | Mr. Sathish Kumar K      | Scientist - B                          |
| 12                          | Mr. Vinay Urs K S        | Scientist - B                          |
| 13                          | Dr. Debjit Chakraborty   | Scientist - B                          |
| 14                          | Mr. V Raju Naik          | Scientist - B                          |
| <b>Technical Staff</b>      |                          |  |
| 15                          | Mr. Sreerama             | Technical Assistant                    |
| 16                          | Mrs. K R Chandrika       | Technical Assistant                    |
| 17                          | Mr. N Sureshkumar        | Technical Assistant                    |
| 18                          | Mr. Monesh B Vishwakarma | Technical Assistant                    |
| 19                          | Mr. Stephen S            | Technical Assistant                    |
| <b>Administrative Staff</b> |                          |  |
| 20                          | Mr. N M Ramesha          | Administrative Officer (Jr. Grade)     |
| 21                          | Mr. C Somasekhar         | Accounts Officer (Jr. Grade)           |
| 22                          | Ms. Kaveri M Kumbhar     | Assistant                              |
| 23                          | Mrs. Latha V             | Lower Division Clerk                   |
| 24                          | Mr. Harish Siddaraju     | Lower Division Clerk                   |
| 25                          | Mr. M Rajendra           | Driver                                 |
| 26                          | Mr. D N Narayanswamy     | Multi-Tasking Staff (General)          |
| 27                          | Mr. Ramachandraiah H B   | Multi-Tasking Staff (General)          |
| 28                          | Mr. Rajesh Kumar M       | Multi-Tasking Staff (General)          |

## Project Staff

| Sl. No | Name                       | Designation                               |
|--------|----------------------------|---|
| 1      | Mr. Anish John             | Research Scientist I                      |
| 2      | Dr. Bhoomika Bajaj Bhalla  | Scientist - B                             |
| 3      | Dr. Rajib Kishore Hazam    | Research Associate                        |
| 4      | Dr. Kalyani Thakur         | Research Associate                        |
| 5      | Mr. Vijay Kumar D D        | Programmer                                |
| 6      | Mrs. Sina K Vivekanandan   | Programmer                                |
| 7      | Mr. Manju M                | Programmer                                |
| 8      | Mr. Nitin Agarwal          | Programmer                                |
| 9      | Mr. Tabrez Ahmed           | Programmer                                |
| 10     | Ms. R Janani Surya         | Statistician                              |
| 11     | Mr. Thillai Govindarajan C | Statistician                              |
| 12     | Mr. N Vinodh               | Statistician                              |
| 13     | Ms. Remya M                | Project Technical Officer (Social Worker) |
| 14     | Ms. N Sathya               | Project Technical Officer (Statistics)    |
| 15     | Ms. S P Jothi Meenakshi    | Project Technical Officer (Statistics)    |
| 16     | Ms. Amulya R               | Computer Programmer (B)                   |
| 17     | Mr. Shivamurthy N          | Computer Programmer (B)                   |
| 18     | Mrs. R Shabeen Taj         | Project Admin. Assistant                  |
| 19     | Ms. Kamalamma              | Data Entry Operator (B)                   |
| 20     | Mr. Iyyappan C             | Data Entry Operator (B)                   |
| 21     | Ms. Jayanthi B K           | Data Entry Operator (A)                   |
| 22     | Mr. Munireddy N            | Multi-Tasking Staff                       |

## INTRODUCTION AND ACHIEVEMENTS

### Introduction

More than thirty years' journey of National Cancer Registry Programme (NCRP) has led to its enrichment and expansion into different parts of the country and also culminated in the establishment of a permanent institute of Indian Council of Medical Research (ICMR), National Centre for Disease Informatics and Research (NCDIR) in 2011 in Bengaluru. NCDIR has a very high potential of leading public health informatics as well as research particularly on cancer, diabetes, cardiovascular diseases, stroke and other non-communicable diseases.

### Achievements 2016 - 17

1. Publication of Consolidated Report of Population Based Cancer Registries 2012 - 14 covering around 10% of the population of India across 27 PBCRs including three new ones (Naharlagun and Pasighat from Arunachal Pradesh and Patiala from Punjab) released in the Workshop on Dissemination of Cancer Registry Report (2012 - 14) held on May 18, 2016 at ICMR headquarters under the Chairmanship of DG, ICMR.
2. Publication of Consolidated Report of Hospital Based Cancer Registries 2012 - 14 including the data from nine newer HBCRs that have contributed data without financial assistance using HBCR-DM software.
3. Publication of ICMR - WHO Report on Consultation on "National Ethical Guidelines for Biomedical and Health Research involving Human Participants, 2016 - 17".
4. The following States have issued Administrative Order for mandatory reporting of cancer cases during the year-
  - a. Gujarat on 20<sup>th</sup> May 2016
  - b. Manipur on 22<sup>nd</sup> February 2017.
5. Development of e-MoR Software to improve the medical certification of cause of death information in cancer registry hospitals and other hospitals.

## NCDIR NETWORK

| Sl. No. | Projects and Software  | Centres Registered |
|---------|--|--------------------|
|         | <b>Long Term Projects</b>  |                    |
| 1       | Population Based Cancer Registries (PBCR)  | 31                 |
| 2       | Hospital Based Cancer Registries (HBCR) including Regional Cancer Centres                | 29                 |
| 3       | Patterns of Care and Survival Studies (including 5 HBCRs)                                | 38                 |
| 4       | HBCR-Data Management Software including Centres from Karnataka Cancer Registry Programme | 145                |
| 5       | Pathology Software Module  | 132                |
| 6       | Radiotherapy Software Module   | 41                 |
| 7       | Medical Oncology Software Module   | 25                 |
| 8       | Surgical Oncology Software Module  | 30                 |
|         | <b>Short Term Projects (Ongoing)</b>   |                    |
| 9       | Development of an Atlas of Cancer in Haryana State                                       | 127                |
|         | <b>Total</b>   | <b>598</b>         |
|         | <b>Short Term Projects (Completed)</b>   |                    |
| 10      | Development of an Atlas of Cancer in Punjab State  | 150                |



## COMPLETED PROJECTS

## DEVELOPMENT OF AN ATLAS OF CANCER IN PUNJAB STATE (PCA)

The project on “Development of an Atlas of Cancer in Punjab State” was started in the year 2011 and continued till 2015 in order to make an assessment of patterns of cancer in parts of Punjab state under the National Cancer Registry Programme (NCRP) of the Indian Council of Medical Research (ICMR). Knowledge on patterns of cancer is important to know as to which type of cancer is occurring where and if possible how much and to what extent. This information will provide a background to search answers to questions related to causation of cancer, a baseline for undertaking / monitoring and evaluation of cancer control measures, and an environment for administering optimum care and measuring outcome. Under this project, a cost-effective design and plan using advances in modern electronic information technology was used to collect and process relevant data on cancer and wherever possible it was also envisaged to calculate estimates of cancer incidence.

Medical colleges, pathology labs, civil hospitals and individual oncologists throughout the state of Punjab were contacted for their interest to collaborate in the project. Those who responded were provided with core forms for collecting basic information (mainly patient identification details including area of living, site and morphology of tumour) and provided guidelines for collecting this information on all malignant cases reported. Visits were made to these potential collaborating centres and their need for support was assessed depending on the infrastructure and average number of malignancies reported per annum and the data was collated. Training workshops were held in different regions of the state. Principles of cancer registration, data collation, transmission and fundamentals of epidemiology constituted the thrust areas of training at the workshops. There was a close collaboration with the state government.

Collaborating centres were given an individual login-ID and password with detailed instructions on entering the core patient information and steps for onward transmission. Data was also received from Mukh Mantri Punjab Cancer Raahat Kosh Scheme (MMPCKRS) patients. Several detailed checks were done on the data so as to meet international standards. The regular accepted measures by cancer registries for analysis, tabulation and incidence rates were followed.

## Workshops and Meetings Held:

| Date             | Venue  | Meeting / Workshop   |
|------------------|--|--|
| 7- 8 June 2011   | Government Medical College, Patiala  | Inaugural Workshop   |
| 17 December 2011 | Baba Farid University of Health Sciences - Guru Gobind Singh Medical College, Faridkot | Meeting cum Workshop   |
| 12 June 2012     | Shri Guru Ram Das (SGRD) Institute of Medical Sciences and Research, Amritsar          | Training cum Orientation Programme   |
| 13 June 2012     | Jalandhar  | Training cum Orientation Programme   |
| 14 June 2012     | Mohan Dai Oswal Multispeciality and Cancer Hospital, Ludhiana                          | Training cum Orientation Programme   |
| 7 November 2012  | Bathinda, Punjab   | Training cum Orientation Programme   |
| 15 April 2013    | Chandigarh   | Meeting called by Smt. Vinni Mahajan, Principal Secretary, Department of Health & Family Welfare, Chandigarh |

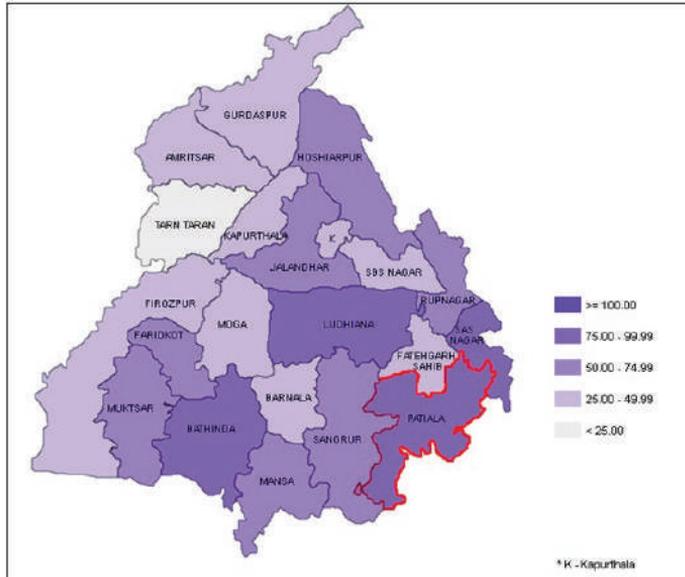
There were a total of 33,940 cases from 29 centres including the cancer registries under the NCRP and other functioning cancer registries.

The district was taken as a unit for calculation of incidence rates. The advantage of using the district as a unit, was that these are reasonably well demarcated geographic areas where the five-year age group population is available from the Census of India publications. Thus the age adjusted incidence rates per 100,000 population were calculated for each district. The district wise incidence rates were compared with the incidence rates of the regular Population Based Cancer Registries (PBCRs) under the NCRP.

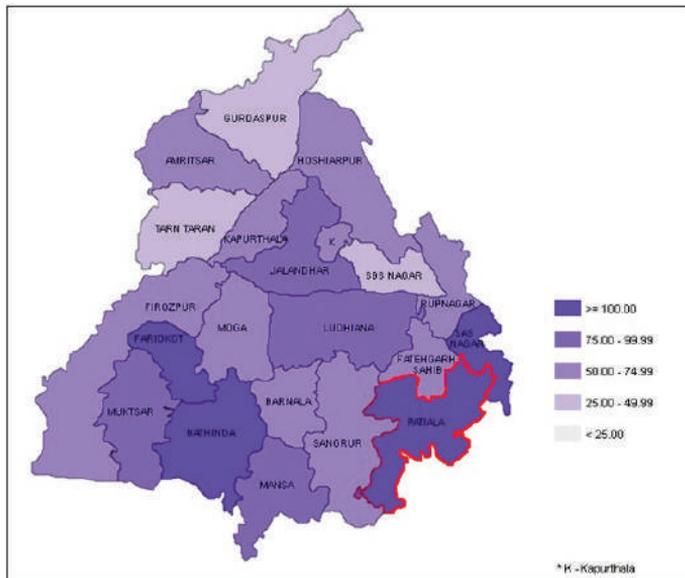
For all sites of cancer put together, in both males and females, there were five districts (Bathinda, Mohali, Ludhiana, Faridkot and Mansa) that had incidence rates higher than that of Patiala PBCR under NCRP. None of the districts showed higher rates than that seen in North East PBCRs for both sexes, but the rates in the above five districts were comparable with that of other PBCRs in the metros of India. Oesophageal cancer in males and females was an important leading site in many districts and was one of the five leading sites in females. However, the incidence rate of this cancer in both sexes was much lower than that seen in the North Eastern states and in males it was lower than that in Bengaluru or Ahmedabad – urban. In females, the corresponding incidence rate of oesophageal cancer was higher (8.9 versus 7.5) than that in Bengaluru females who had the highest incidence among all PBCRs other than those in the North East.

## Districtwise Distribution of Age Adjusted Incidence Rate (AAR) - All Sites (ICD-10: C00-C96)

### All Sites - Males

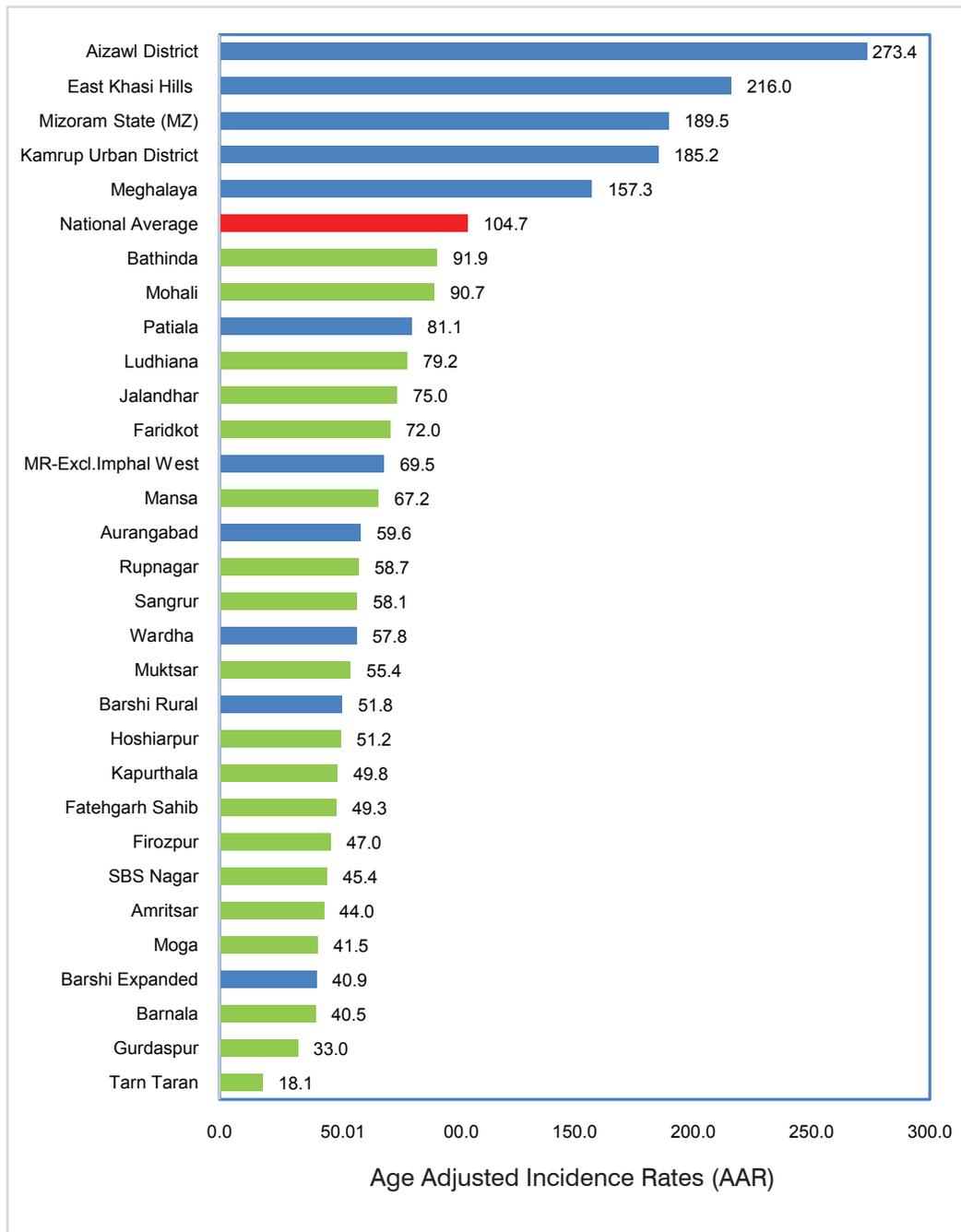


### All Sites - Females

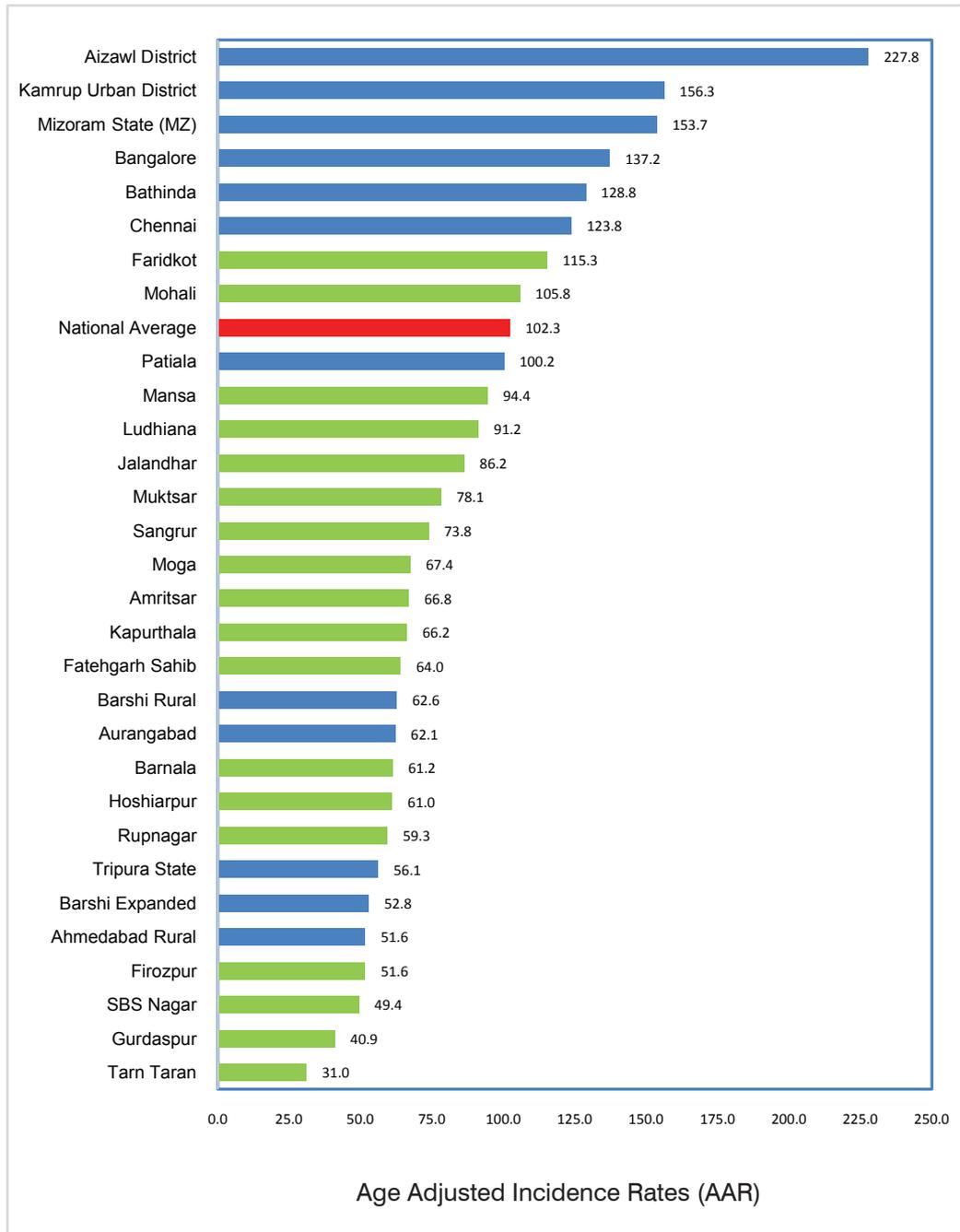


The incidence rates of multiple myeloma along with other lymphoid and haemopoietic malignancies appeared to be higher in some districts of Punjab compared to that seen in other PBCRs.

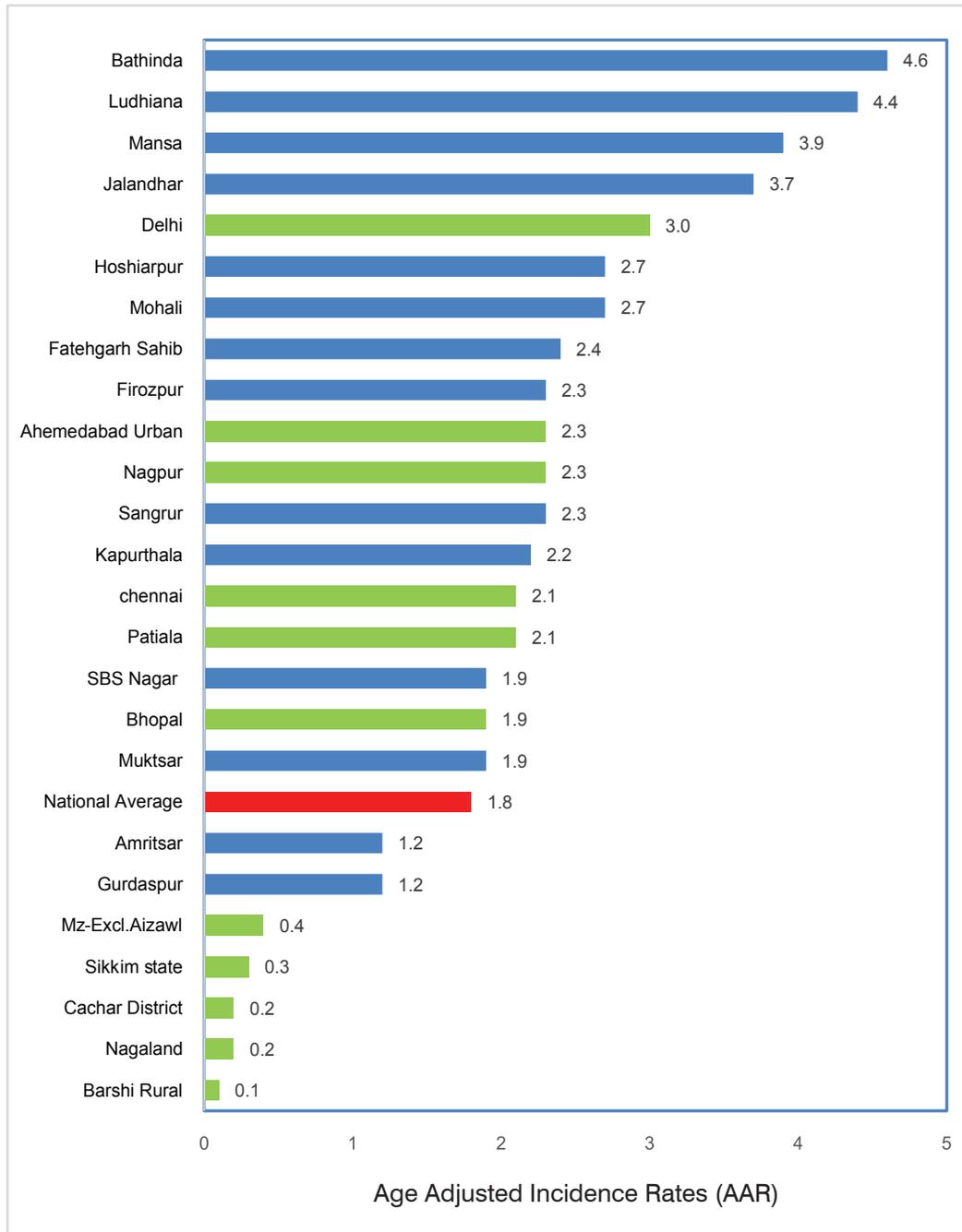
## Districtwise Comparison of AAR with that of PBCRs (2009 - 2011) under NCRP All Sites (C00-96) - (2012 - 2013) - Males



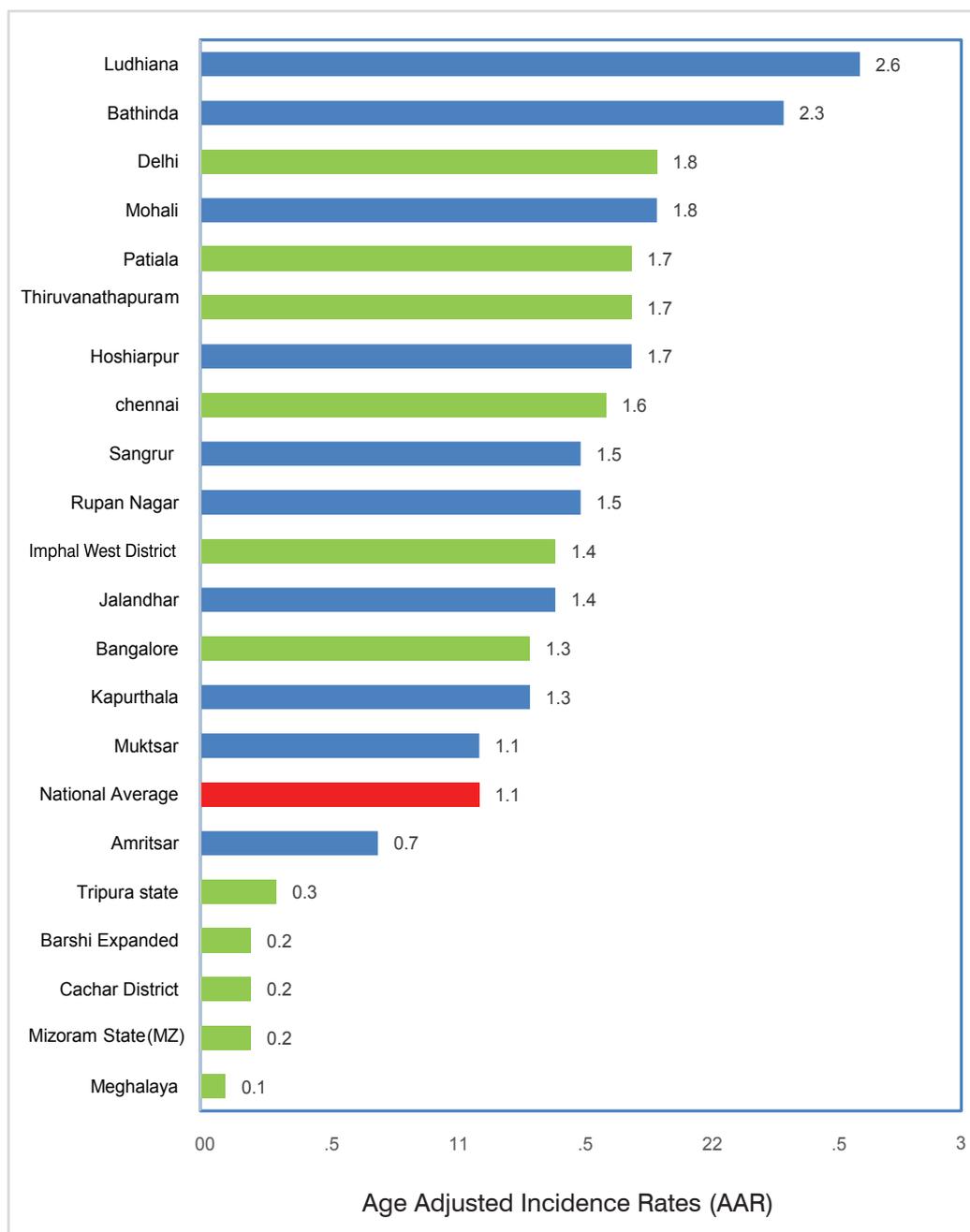
## Districtwise Comparison of AAR with that of PBCRs (2009 - 2011) under NCRP All Sites (C00-96) - (2012 - 2013) - Females



## Districtwise Comparison of AAR with that of PBCRs (2009 - 2011) under NCRP Lymphoid Leuk.(C91) - (2012 - 2013) - Males



## Districtwise Comparison of AAR with that of PBCRs (2009 - 2011) under NCRP Lymphoid Leuk. (C91) - (2012 - 2013) - Females



Some of the other sites of cancer that showed higher or comparably high incidence rates with the highest seen in other PBCRs in India are: in males: Penile cancer (Faridkot, Bathinda), Prostate (Jalandhar), Urinary Bladder (Kapurthala, Jalandhar) and Brain (Mohali, Mansa); in females: Breast (Bathinda, Mohali), Vagina (Bathinda, Ludhiana), Ovary (Mohali) and Brain (Moga and Mohali).

## **Verification of completeness of data obtained through Punjab Cancer Atlas (PCA) through a survey with the additional objective of knowing the magnitude of diabetes, CVDs, and stroke in the respective region.**

Under National Cancer Registry Programme (NCRP) of India, Punjab Cancer Atlas (PCA) was implemented between 2012 - 2015 with the implicit aim of knowing the incidence of various types of cancers in the state of Punjab. In 2015, during the month of March and April it was decided to verify the completeness of coverage of PCA in randomly selected three districts (Barnala, Bathinda and Mansa) in the Malwa region of Punjab state in India. Since the cluster of risk factors for diabetes, CVDs, stroke and cancer are almost identical and scarcity of data on the magnitude of first three diseases mentioned here, for the region in particular, country in general, it was decided to assess the magnitude of diabetes, CVDs, and stroke along with the verification of completeness of coverage of PCA.

A cross sectional sample survey was carried out in these three districts. The estimated population of Barnala in 2014 was 0.62 million (around 30.0% urban), Bathinda was 1.5 million (33.0% urban), and Mansa was 0.8 million (21.0% urban). In each district a target sample of 25,000 (around 5,000 families) was fixed. The sample size was arrived based on the reported prevalence of stroke in India which is 0.1% to 0.4%. Since, the prevalence is very low (0.1%) the absolute precision was taken as half of the prevalence value with ( $\alpha=5\%$ ) and allowing 10% drop out, the sample size was arrived at 16,731 per district. With a design effect of 1.5, the sample 'n' was 25,000 in each district. The study was approved by the Institutional Ethics Committee (IEC) of Rajendra Medical College, Patiala.

A structured questionnaire was used. The diseases considered were Type 1 diabetes, Type 2 diabetes, Rheumatic Heart Disease (RHD), Hypertension (HT), and Stroke (all the three districts). In addition to these diseases, in Mansa district magnitude of Ischemic Heart Disease (IHD), Myocardial Infarction (MI) (survivors/dead), Heart Failure (HF), Rheumatic Heart Disease (RHD), Arrhythmias, Congenital Heart Disease (Cong. HD), and Cancer were also assessed. The study looked into only diagnosed cases. For the diagnosis (Medical Record, Medication, and Doctor has told), date of diagnosis (Medical Record, Recall) the proof was sought. The information about the nature of health care facility and spending pattern were also collected. The deaths occurred in 2014 were

documented and it was ascertained whether they had diseases of interest for present study (including cancer in Mansa district). Cases diagnosed in 2014 were counted for calculating the incidence.

Total 74,585 individuals residing in 15,185 families were studied with a response rate of 81.6%.

**Table 1a: The Prevalence of Diabetes, CVDs<sup>1</sup>, Stroke and Cancer<sup>2</sup> in the Malwa Region of Punjab**

| Disease                      | Prevalence |                          |                          |
|------------------------------|------------|--------------------------|--------------------------|
|                              | n          | Crude (95% of CI)        | Age adjusted (95% of CI) |
| <b>Over all (n=74,585)</b>   |            |                          |                          |
| Type I diabetes              | 11         | 14.7 (7.4 - 26.4)        | 16.3 (6.0 - 26.5)        |
| Type II diabetes             | 1467       | 1966.9 (1868.4 - 2069.1) | 1853.3 (1761.2 - 1945.5) |
| RHD                          | 41         | 54.9 (39.4 - 74.6)       | 49.6 (34.3 - 64.9)       |
| HT                           | 2469       | 3310.3 (3183.1 - 3441.2) | 3042.9 (2927.1 - 3158.8) |
| Stroke                       | 163        | 218.5 (186.3 - 254.7)    | 202.4 (170.8 - 234.0)    |
| <b>Barnala (n = 25,985)</b>  |            |                          |                          |
| Type I diabetes              | 3          | 11.5 (2.4 - 33.7)        | 10.7 (0.01 - 23.0)       |
| Type II diabetes             | 463        | 1781.7 (1624.4 - 1950.1) | 1608.7 (1465.4 - 1751.9) |
| RHD                          | 16         | 61.6 (35.2 - 99.9)       | 55.3 (28.1 - 82.6)       |
| HT                           | 835        | 3213.4 (3002.3 - 3435.0) | 2839.3 (2652.3 - 3026.3) |
| Stroke                       | 43         | 165.5 (119.8 - 222.8)    | 155.5 (107.0 - 203.9)    |
| <b>Bathinda (n = 25,951)</b> |            |                          |                          |
| Type I diabetes              | 7          | 26.9 (10.8 - 55.6)       | 31.1 (6.8 - 55.3)        |
| Type II diabetes             | 474        | 1826.5 (1667.1 - 1996.9) | 1804.2 (1645.9 - 1962.5) |
| RHD                          | 12         | 46.2 (23.9 - 80.7)       | 43.6 (18.6 - 68.6)       |
| HT                           | 771        | 2970.9 (2767.8 - 3184.8) | 2830.9 (2637.1 - 3024.6) |
| Stroke                       | 32         | 123.3 (84.3 - 174.0)     | 113.7 (73.9 - 153.5)     |
| <b>Mansa (n = 22,649)</b>    |            |                          |                          |
| Type I diabetes              | 1          | 4.41 (1.0 - 24.6)        | 4.9 (0.01 - 14.6)        |
| Type II diabetes             | 530        | 2340.0 (2147.1 - 2545.4) | 2208.2 (2027.0 - 2389.3) |
| RHD                          | 13         | 57.4 (30.6 - 98.1)       | 51.5 (23.4 - 79.5)       |
| HT                           | 863        | 3810.3 (3564.7 - 4067.8) | 3516.3 (3292.2 - 3740.4) |
| Stroke                       | 88         | 388.5 (311.7 - 478.5)    | 358.5 (282.4 - 434.5)    |
| IHD                          | 31         | 136.9 (93.0 - 194.2)     | 128.8 (83.2 - 174.4)     |
| MI                           | 6          | 26.5 (9.7 - 57.6)        | 23.8 (4.6 - 42.9)        |
| HF                           | 105        | 463.6 (379.3 - 560.9)    | 429.2 (346.9 - 511.5)    |
| Arrhythmias                  | 37         | 163.4 (115.0 - 225.1)    | 152.8 (103.2 - 202.5)    |
| Cong. HD                     | 4          | 17.7 (4.8 - 45.2)        | 18.3 (0.01 - 36.6)       |
| Cancer                       | 37         | 163.4 (115.0 - 225.1)    | 152.2 (103.0 - 201.3)    |

<sup>1</sup> Prevalence of RHD, HT were assessed in all the three districts while in addition to that IHD, MI, HF, Arrhythmias, and Cong. HD were assessed in Mansa district, <sup>2</sup> Prevalence of cancer was assessed only in Mansa district.

**Table 1b: The Incidence of Diabetes, CVDs<sup>1</sup>, Stroke and Cancer<sup>2</sup> in the Malwa Region of Punjab (Cases diagnosed in 2014)**

| Disease                      | Overall Incidence |                              |                              |       | N   | n |
|------------------------------|-------------------|------------------------------|------------------------------|-------|-----|---|
|                              | n                 | Crude (95% of CI)            | Age adjusted (95% of CI)     |       |     |   |
| <b>Over all (n = 74,585)</b> |                   |                              |                              |       |     |   |
| Type I diabetes              | 3                 | <b>4.0</b> (1.0 - 11.7)      | <b>4.4</b> (0.01 - 9.4)      | 15396 | 3   |   |
| Type II diabetes             | 172               | <b>230.6</b> (197.5 - 267.7) | <b>214.7</b> (182.6 - 246.8) | 52351 | 172 |   |
| RHD                          | 5                 | <b>6.7</b> (2.2 - 15.6)      | 5.3 (0.6 - 9.9)              | 52351 | 5   |   |
| HT                           | 235               | <b>315.1</b> (276.1 - 357.9) | <b>286.2</b> (249.5 - 322.9) | 52351 | 234 |   |
| Stroke                       | 29                | <b>38.9</b> (26.0 - 55.8)    | <b>34.6</b> (21.9 - 47.3)    | 52351 | 29  |   |
| <b>Barnala (n = 25,985)</b>  |                   |                              |                              |       |     |   |
| Type I diabetes              | 1                 | <b>3.8</b> (1.0 - 21.4)      | <b>4.2</b> (0.01 - 12.4)     | 5049  | 1   |   |
| Type II diabetes             | 53                | <b>203.9</b> (152.8 - 266.7) | <b>182.1</b> (133.0 - 231.3) | 18566 | 53  |   |
| RHD                          | 1                 | <b>3.8</b> (1.0 - 21.4)      | <b>2.7</b> (0.01 - 8.0)      | 18566 | 1   |   |
| HT                           | 78                | <b>300.2</b> (237.3 - 374.5) | <b>264.1</b> (205.3 - 322.9) | 18566 | 78  |   |
| Stroke                       | 8                 | <b>30.8</b> (13.3 - 60.6)    | <b>28.9</b> (8.8 - 48.9)     | 18566 | 8   |   |
| <b>Bathinda (n = 25,951)</b> |                   |                              |                              |       |     |   |
| Type I diabetes              | 1                 | <b>6.5</b> (1.0 - 35.9)      | <b>4.1</b> (0.01 - 12.2)     | 5671  | 1   |   |
| Type II diabetes             | 60                | <b>231.2</b> (176.5 - 297.5) | <b>229.8</b> (171.6 - 288.0) | 17991 | 60  |   |
| RHD                          | 1                 | <b>6.5</b> (1.0 - 35.9)      | <b>3.1</b> (0.01 - 9.2)      | 17991 | 1   |   |
| HT                           | 80                | <b>308.3</b> (244.5 - 383.5) | <b>285.8</b> (222.8 - 348.9) | 17991 | 80  |   |
| Stroke                       | 6                 | <b>23.1</b> (8.5 - 50.3)     | <b>19.9</b> (3.7 - 36.2)     | 17991 | 6   |   |
| <b>Mansa (n = 22,649)</b>    |                   |                              |                              |       |     |   |
| Type I diabetes              | 1                 | <b>4.4</b> (1.0 - 24.6)      | <b>4.9</b> (0.01 - 14.6)     | 4676  | 1   |   |
| Type II diabetes             | 59                | <b>260.5</b> (198.4 - 335.9) | <b>242.7</b> (180.6 - 304.8) | 15794 | 59  |   |
| RHD                          | 3                 | <b>13.2</b> (2.7 - 38.7)     | <b>11.1</b> (0.01 - 23.6)    | 15794 | 3   |   |
| HT                           | 77                | <b>339.9</b> (268.4 - 424.7) | <b>312.9</b> (242.9 - 382.8) | 15794 | 76  |   |
| Stroke                       | 15                | <b>66.2</b> (37.1 - 109.2)   | <b>59.5</b> (29.1 - 89.8)    | 15794 | 15  |   |
| IHD                          | 4                 | <b>17.7</b> (4.8 - 45.2)     | <b>15.6</b> (0.2-31.0)       | 15794 | 4   |   |
| MI                           | 14                | <b>61.8</b> (33.8 - 103.7)   | <b>62.9</b> (28.0 - 97.8)    | 15794 | 14  |   |
| HF                           | 21                | <b>92.7</b> (57.4 - 141.7)   | <b>90.7</b> (51.9 - 129.6)   | 15794 | 21  |   |
| Arrhythmias                  | 6                 | <b>26.5</b> (9.7 - 57.6)     | <b>24.6</b> (4.8 - 44.3)     | 15794 | 5   |   |
| Cong. HD                     | 0                 | -                            | -                            | 15794 | 0   |   |
| Cancer                       | 19 (11)           | <b>83.9</b> (50.5 - 130.9)   | <b>47.7</b> (40.9 - 108.5)   | 15794 | 19  |   |

<sup>1</sup> Incidence of RHD, HT were assessed in all the three districts while in addition to that IHD, MI, HF, Arrhythmias, and Cong. HD were assessed in Mansa district, <sup>2</sup> Incidence of cancer was assessed only in Mansa district.

**Table 2: Comparison of Cancer Incidence obtained from the study with that of Punjab Cancer Atlas (PCA) in Mansa District**

| Year   | 2012   | 2013   | 2014   |
|--|--------|--------|--------|
| Estimated population   | 781247 | 789981 | 798816 |
| Total cancers - all sites (PCA)  | 562    | 696    | 618    |
| Incident cancer cases in the studied population                              | 17     | 21     | 19     |
| Incident cancer cases when extrapolated to the entire population of district | 586    | 732    | 670    |
| Study/PCA (%)  | 104.3  | 105.2  | 108.4  |

The survey showed high incidence and prevalence rates for type II diabetes mellitus, hypertension, stroke, and myocardial infarction. The study serves as a pilot to undertake larger surveys on chronic disease morbidities in the community and correlate with prevalence of risk factors – tobacco, alcohol, inappropriate diet, physical inactivity, overweight and obesity. Appropriate programs for risk factor reduction, early diagnosis, optimal management and rehabilitation are required to comprehensively address these major NCDs.

## ONGOING PROJECTS

## Population Based Cancer Registries

In 2016 - 2017, there were 31 Population Based Cancer Registries (PBCR) under National Cancer Registry Programme (NCRP). These registries collect data on cancer incidence and mortality from a defined geographical region and they submit data to the National Cancer Registry Programme for cleaning and analyzing the data. They represent different geographical regions in India covering approximately 10% of the Indian population.

### Completed work - 27 PBCRs

The data from 27 Population Based Cancer Registries (PBCRs) was analyzed and the “Three-year Report of Population Based Cancer Registries 2012 - 2014”, was released in May 2016. The report dealt with cancer incidence, the leading sites of cancer, tobacco related cancers, childhood cancers, the method of diagnosis, cancer rates for some sites of cancer and cancer mortality. The comparison of this data was also done with the data available in Cancer Incidence in Five Continents (CI 5 Vol - X) published by International Agency for Research on Cancer (IARC). The quality indices of the registries were looked into as per international norms. The trend of some sites of cancers over time was generated in addition to estimating and projecting the burden of cancer in the country till 2020. Three new PBCRs, Naharlagun and Pasighat from Arunachal Pradesh and Patiala from Punjab were included in the report for analysis.

The report can be accessed from <http://www.ncdirindia.org>

Some of the findings from the analysis of the data based on the 2012 - 2014 are as follows:

## Leading Sites of Cancer across 27 PBCRs

### Males

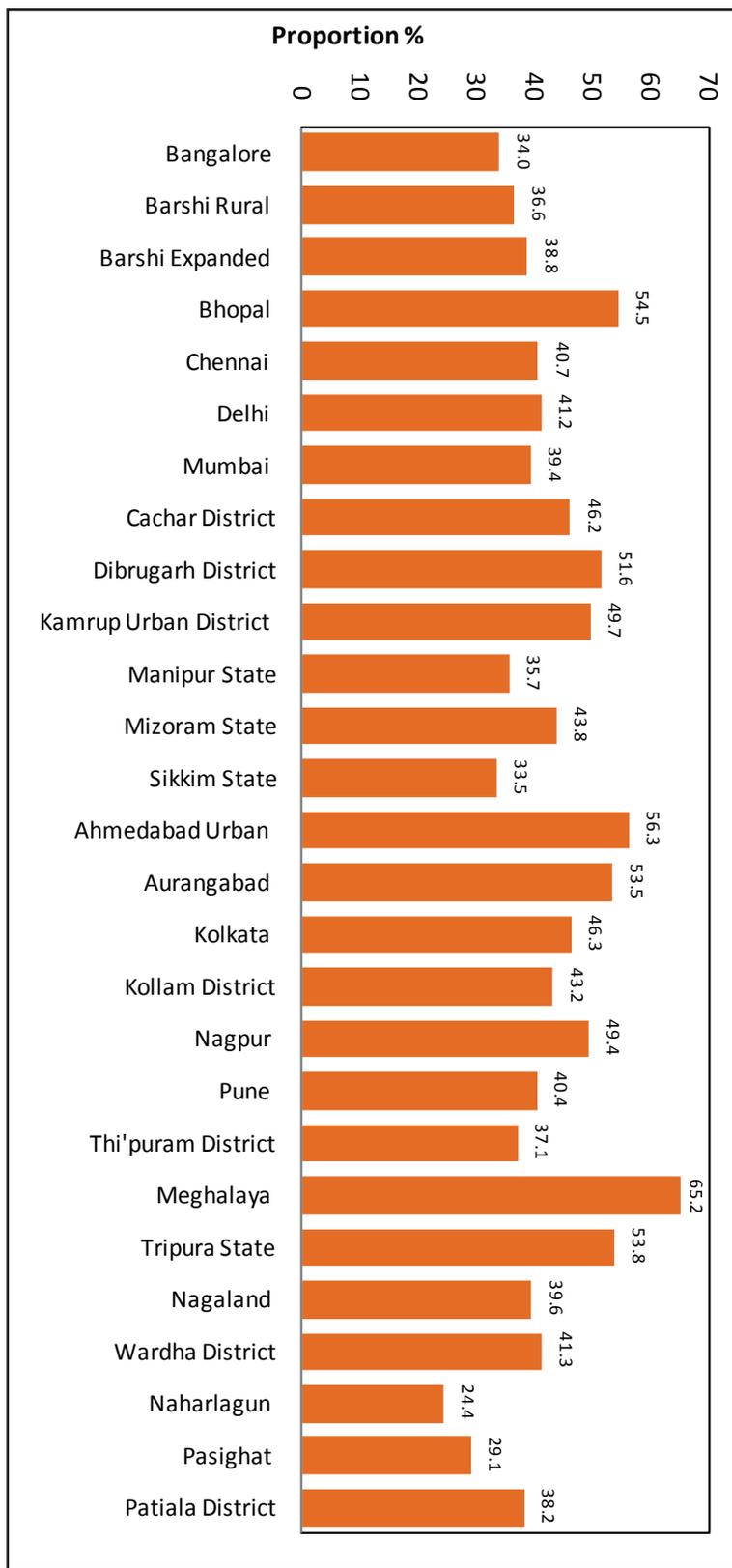
| Site (ICD10)            | Number of PBCRs | PBCR Name  |
|-------------------------|-----------------|--|
| Lung (ICD10:C33-C34)    | 10              | Bengaluru, Chennai, Delhi, Mumbai, Manipur State, Aurangabad, Kollam District, Kolkata, Thiruvananthapuram District, Tripura State |
| Mouth (ICD10:C03-C06)   | 7               | Barshi Rural, Barshi Expanded, Bhopal, Ahmedabad Urban, Nagpur, Pune, Wardha District  |
| Oesophagus (ICD10:C15)  | 5               | Cachar District, Dibrugarh District, Kamrup Urban, Meghalaya, Patiala District   |
| Stomach (ICD10:C16)     | 4               | Mizoram State, Sikkim State, Naharlagun, Pasighat  |
| Nasopharynx (ICD10:C11) | 1               | Nagaland   |

### Females

| Site (ICD10)             | Number of PBCRs | PBCR Name  |
|--------------------------|-----------------|--|
| Breast (ICD10:C50)       | 19              | Bengaluru, Bhopal, Chennai, Delhi, Mumbai, Cachar District, Dibrugarh District, Kamrup Urban, Manipur State, Sikkim State, Ahmedabad Urban, Aurangabad, Kolkata, Kollam District, Nagpur, Pune, Thiruvananthapuram District, Wardha District, Patiala District |
| Cervix Uteri (ICD10:C53) | 6               | Barshi Rural, Barshi Expanded, Mizoram State, Tripura State, Nagaland, Pasighat  |
| Oesophagus (ICD10:C15)   | 1               | Meghalaya  |
| Stomach (ICD10:C16)      | 1               | Naharlagun   |

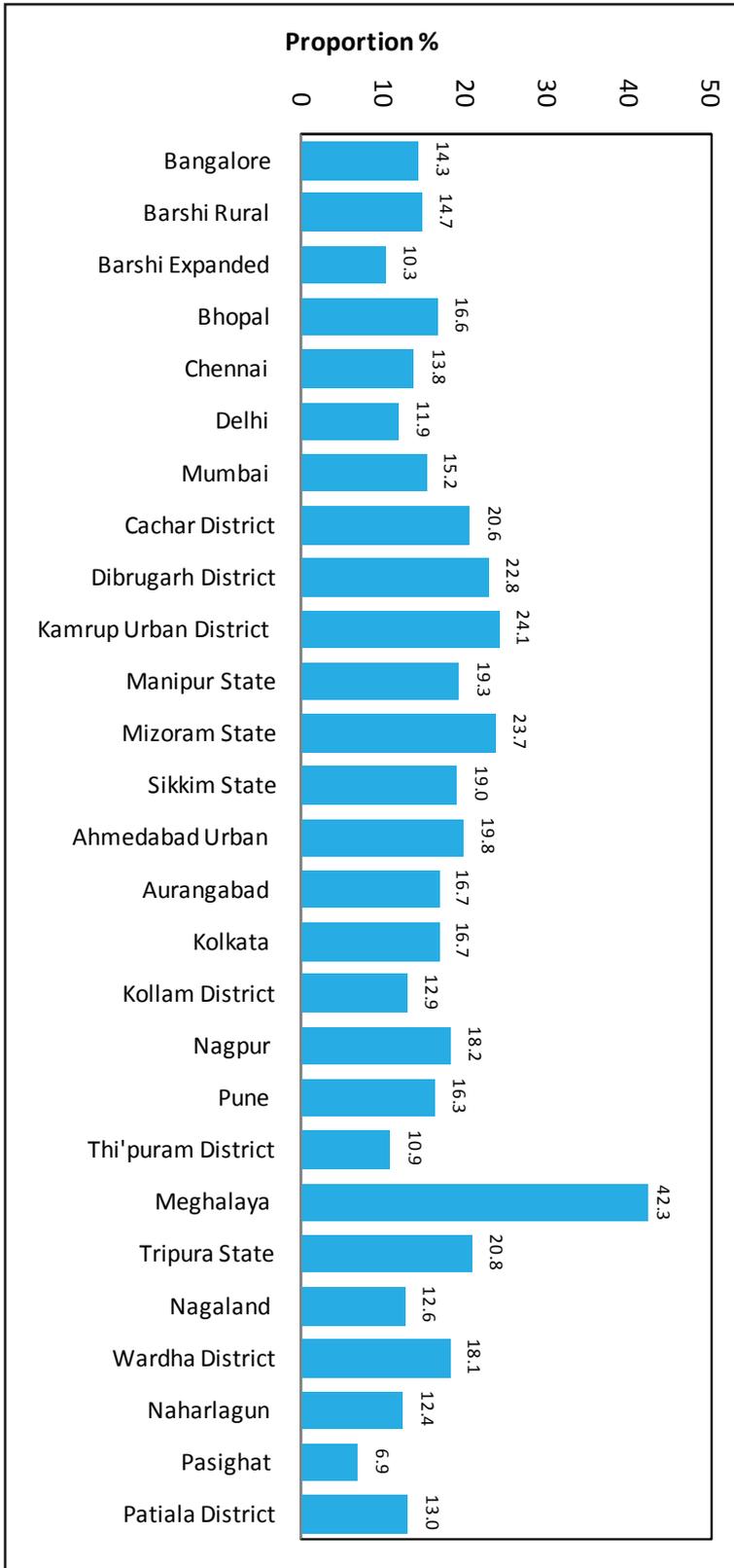
**Cancers associated with the use of Tobacco (2012 - 2014)**

**Males**



East Khasi Hills district of Meghalaya had the highest relative proportion with 69.5% and 45.0% for males and females respectively. Excluding the north east PBCRs, the highest proportion of cancers associated with the use of tobacco was observed in Ahmedabad Urban PBCR for both males (56.3%) and females (19.8%).

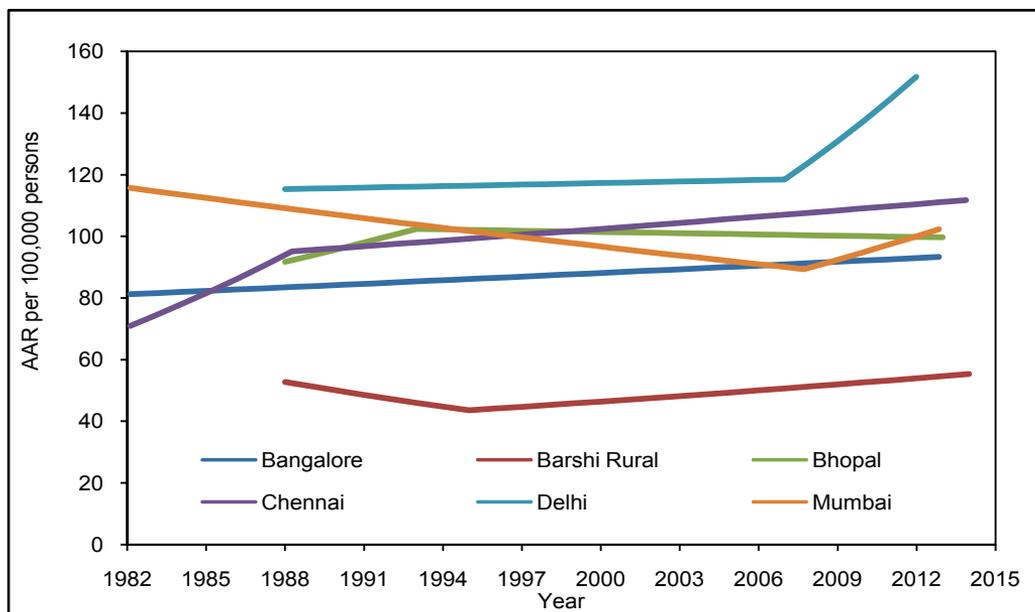
## Females



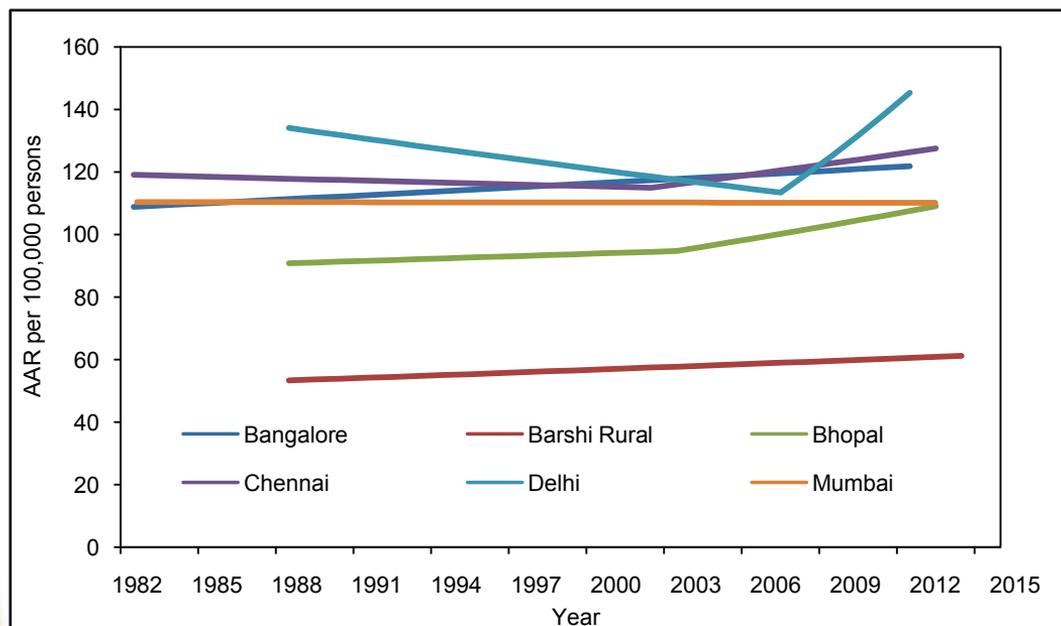
## Trends over Time (1982 - 2014)

The following graphs depict the trends of "All Sites of Cancers" for 6 PBCRs.

### All Sites (ICD10: C00-C97) – Males



### All Sites (ICD10: C00-C97) - Females



## Childhood Cancers

Among boys, the proportion of cancers in childhood relative to cancers of all ages varied from 0.7% in Nagaland PBCR to 5.4% in Delhi PBCR. Among girls, it ranged from 0.5% in East Khasi Hills District of Meghalaya to 3.5% in Naharlagun excluding Papum Pare district.

## Projection

Cancer trend and prediction analyses serves as surveillance tools in measuring and evaluating the introduction of targeted screening or early cancer detection programme for cancer control as well as for improving of health care services.

The number of new cancer cases expected to increase from 13.8 lakhs in the year 2015 to 17.3 lakhs in the year 2020.

## Projected Incidence of Cancer Cases in India for Selected Sites and Time Periods – Both Sexes

| ICD10   | Site Name    | 2015    | 2020    | ICD10       | Site Name        | 2015   | 2020   |
|---------|--------------|---------|---------|-------------|------------------|--------|--------|
| C00-C97 | All Sites    | 1388397 | 1734886 | C33-34      | Lung             | 106794 | 144351 |
| C01-02  | Tongue       | 60333   | 81200   | C50         | Breast (Females) | 134214 | 179790 |
| C03-06  | Mouth        | 89645   | 128451  | C53         | Cervix           | 97909  | 104060 |
| C12-13  | Hypopharynx  | 19700   | 20948   | C54         | Corpus Uteri     | 25395  | 37178  |
| C15     | Oesophagus   | 49059   | 53898   | C56         | Ovary            | 45231  | 59276  |
| C16     | Stomach      | 44998   | 54108   | C61         | Prostate         | 43049  | 61222  |
| C18     | Colon        | 37435   | 51906   | C67         | Urinary Bladder  | 26886  | 33608  |
| C19-20  | Rectum       | 36290   | 46427   | C70-72      | Brain            | 30629  | 32619  |
| C22     | Liver        | 36255   | 49844   | C82-85, C96 | NHL etc.         | 42273  | 51903  |
| C23-24  | Gall Bladder | 37561   | 55141   | C91         | Lymphoid Leuk.   | 20762  | 27709  |
| C32     | Larynx       | 33642   | 39636   | C92-94      | Myeloid Leuk.    | 24287  | 27201  |

After the release of the PBCR 2012 - 2014 Report, the following activities have been completed/ongoing.

1. PBCR 2012 - 2015 data of 28 PBCRs have been cleaned and analysed for the draft report presented at the 32<sup>nd</sup> Annual Review Meeting of NCRP at Kohima in November 2016. This was an interim report for analysing the partial data submitted by the registries to monitor the progress and data quality.

2. The PBCRs work is on surveillance mode and the data collection never stops. Each year's data is collected, submitted to NCDIR for cleaning and analysis. The same is repeated for the next year's data and so on. Several PBCRs data was received and analysed in the year 2016 - 2017 as follows.

| Registry                    | Completed   | Ongoing     | Registry         | Completed | Ongoing     |
|-----------------------------|-------------|-------------|------------------|-----------|-------------|
| Wardha District             | 2015        | 2016        | Patiala District | -         | 2015        |
| Aurangabad                  | 2015        | -           | Mizoram State    | -         | 2015        |
| Sikkim State                | 2015        | -           | Nagpur           | 2014      | -           |
| Meghalaya                   | 2015        | -           | Barshi Rural     | -         | -           |
| Pune                        | 2014 - 2015 | -           | Nagaland         | -         | -           |
| Kollam District             | 2015        | -           | Bhopal           | -         | 2014 - 2015 |
| Naharlagun                  | -           | 2015 - 2016 | Chennai          | -         | 2014        |
| Cachar District             | -           | 2015 - 2016 | Mumbai           | 2013      | 2014        |
| Dibrugarh District          | -           | 2015        | Barshi Expanded  | 2013      | 2014        |
| Pasighat                    | -           | 2015        | Ahmedabad Urban  | -         | 2014        |
| Thiruvananthapuram District | -           | 2015        | Kolkata          | -         | 2013        |
| Tripura State               | -           | 2015        | Bengaluru        | -         | 2013        |
| Manipur State               | -           | 2015        | Delhi            | -         | 2013        |
| Hyderabad District          | 2014        | 2015        | Ahmedabad Rural  | -         | 2012 - 2014 |
| Kamrup Urban District       | -           | 2015        |                  |           |             |

NCDIR encourages new PBCRs to join the NCRP family. In this period, two more PBCRs have been initiated. They are listed below:

1. National Institute of Cancer Prevention and Research (NICPR), Noida covering Gautam Budh Nagar (Uttar Pradesh) (funds sanctioned from 1<sup>st</sup> March 2017).
2. Cachar Cancer Hospital, Silchar covering the districts of Karimganj, Hailakandi and Dima Hassao (Assam) (funds sanctioned from 1<sup>st</sup> January 2017).

## HOSPITAL BASED CANCER REGISTRIES - PATTERNS OF CARE AND SURVIVAL STUDIES

Hospital Based Cancer Registries (HBCRs) collect information of cancer cases reported in a given hospital, regardless of where that person with cancer resides. HBCRs help in assessing cancer patient care in a given hospital and aid in hospital administration including the individual hospital's cancer control programmes. HBCRs also collect information pertaining to clinical stage, treatment and follow-up. Hospital registries help in planning and monitoring survival studies and clinical trials. In many instances, hospital registries contribute cases to the Population Based Cancer Registry in the area.

Due to the challenges in obtaining follow-up parameters, a separate study on Patterns of Care and Survival (POCSS) was undertaken by the National Cancer Registry Programme in the year 2006 for three major sites of cancer namely Breast, Cervix and Head & Neck Cancers.

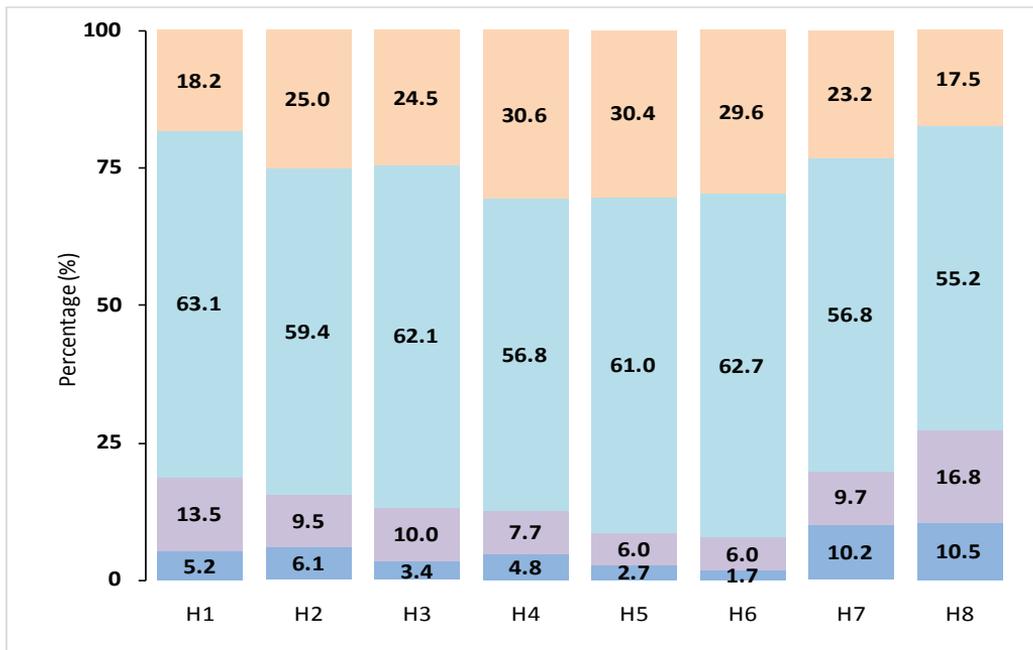
There are 29 Hospital Based Cancer Registries including the Regional Cancer Centres (funded directly by the Ministry of Health and Family Welfare, Government of India) under the network of National Cancer Registry Programme (NCRP) - NCDIR maximum of which are also providing data on Patterns of Care and Survival. In addition, the following collaborating centres are also providing data on POCSS.

| Sl. No | Centre Name  |
|--------|--|
| 1      | Amrita Institute of Medical Science, Kochi                   |
| 2      | Malabar Cancer Centre, Kannur                                |
| 3      | Rajiv Gandhi Cancer Institute and Research Centre, New Delhi |
| 4      | Medanta Cancer Institute, Gurgaon                            |
| 5      | Vydehi Institute of Medical Sciences, Bengaluru              |
| 6      | Mahavir Cancer Sansthan, Patna                               |

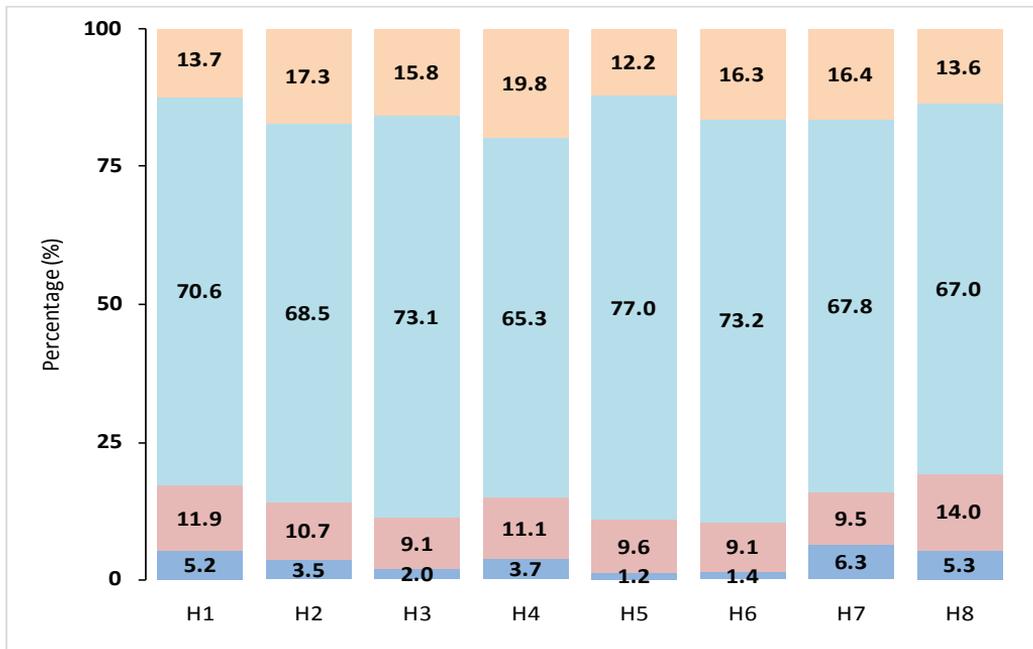
The Three-year Report of Hospital Based Cancer Registries for the years 2012 - 14 was released in the Workshop on Dissemination of Cancer Registry Report (2012 - 14) held on May 18, 2016 at ICMR headquarters under the Chairmanship of Director General, ICMR.

## Stack (100%) diagram showing Proportion of Cancer by Broad Age Groups

### Males

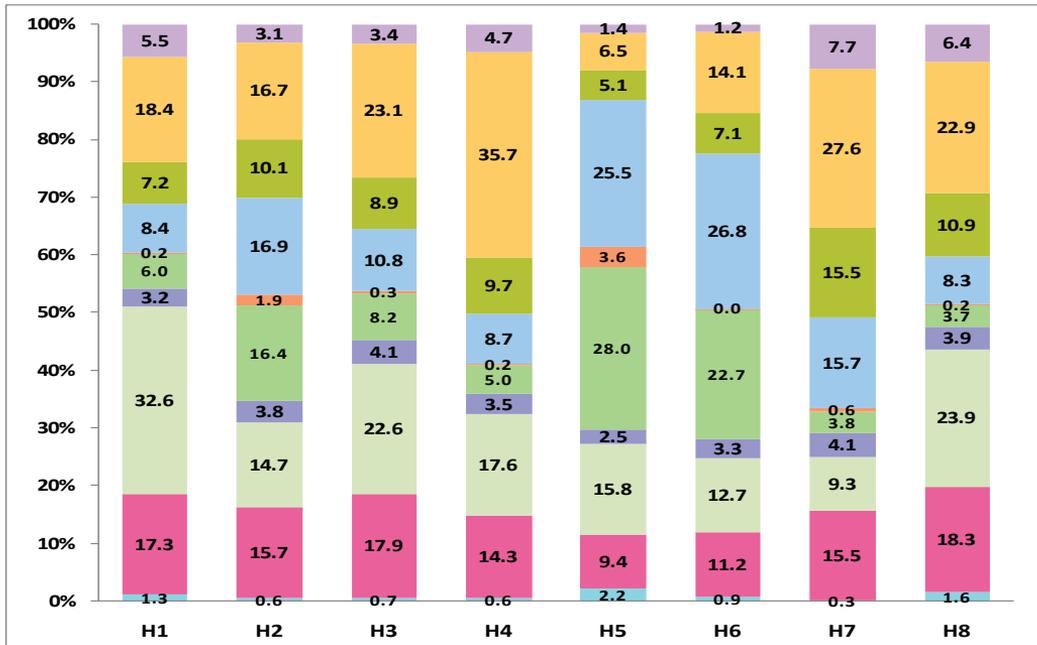


### Females

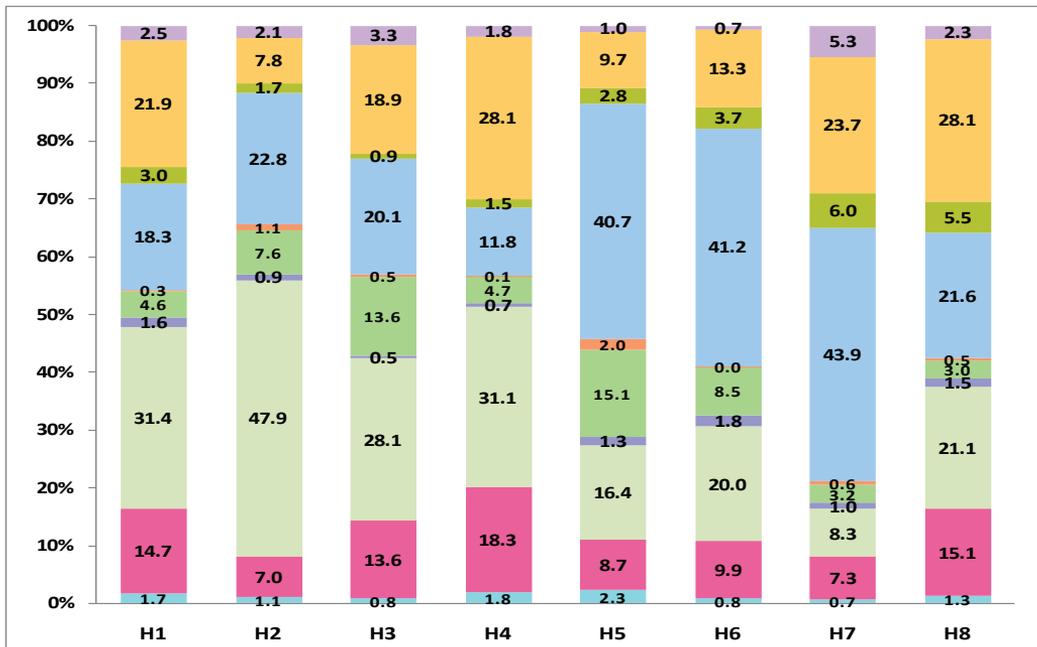


## Stack (100%) Diagram Showing Proportion of Specific Tobacco Related Sites Relative to All Tobacco Related Cancers

### Males

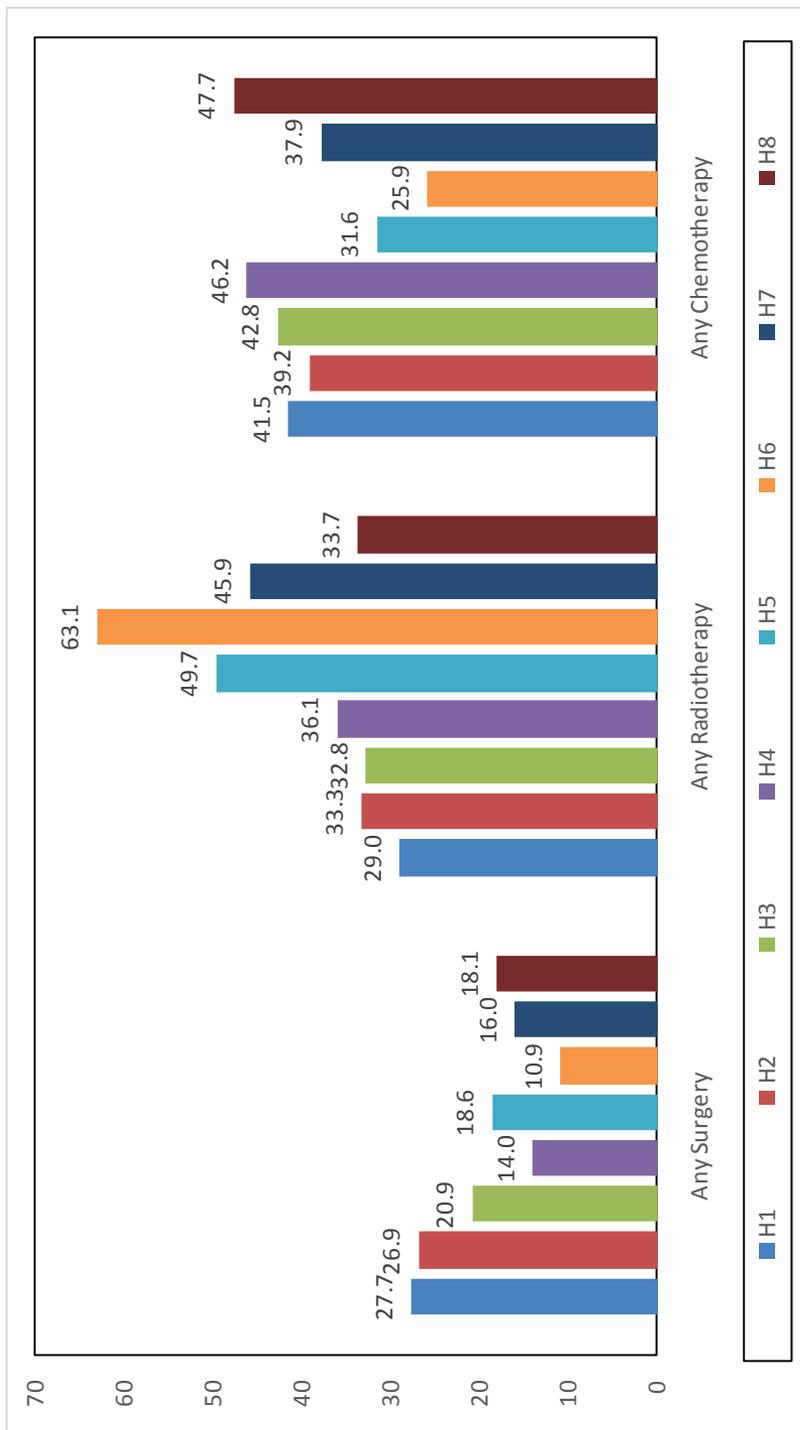


### Females

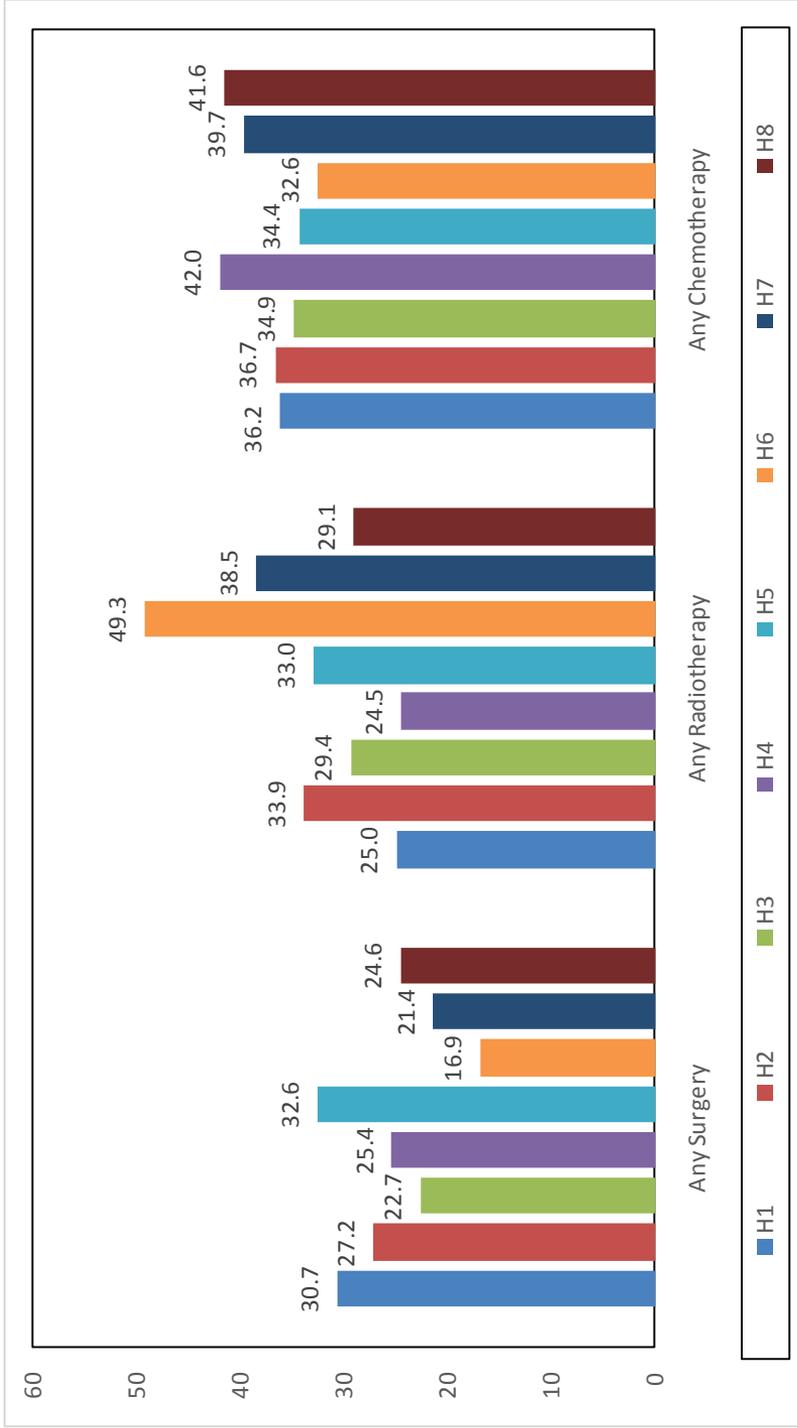


### Proportion of Type of Treatment (Patients treated only at reporting institution)

#### Males

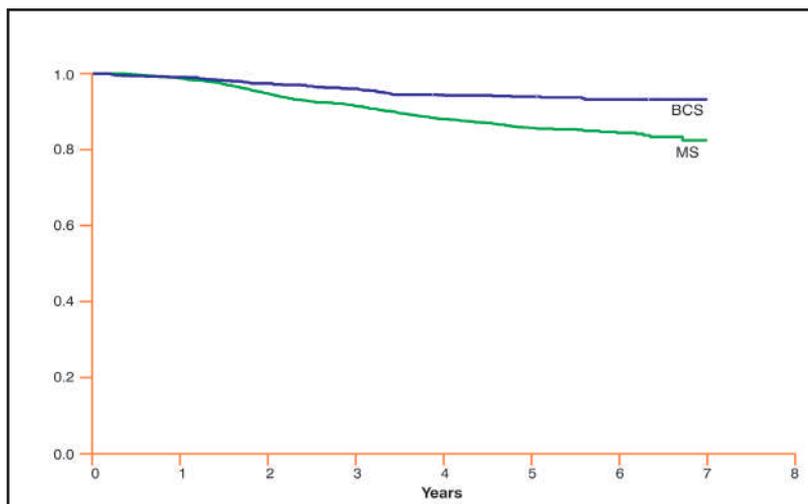


Females

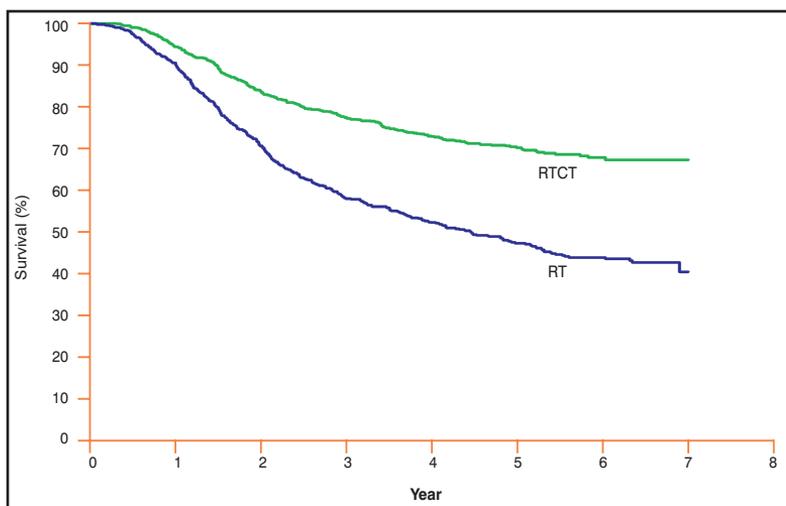


The main findings of the Patterns of Care and Survival Studies are:

1. In locally advanced cervical cancer, significant survival benefit was observed when treated with a combination of radiation with cisplatin than radiation alone.
2. The same observation was seen in patients with locally advanced cancers of the oro and hypo-pharynx.



Kaplan-Meier comparative survival curve for Cancer Breast patients who received BCS and MS for Stage II.



Kaplan-Meier comparative survival graph for locally advanced Cancer Cervix patients who received Radiotherapy alone and those who received Radiotherapy and Chemotherapy.

3. The low proportion of patients undergoing Breast Conservation Surgery (BCS) were observed in contrast to Mastectomy (MS) in both Stage II and Stage III disease.
4. Statistically significant decreased survival noted with mastectomy compared to breast conserving surgery.
5. Patients who had mastectomy did better with systemic therapy (chemotherapy and/or hormone therapy) whereas patients with Breast Conservation Surgery required just local radiation therapy for achieving best survival.
6. The reasons for lower survival with Mastectomy and the biological or scientific rationale of the necessity of systemic therapy to achieve optimal survival in patients undergoing MS but not in those with BCS needs further investigation.
7. This study is a foremost example of cancer registration (through its national programme of cancer registries covering several cancer centres / medical institutions) evaluating clinical parameters and providing critical findings that could have an impact on patient care. A network of cancer hospitals linked to a central coordinating centre (NCDIR) with a system to accrue good clinical data through modern electronic information technology is in place.

## KARNATAKA STATE CANCER NOTIFIABILITY PROGRAMME

This project has been initiated subsequent to issue of Gazette Notification of the Government Order by the Government of Karnataka on 25<sup>th</sup> July 2015 for the notification of cancer cases in Karnataka state. The objective is to strengthen cancer prevention and control programme in the State of Karnataka through complete coverage of cancer registration and analysis of data through the existing health systems in public and private sector in urban and rural areas.

This notification is applicable to all industries, railways, civil, army and other Central and State government medical agencies and hospitals, and medical institutions other than State-run medical institutions, including Ayurvedic and Unani.

The government had constituted Karnataka Cancer Control Committee that would oversee the implementation of the notification effectively. The Additional Deputy Commissioner, the District Health Officer, and the Family Welfare Officer are responsible to ensure adherence to this notification by medical institutions. With the government notifying cancer, all hospitals across the State, both government and private, will have to mandatorily report any case of cancer they come across within a period not exceeding one week from the date of diagnosis.

The notification also states that whosoever is reporting or notifying cancer, shall maintain a prescribed register and accordingly document additional printed proforma for all new cases diagnosed or being treated in the state of Karnataka from 1<sup>st</sup> August 2015.

Website [http://ncdirindia.org/ncrp/hbcr/karnataka\\_reg/karnataka.aspx](http://ncdirindia.org/ncrp/hbcr/karnataka_reg/karnataka.aspx) has been developed for registration of the centre for the project and the transmission of data. Login credentials and other technical support has been provided by NCDIR.

Online and dynamic e-Monitoring of data capture has also been developed for monitoring of the data transmission by NCDIR as well as by the officials of Health Department of Government of Karnataka and the Suvarna Arogya Surakasha Trust.

The primary purpose of notification is to facilitate planning, guidance, monitoring and evaluation of Cancer Research and Control Programme. The data received from the state will be used to frame policy on prevention and control. This would further help in establishing the treatment facilities and cancer research and training centres in the state. It is also a valuable source for incidence, prevalence, mortality and morbidity of the disease.

97 centres (includes the centres from neighbouring states providing data for Suvarna Arogya Suraksha Trust) have been registered and 37 centres are actively transmitting data.



**National Centre for Disease Informatics and Research**  
National Cancer Registry Programme  
*Indian Council of Medical Research*

Home      Logout

**Online and Dynamic e-Monitoring of Data Capture - Coverage of Cases under Karnataka State Cancer Registry Programme**

- ★ Status of Registration
- ★ List of Online Participating Institutions
- ★ Status of Data Received (Year Wise) - All Centres
- ★ Status of Data Received - All Districts
- ★ **District Wise**

|                                   |                      |                      |
|-----------------------------------|----------------------|----------------------|
| Bengaluru Urban(Bangalore)        | Dakshina Kannada     | Mandya               |
| Bengaluru Rural (Bangalore Rural) | Davangere            | Mysuru(Mysore)       |
| Bagalgot                          | Dharwad              | Raichur              |
| Belagavi (Belgaum)                | Gadag                | Ramanagara           |
| Baillar(Gellary)                  | Kalaburagi (Gubarga) | Shivamogga (Shimoga) |
| Bidar                             | Hassan               | Tumakuru (Tumkur)    |
| Channarayana                      | Haveri               | Udupi                |
| Chikkaballapur                    | Kodagu               | Uttara Kannada       |
| Chikkamagaluru(Chikmagalur)       | Kolar                | Vijapura(Bijapur)    |
| Chitradurga                       | Koppal               | Yaedgir              |
| Others - Karnataka                |                      |                      |

- ★ Summary of Progress made by Different Institutions



Designed and Developed by National Centre for Disease Informatics and Research, Bangalore



## NATIONAL CENTRE FOR DISEASE INFORMATICS AND RESEARCH NATIONAL CANCER REGISTRY PROGRAMME

*(Indian Council of Medical Research)*

### Karnataka State Cancer Registry Programme

### List of Online Participating Institutions

● Centres - Currently Transmitting Data (Online) ● Centres offline

| Code | Name of the Centres  | Status | Code | Name of the Centres                                    | Status |
|------|--|--------|------|--|--------|
| 573  | A.J. Hospital & Research Centre, Mangalore                 | ●      | 642  | Manipal Hospital, Bengaluru                            | ●      |
| 627  | Adarsha Hospital, Udupi                                    | ●      | 690  | HCG NMR Cancer Centre, Hubli                           | ●      |
| 666  | Aditya Diagnostics and Shushrutha Surgical Clinic, Shimoga | ●      | 672  | Max Super Speciality Hospital, Shimoga                 | ●      |
| 684  | Anusha Diagnostic Center, Mandya                           | ●      | 649  | Megam Teaching District Hospital, Shimoga              | ●      |
| 596  | Apollo Hospital, Bengaluru                                 | ●      | 670  | Mandya Institute of Medical Sciences, Mandya           | ●      |
| 673  | Archana Hospital and Urology Center, Mandya                | ●      | 590  | Mysore Medical College & Research Institute, Mysore    | ●      |
| 683  | Arpana Hi Tech Diagnostic Center, Mandya                   | ●      | 681  | Nandini Nursing Home, Mandya                           | ●      |
| 677  | Ashraya Maternity Home, Mandya                             | ●      | 695  | Nanjappa Hospital, Shimoga                             | ●      |
| 585  | Basaveshwar Teaching & General Hospital, Gulbarga          | ●      | 536  | Narayana Hrudayalaya Health City, Bengaluru            | ●      |
| 564  | K.L.E.S. Belgaum   | ●      | 640  | Narayana Hrudayalaya Surgical Hospital Pvt.Ltd, Mysuru | ●      |
| 652  | BGS Global Hospitals, Kengeri                              | ●      | 665  | Nayana Hospital, Bhadravathi                           | ●      |
| 625  | Bhanavi Hospital, Mysore                                   | ●      | 674  | Pragathi Hospital, Mandya                              | ●      |

## DEVELOPMENT OF AN ATLAS OF CANCER IN HARYANA STATE (HCA)

A project on “Development of an atlas of Cancer in Haryana” has been launched by Indian Council of Medical Research in collaboration with state NCD cell for the state of Haryana which received registrations from several centres across the state. The project was commenced, with the objective of obtaining an overview of patterns of cancer in Haryana State and also to set up collaborating centres.

The overall aim of the study is to get to know the similarities and differences in patterns of cancer across this state of the country in a relatively cost-effective way, using recent advances in computer and information technology transmission. Knowing patterns of cancer would provide important leads in undertaking aetiological research, in targeting cancer control measures and in examining clinical outcomes.

An innovative approach was adopted for implementation of the project for complete coverage of cancer cases including the centres who register very few cases. The civil surgeons and deputy civil surgeons were provided special login and passwords for registering cases from respective districts. In this way, it is ensured that cancer cases from relatively smaller centres are not missed out.

An inaugural workshop was conducted in Panchkula, Haryana on 20<sup>th</sup> - 21<sup>st</sup> May 2016 to sensitize the collaborating centres about the project. Online access has been given to collaborating centres for data transmission to NCDIR for the project along with demonstration to participants regarding data entry.

- A website with a URL created as a module on the website [www.ncdirindia.org](http://www.ncdirindia.org) with URL <http://www.canceratlasindia.org/Haryana>.
- Online registration for the project provided to the stakeholders and online data entry is being carried out with a simple core form.
- An e-monitoring module on the Haryana Cancer Atlas website has been created which will enable the chief coordinator, to view the information on the participating centres, data contributed etc.

|  <b>National Centre for Disease Informatics and Research</b><br><b>National Cancer Registry Programme</b><br><i>(Indian Council of Medical Research)</i> |   |
|---|---|
|    | <b>Development of an Atlas of Cancer In Haryana State</b> |
|   | <a href="#">Download Registration Form</a>                |
|   | <a href="#">Click here to Register</a>                    |
|   | <a href="#">Member Login</a>                              |
| For further information please contact<br> +919449033748; +919481767643<br><a href="mailto:ncdir@ncdirindia.org">ncdir@ncdirindia.org</a>                |   |

NCDIR has conducted second workshop at Medanta, The Medicity, Gurgaon on 13<sup>th</sup> February 2017 for Centres/institutes from districts of Faridabad, Gurgaon, Rohtak, Sonapat, Palwal and New Delhi. The workshop aimed to strengthen and rejuvenate the project related activities of the centres in above mentioned Districts / State. It would also additionally sensitize the major sources of Delhi about the project and seek their co-operation.

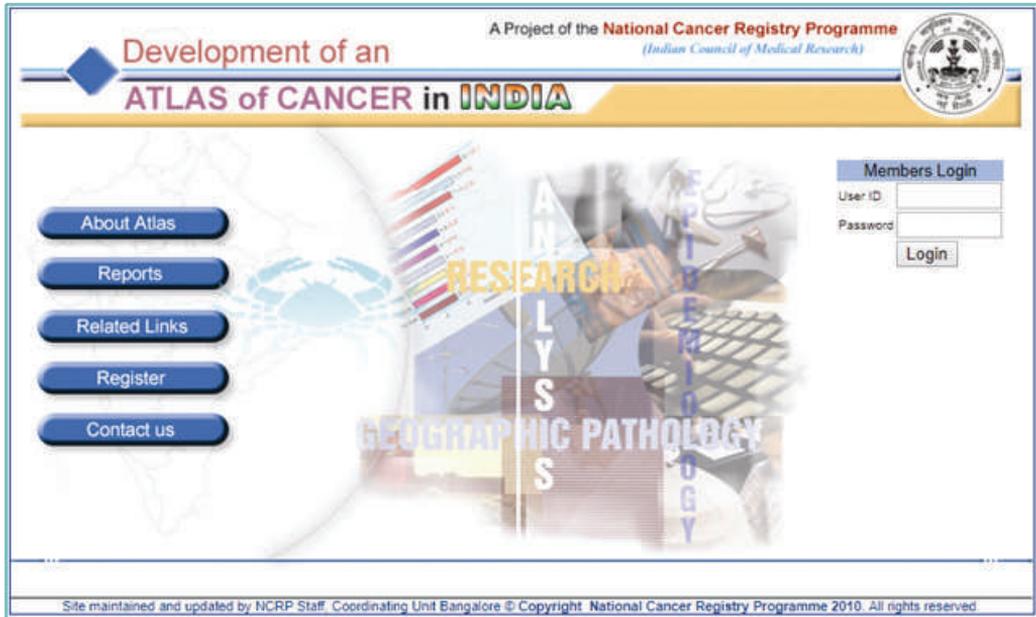
The rationale of such an atlas is that there are areas of the population in a state, particularly the rural areas remain largely uncovered and therefore the patterns of cancer in several urban centers and rural areas remain largely unknown. The environment differs in rural and urban areas and so do dietary practices and socioeconomic status. The scientific data on cancer collected from the state by the project would bring out the actual picture and burden of cancer for the stipulated period for which it is implemented.

127 centres have been registered as on date and 96 centres are transmitting data. Information on a total of 23,980 confirmed malignancy cases has been transmitted with 15,384 cancer cases for the year 2016 and 7897 cases for the year 2017.

## SOFTWARE DEVELOPMENT AT NCDIR

NCDIR being centre on Informatics, has developed the following software programme for data transmission and the analysis.

### 1. Development of an Atlas of Cancer in India



Development of an  
**ATLAS of CANCER in INDIA**

A Project of the **National Cancer Registry Programme**  
(Indian Council of Medical Research)

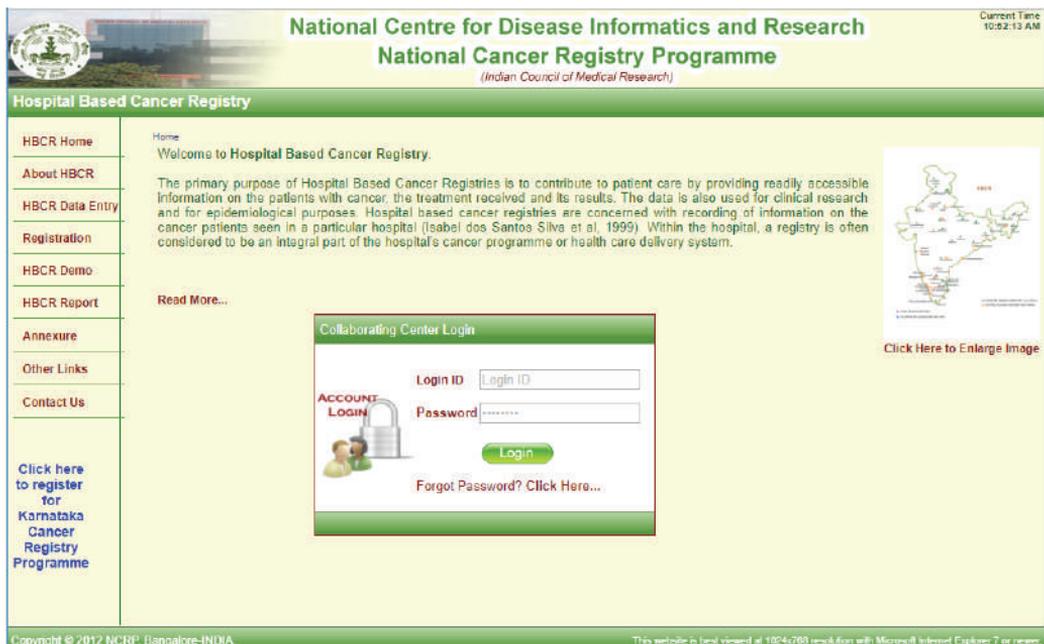
Members Login  
User ID:   
Password:   
Login:

Navigation: About Atlas, Reports, Related Links, Register, Contact us

Keywords: RESEARCH ANALYSIS, GEOGRAPHIC PATHOLOGY

Site maintained and updated by NCRP Staff, Coordinating Unit Bangalore © Copyright National Cancer Registry Programme 2010. All rights reserved.

### 2. Hospital Based Cancer Registry Data Management



National Centre for Disease Informatics and Research  
**National Cancer Registry Programme**  
(Indian Council of Medical Research)

Current Time: 10:52:13 AM

**Hospital Based Cancer Registry**

Home  
Welcome to **Hospital Based Cancer Registry**.

About HBCR  
The primary purpose of Hospital Based Cancer Registries is to contribute to patient care by providing readily accessible information on the patients with cancer, the treatment received and its results. The data is also used for clinical research and for epidemiological purposes. Hospital based cancer registries are concerned with recording of information on the cancer patients seen in a particular hospital (Isabel dos Santos Silva et al. 1999). Within the hospital, a registry is often considered to be an integral part of the hospital's cancer programme or health care delivery system.

HBCR Data Entry  
Registration  
HBCR Demo  
HBCR Report  
Annexure  
Other Links  
Contact Us

Read More...

Collaborating Center Login

ACCOUNT LOGIN

Login ID:   
Password:   
Login:   
Forgot Password? [Click Here...](#)

Click here to register for Karnataka Cancer Registry Programme

Click Here to Enlarge Image

Copyright © 2012 NCRP, Bangalore-INDIA. This website is best viewed at 1024x768 resolution with Microsoft Internet Explorer 7 or newer.

### 3. Patterns of Care and Survival Studies

**National Centre for Disease Informatics and Research  
National Cancer Registry Programme**  
(Indian Council of Medical Research)  
**Patterns of Care and Survival Studies**

Home | About Us | NCDIR | Links | Contact Us

**LOGIN PANEL**

User ID   
Password   
**Login**

● NCDIR  
● Independent Modules

**INSTRUCTION MANUAL**

**CONTACT INFORMATION**

9449067643 (Administration)  
9449033748 (Technical)  
ncdir@ncdirindia.org

**WELCOME**

**Patterns of Care and Survival Studies...**

**Objective**

- 1 - To obtain the details of clinical stage and types of treatment in the Hospital Based Cancer Registries under the NCRP and in other selected centres and medical colleges across the country;
- 2 - To obtain clinical stage and treatment based survival in all registered and treated patients at these centres.

**Background**

The Indian Council of Medical Research initiated a network of cancer registries across the country under the National Cancer Registry Programme (NCRP) in December 1981. This move followed the recognition that there was an urgent need for strengthening the existing cancer registries and organization of new cancer registries in different regions of the country. The programme was commenced with the following objectives:

1. To generate reliable data on the magnitude and patterns of cancer.
2. To undertake epidemiologic studies in the form of case control or cohort studies based on observations of registry data.
3. Provide research base for developing appropriate strategies to aid in National Cancer Control Programme; this would be in the form of planning, monitoring and evaluation of activities under this programme.
4. Develop human resource in cancer registration and epidemiology.

**More**

[Click here to register for Karnataka Cancer Registry Programme](#)

Note:  
This website is best viewed at 1024x768 resolution with Microsoft Internet Explorer 7 or 8 or newer.

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### 4. Population Based Cancer Registry Online (PBCR)

Software development is a regular activity in PBCR for improving the data collection, data quality and analysis. The following activities were undertaken for the PBCRs at NCDIR.

#### Completed:

- A. Development of an intranet based application for use by NCDIR to generate annexure tables and population pyramids for PBCRs. These PDF copies were directly used to prepare the CD and the web based HTML version of the Three Year Report of 27 PBCRs: 2012 - 2014. The same was used to prepare the PBCR 2012 - 2015 draft report.

- B. Provisions were made for the PBCRs to generate web based statistical tables for their respective data with valid credentials.
- C. The PBCR at Cachar Cancer Hospital, Silchar covering the districts of Karimganj, Hailakandi and Dima Hassao has been given access to the online PBCR software to commence work.
- D. Existing two registries, Patiala and Kamrup Urban were migrated from the offline PBCR software for doing regular registry work to the online version on [www.pbcrindia.org](http://www.pbcrindia.org).

### Ongoing work:

- A. The online de-duplicate module is under development. It is pilot tested in NCDIR with 10 years of Delhi PBCR data to generate the probable list of duplicates in MS Excel and the results are comparable with that of offline PBCRDM 2.1. Development of additional options in the module is underway.
- B. An online data visualization tool with tables, graphs and map based on the PBCR data reported in the PBCR 2012 - 2014 report is being developed.

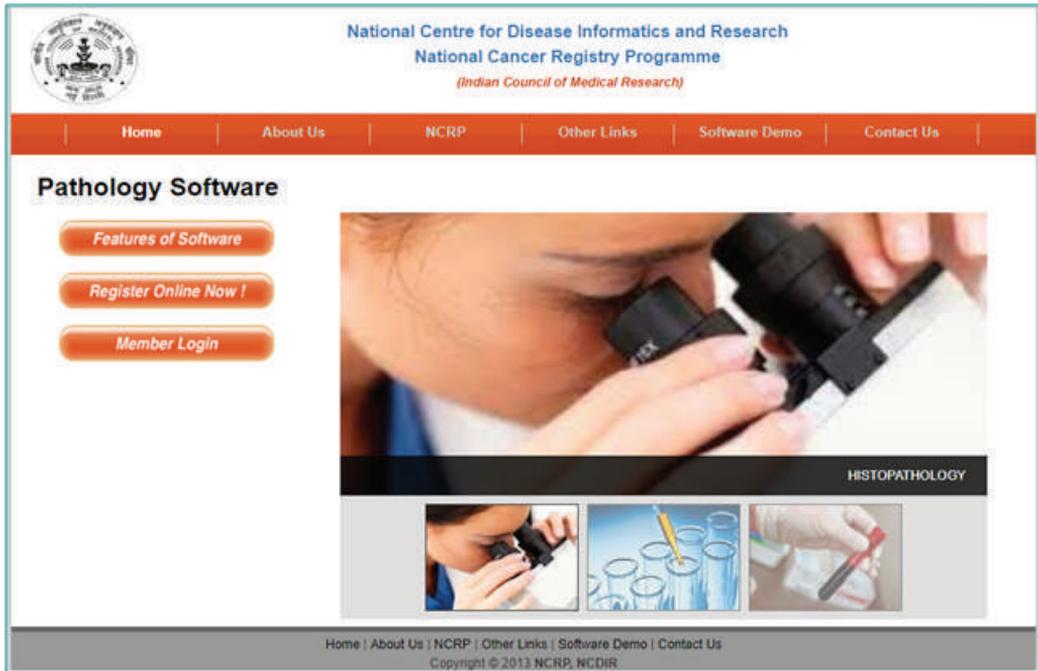
## 5. Development of an Atlas of Cancer in Punjab State

The screenshot shows the web interface for the 'Development of an Atlas of Cancer in Punjab State'. The header includes the NCDIR logo and the text: 'National Centre for Disease Informatics and Research, National Cancer Registry Programme, Indian Council of Medical Research'. The current time is 3:54:42 PM. The main content area features a navigation menu on the left with links for 'NCRP Home', 'PCA Home', and 'Contact Us'. The central area displays a 'Login Panel' with fields for 'User Id' (containing 'Enter User ID') and 'Password' (containing '\*\*\*\*\*'), a 'LOGIN' button, and a link for 'Forgot Password? Click Here...'. To the right of the login panel is a map of Punjab state with a caption 'Click on image to enlarge'. At the bottom of the page, there is a red link: 'Report of Punjab Cancer Atlas for year 2012-2013'.

## 6. Oncology Modules

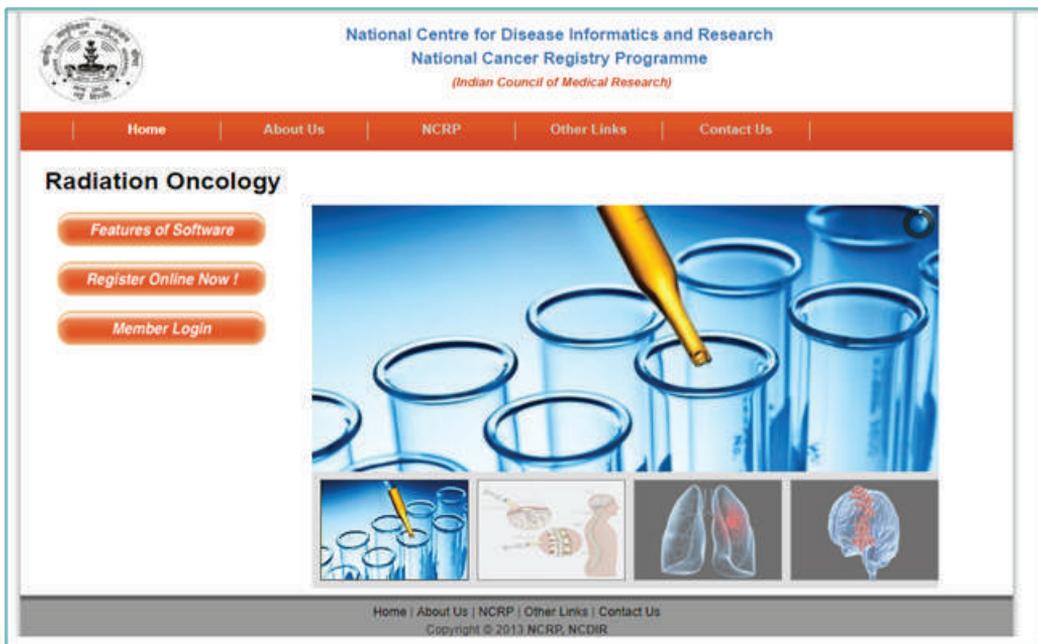
The following modules are available:

### a) Pathology



The screenshot shows the website for the National Centre for Disease Informatics and Research (NCDIR) National Cancer Registry Programme (NCRP). The header includes the NCDIR logo and the text "National Centre for Disease Informatics and Research National Cancer Registry Programme (Indian Council of Medical Research)". A navigation bar contains links for Home, About Us, NCRP, Other Links, Software Demo, and Contact Us. The main content area is titled "Pathology Software" and features three buttons: "Features of Software", "Register Online Now!", and "Member Login". A large image of a person using a microscope is displayed, with the word "HISTOPATHOLOGY" written below it. Below this image are three smaller images: a person using a microscope, test tubes with a pipette, and a hand holding a test tube. The footer contains the same navigation links and the copyright notice "Copyright © 2013 NCRP, NCDIR".

### b) Radiotherapy



The screenshot shows the website for the National Centre for Disease Informatics and Research (NCDIR) National Cancer Registry Programme (NCRP). The header includes the NCDIR logo and the text "National Centre for Disease Informatics and Research National Cancer Registry Programme (Indian Council of Medical Research)". A navigation bar contains links for Home, About Us, NCRP, Other Links, and Contact Us. The main content area is titled "Radiation Oncology" and features three buttons: "Features of Software", "Register Online Now!", and "Member Login". A large image of test tubes with a pipette is displayed. Below this image are four smaller images: test tubes with a pipette, a diagram of a human torso showing internal organs, a diagram of human lungs, and a diagram of a human brain. The footer contains the same navigation links and the copyright notice "Copyright © 2013 NCRP, NCDIR".

### c) Medical Oncology

The screenshot shows the website for the National Centre for Disease Informatics and Research (NCDIR) National Cancer Registry Programme. The header includes the ICMR logo and the text: "National Centre for Disease Informatics and Research", "National Cancer Registry Programme", and "(Indian Council of Medical Research)". The navigation bar contains links for "Home", "About Us", "NCRP", and "Contact Us". The main content area is titled "Medical Oncology" and features three buttons: "Features of Software", "Register Online Now!", and "Member Login". The central image is a composite of medical illustrations: a syringe injecting into a "Dermatome Reservoir", a syringe injecting into "Intervertebral Gaps", a "Carcinomatous Tumor" on the brain, and a "Spinal Cord" cross-section. Below this are four smaller thumbnail images: laboratory glassware, a spinal cross-section, lungs with a red tumor, and a brain with a red tumor. The footer contains the same navigation links and the copyright notice: "Copyright © 2013 NCRP, NCDIR".

### d) Surgical Oncology

The screenshot shows the website for the National Centre for Disease Informatics and Research (NCDIR) National Cancer Registry Programme. The header includes the ICMR logo and the text: "National Centre for Disease Informatics and Research", "National Cancer Registry Programme", and "(Indian Council of Medical Research)". The navigation bar contains links for "Home", "About Us", "NCRP", "Other Links", and "Contact Us". The main content area is titled "Surgical Oncology" and features three buttons: "Features of Software", "Register Online Now!", and "Member Login". The central image is a large illustration of human lungs, with a red tumor highlighted in the right lung. Below this are four smaller thumbnail images: laboratory glassware, a spinal cross-section, lungs with a red tumor, and a brain with a red tumor. The footer contains the same navigation links and the copyright notice: "Copyright © 2013 NCRP, NCDIR".

These modules offer flexi and site specific variants for data collection. Flexi data collection is classified in three different formats, Basic, Basic + Advanced and Site Specific. Modules allow data to be captured for Cervix, Breast, Head & Neck and other anatomical sites of cancer. The broad features of oncology modules are as follows:

- Work as Routine Recording of Treatment
- User can take printout of entered Information
- Quality Check Reports
- Outputs
  - Administration Outputs
    - ✓ Sources of Registration
    - ✓ Waiting Time
    - ✓ Source of Referral Doctor
    - ✓ Age Group Analysis
    - ✓ Area-wise Analysis
  - Research Outputs
    - ✓ Specific Site of Cancer
    - ✓ Site-wise and Age Group Analysis
    - ✓ Magnitude and Leading Sites of Cancer
      - Number and Proportion According to Sex and Sex Ratio
      - Ten Leading Sites of Cancer
      - Number and Proportion of Cancers by Broad Age Group
    - ✓ Distribution of Cancer Cases According to Registered Year
    - ✓ Childhood Cancer
      - Number and Percentage
      - Number and Percentage by Five Year Age Group
      - Number and Percentage of Broad Types
      - Number and Percentage of Specific Types

✓ Tobacco Related Cancer

- Histological Classification
- User based Login (Eg.: Data Entry Operator, Social Investigator, Physician / Oncologist).
- Integrated with all NCRP Oncology Software / HBCR / Pattern of Care & Survival Studies Modules

## 7. e-Monitoring of Data Transmission

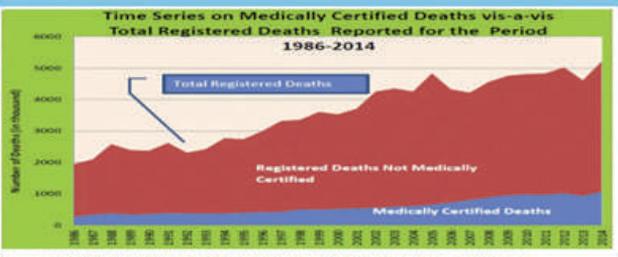
- a) Punjab Cancer Atlas Project
- b) Haryana Cancer Atlas Project
- c) Karnataka Cancer Registry

## 8. NCDIR electronic Mortality software (NCDIR e-MOR)



**National Centre for Disease Informatics and Research**  
Indian Council of Medical Research  
**NCDIR e-Mortality Software (NCDIR e-Mor)**

[Home](#) [NCDIR](#) [Features of e-Mor](#) [Registration](#) [Training](#) [Query](#) [Contact Us](#)



Source - REPORT ON THE TRENDS, CERTIFICATION OF CAUSE OF DEATH 2014 by ORG India

**Welcome to NCDIR e-Mor Software**

The NCDIR e-Mortality software "NCDIR e-Mor" is an Information Technology software to record cause of death information of all deaths occurring in hospitals. The software has in-built standard protocols for recording, extracting and analysing mortality data of hospitals. It facilitates generation of MCCD and Death reports for registration of deaths. The aim is to improve the quality of cause of mortality statistics in India.

**About MCCD**

 Medical Certificate of Cause of Death (MCCD) is the certificate issued by the attending medical practitioner who had treated the person during admission in a medical institution or in the last illness (prior to death) while taking treatment from a physician outside of a medical institution. It is the physician's primary responsibility to complete the medical part of the certificate regarding all diseases, morbid conditions or injuries which either resulted in or contributed to death. The certificate as to the cause of death required under subsection (3) of Section 10 of Registration of Births and Deaths Act, 1969 shall be issued in Form No.4 for institutional deaths and Form 4A for non-institutional deaths.

-  **Cause of death - All what you want to know !**  
The cause of death is defined as "all those diseases, morbid conditions/abnormalities, injuries which either resulted in or contributed to death and the circumstances of the accident or violence which produced any such injuries". [Read More](#)
-  **What is your role as a doctor?**  
The doctor's responsibility is to complete the 'Medical Cause of Death Certificate(MCCD)' to state that an individual died from the reported cause/causes of death. [Read More](#)

**User Login**

User id:

Password:

**Important Links**

- [ICMR](#)
- [WHO](#)
- [Civil Registration System](#)

## CONFERENCE(S) / WORKSHOP(S) / SYMPOSIUM(S) ORGANIZED BY NCDIR

### 1. Workshop on Dissemination of Cancer Registry Reports (PBCR & HBCR) for 2012 - 2014 (18<sup>th</sup> May 2016)



The three-year Report of Population Based Cancer Registries for the years 2012 - 14 and the three-year Report of Hospital Based Cancer Registries for the years 2012 - 14 were released in the Workshop on Dissemination of Cancer Registry Report (2012 - 14) held on May 18, 2016 at ICMR headquarters under the Chairmanship of Director General, ICMR.

### 2. Workshop on “Development of a Cancer Atlas in Haryana” at Panchkula (20<sup>th</sup> - 21<sup>st</sup> May 2016)



An inaugural workshop was conducted in Panchkula, Haryana to sensitize the collaborating centres about the project. All the centres registered for the project in Haryana and the neighbouring states including

Delhi where cancer patients from Haryana seek treatment were invited. Additional Chief Secretary of the State of Haryana, the medical officers of District Hospitals, Civil Hospitals were present and a total of about 160 participants attended the meeting.

### **3. Institutional Ethics Committee Meeting (IEC) of National Centre for Disease Informatics and Research (NCDIR) at NCDIR, Bengaluru. (23<sup>rd</sup> June 2016)**

This was held at NCDIR under the chairmanship of Dr. R.N.Visweswara and discussions held regarding NCDIR policy, sharing of Registry data and Handling datasets.

### **4. Feasibility Workshop for Establishment of Cancer Registries along River Course of Ganga held at Allahabad (23<sup>rd</sup> - 24<sup>th</sup> September 2016)**



A feasibility workshop with relevant stakeholders including representatives from BHU, Varanasi, Uttar Pradesh state health authorities was held at Kamala Nehru Memorial Hospital, Allahabad to seek the co-operation in the project. The workshop was planned with the objective of measures which need to be taken to assess the burden of cancer so that the future screening programmes and preventive measures may be planned as incidence of certain sites of cancers is found to be high in areas near Gangetic belt. Around 55 stakeholders participated in the workshop.

## 5. Regional Consultation on National Ethical Guidelines for Biomedical and Health Research involving Human Participants at NCDIR, Bengaluru (4<sup>th</sup> October 2016).



The regional consultation meeting was aimed at inviting comments and feedbacks from various stakeholders from all parts of the country including East, West, South and North regarding the draft National Ethical Guidelines for Biomedical and Health Research Involving Human participants. This meeting was attended by about 94 experts, including social scientists, legal experts, and representatives from the pharma industry, academic institution in public and private, Non-Governmental Organisations, and many others from across the country. The consultation provided a platform to receive valuable inputs that were helpful in refining the ethical guidelines to suit the requirements of the various stakeholders involved in research.

## 6. Advisory Committee Meeting for “Draft National Ethical Guidelines for Biomedical and Health Research involving Human Participants, 2016” at National Centre for Disease Informatics and Research, Bengaluru (13<sup>th</sup> - 14<sup>th</sup> October, 2016).

The Advisory Committee meeting was held after the regional consultation meeting to discuss and review the comments and suggestions received from stakeholders. The relevant suggestions were discussed and reviewed. Changes were incorporated in the guidelines based on the suggestions.

## 7. Farewell to Dr. A. Nandakumar (Former Director - in - Charge and Consultant / Advisor NCDIR) at NCDIR, Bengaluru (24<sup>th</sup> October 2016).



Dr. A. Nandakumar, the former Director-in-charge who was the main pillar of National Cancer Registry Programme has superannuated on 30<sup>th</sup> September 2013, continued as Director-in-charge on Re-employment till 24<sup>th</sup> May 2016 and continued to serve as the Advisor / Consultant to Director General, ICMR and relinquished from his duties on 24<sup>th</sup> October 2016. Dr. A. Nandakumar was felicitated and given a formal farewell.

## 8. Advisory Committee Meeting for “Draft National Ethical Guidelines for Biomedical and Health Research involving Human Participants, 2016” at National Centre for Disease Informatics and Research, Bengaluru (1<sup>st</sup> - 2<sup>nd</sup> November 2016)

The Advisory Committee suggested inviting the external experts to provide their suggestions for updated guidelines. Subject experts for Genetics were invited for the meeting held on 1<sup>st</sup> - 2<sup>nd</sup> November 2016. The experts suggested some changes that were discussed with advisory committee members and the relevant suggestions were incorporated into the revised guidelines.

## **9. Advisory Committee Meeting for “Draft National Ethical Guidelines for Biomedical and Health Research involving Human Participants, 2016” at National Centre for Disease Informatics and Research, Bengaluru - 562110 (7<sup>th</sup> – 8<sup>th</sup> November 2016).**

Subject experts for Public Health, Social and Behavioral Sciences were invited for the meeting held on 7<sup>th</sup> - 8<sup>th</sup> November 2016 to provide their suggestions for updated ICMR Ethical Guidelines. The sections on Public Health and Social and Behavioral Sciences were modified based on the suggestions received.

## **10. National Consultation on National Ethical Guidelines for Biomedical and Health Research involving Human Participants, at ICMR Hqs. New Delhi (14<sup>th</sup> December 2016).**



The meeting was aimed at finalising the draft of the National Ethical Guidelines for Biomedical and Health Research Involving Human Participants and sought the approval of the Expert Group which included members of the Central Ethics Committee on Human Research (CECHR) which is the National Ethics Committee along with other invited experts from Academic Institutions, Members of Non-Governmental organisations, International and National Agencies, Government Organisations, Representatives from various Ministries and Scientific Bodies, Pharmaceutical Industry, Hospitals, Patient groups, and others. Meeting was attended by 68 expert participants from various parts of the country. The experts discussed the major ethical challenges and deliberated on the various sections of the ICMR Ethical Guidelines in finding ways to promote ethical conduct of research in the country while safeguarding the rights, welfare, and safety of research participants.

## 11. Annual Review Meeting of National Cancer Registry Programme (9<sup>th</sup> - 12<sup>th</sup> November 2016).



Annual Review Meeting for two days is held every year to review the working of all registries under the network of National Cancer Registry Program. The principal investigators of all the registries participate in the meeting and present the data status and the findings of the data. The issues related to data collection and transmission were discussed during the meeting. A representative from the International Agency for Research on Cancer also participated in the meeting.

A Pre Annual Review Meeting Workshop was held just before the Annual Review meeting in the same place wherein the junior staff of all the registries were participating. The senior faculty members of the registries conducted various training sessions on the data abstraction, coding, statistical variables and software demonstration.

This year the Annual Review Meeting was held at Capital Convention Centre, Kohima on 11<sup>th</sup> - 12<sup>th</sup> November 2016 preceded by the workshop on 9<sup>th</sup> - 10<sup>th</sup> November 2016. Various recommendations have emerged out of the meeting to improve the quality of data and dissemination of the information to the public.

## **12. Institutional Ethics Committee Meeting of NCDIR to review various proposals of NCDIR (6<sup>th</sup> January 2017).**

This meeting was held at NCDIR and 16 projects were reviewed. 4 projects were recommended for exemption from review. Clarifications for 2 projects were sought and the remaining 10 projects were approved.

## **13. South Zonal Consultation for Food Fortification at IISc, Bengaluru Organized by ICMR for Dept. of Women and Child Development at New Biological Sciences Auditorium, Indian Institute of science Campus, Bengaluru. (20<sup>th</sup> January 2017).**



South Zonal Multi Stakeholders consultation on fortification of food articles was organized by the National Centre for Disease Informatics and Research, Bengaluru on behalf of Department of Health Research, ICMR, Government of India in collaboration with Ministry of Women and Child Development. The objective of the conference was to discuss issues and implementation plan on roll out of food fortification in identified food commodities. Dr. Shalini Rajneesh IAS, Principal Health Secretary of the Govt. of Karnataka inaugurated the meeting. About 75 participants from different industries, Ministry of Women and Child Development, Government of India, FSSAI etc. participated in the conference. The Zonal Consultation was useful in bringing stakeholders from all across the Southern States of the country on a common platform to discuss the initiatives and plans for Food Fortification in the country.

#### 14. Project Review Meeting of Setting up of Hospital Based Cancer Registries (HBCRs) in Regional Cancer Centres (RCC) held at NCDIR, Bengaluru (1<sup>st</sup> February 2017).



The members of Research Area Panel (RAP) on Cancer along with the center's principal investigator/co-principal investigators who were funded under this project were invited. A draft consolidated report for the year 2014 and 2015 from 14 centres was reviewed by the Research Area Panel members and study was granted on extension for the next 5 years since hospital registry is a continuous process and to perform survival analysis, minimum 5 years follow up is required.

#### 15. Meeting of the Research Area Panel on Cancer of NCDIR (2<sup>nd</sup> February 2017)



The research area panel discussed and recommended certain scientific and administrative aspects of the ongoing projects at NCDIR. They also reviewed the projects to be initiated soon and provided their inputs and approval. Discussion was also held on new initiatives and ideas generated by the scientists of NCDIR.

### **16. Second Workshop on Development of an Atlas of Cancer in Haryana State at Medanta, The Medicity, Gurgaon (13<sup>th</sup> February 2017).**



A second workshop of this series was held at Gurgaon - Medanta Hospital where centres involved in diagnosis and treatment of cancer of Delhi, Faridabad and Gurgaon attended. The workshop was held with objective of providing complete coverage of registration of cancer cases who are residents of Haryana state. Around 85 participants were present in the meeting. As a consequence, many centres of New Delhi registered for the project and are transmitting data to NCDIR.

### **17. Workshop on HBSR core form at Medanta, The Medicity, Gurgaon (13<sup>th</sup> February 2017).**

The workshop aimed at finalising the core form for abstraction of the data of patients of the Hospital Based Stroke Registries. Dr. Kameshwar Prasad, the chairperson of the Research Area Panel on Stroke and other expert members participated in the workshop and provided inputs on the HBSR core form.

### **18. All India Workshop on Software Modules developed by NCDIR held at Dr. B. Borooah Cancer Institute, Guwahati (2<sup>nd</sup> – 3<sup>rd</sup> March 2017).**



An All India Workshop on Software Modules developed by NCDIR, Bengaluru was organized by the National Centre for Disease Informatics and Research, Bengaluru at Dr. B. Borooah Cancer Institute, Guwahati. The objective of the conference was to explain the features and to clarify problems encountered for the individual software modules.

The workshop showcased the outputs generated by the software for patient management in oncology. It also identified potential institutions for implementation of the software modules. The modalities of data extraction into the NCDIR software from their HMIS and transmitted data to NCDIR were also discussed.

About 50 oncologists from different hospitals participated in the workshop from all over India. The participants learnt the procedures of cancer registry and a few of them wanted to implement the hospital cancer registry in their hospitals.

### **19. Consultation meeting for Ca Res NER - a Multidisciplinary Research Programme for prevention and control of Cancer in North Eastern States in India held at NCDIR, Bengaluru (22<sup>nd</sup> March 2017).**



The consultation meeting was aimed at inviting comments and feedbacks from various experts on cancer and public health as well from all parts of the country in order to develop a research agenda to address the cancer problem in North East India. This meeting was attended by 15 experts, including cancer specialists, clinicians, epidemiologists, public health experts, basic scientists etc. The consultation provided a platform to receive valuable inputs that were helpful in framing a roadmap towards initiating this multidisciplinary research programme for prevention and control of Cancer in North Eastern States in India.

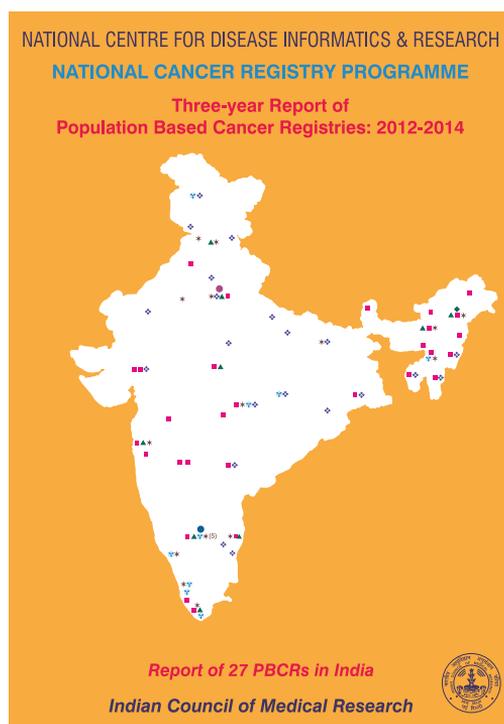
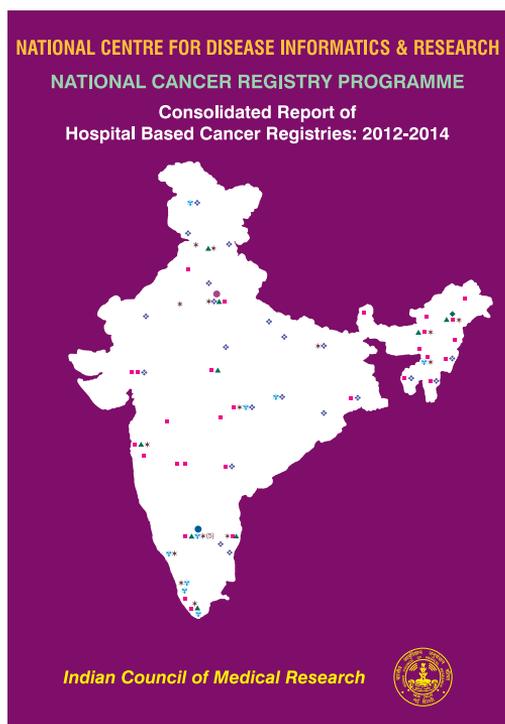
## **20. Feasibility workshop for setting up of Population Based Cancer Registries in Urban Population of mid-size and large size cities along Ganga River at IGIMS, Patna (29<sup>th</sup> March 2017).**



The second feasibility workshop was held at IGIMS Patna which is the Regional Cancer Centre having major load of cancer patients from the area. Director of another major cancer treating hospital Mahavir Cancer Sansthan actively participated in the workshop and gave valuable inputs. Around 55 stakeholders participated in the workshop. The workshop was planned with the objective of measures which need to be taken to assess the burden of cancer as incidence of certain sites of cancers is found to be high in areas near Gangetic belt.

## REPORTS PUBLISHED

### PBCR & HBCR REPORTS 2012 - 2014



The Three-year Report of Population Based Cancer Registries for the years 2012 - 14 and The Three-year Report of Hospital Based Cancer Registries for the years 2012 - 14 were printed in March 2016 and released in the Workshop on Dissemination of Cancer Registry Report (2012 - 14) held on May 18, 2016 at ICMR headquarters under the Chairmanship of Director General, ICMR.

*The consolidated PBCR report for 2012 - 2014 is based on the analysis of data from 27 PBCRs including three new ones (Naharlagun and Pasighat from Arunachal Pradesh and Patiala from Punjab). Reports of two other PBCRs – Hyderabad and Ahmedabad Rural was not included in the report although some description of their work was mentioned.*

The consolidated HBCR report for 2012 - 2014 includes the data from (i) Eight earlier HBCRs (i.e., in centres already in NCRP network) (ii) Nine newer HBCRs that have contributed data without financial assistance using HBCR-DM software).

## BIO-ETHICS REPORT



### ICMR-WHO

#### Consultation on “National Ethical Guidelines for Biomedical and Health Research involving Human Participants, 2016-2017”- A Report



ICMR Bioethics Unit  
NCDIR, Bangalore

## CANCER REGISTRY ABSTRACT (CRAB 2016)

# Cancer Registry ABstract CRAB

The newsletter of NCRP

Vol. 21, No. 1, October 2016

**NATIONAL CENTRE FOR DISEASE INFORMATICS AND RESEARCH  
BENGALURU**

**NATIONAL CANCER REGISTRY PROGRAMME**

INDIAN COUNCIL OF MEDICAL RESEARCH



Annual Review Meeting of NCRP 2016 – Kohima, Nagaland

## PUBLICATIONS

1. Nandakumar A, Rath GK, Kataki AC, Bapsy PP, Gupta PC, Gangadharan P et al. Decreased Survival With Mastectomy Vis-a-Vis Breast-Conserving Surgery in Stage II and III Breast Cancers: A Comparative Treatment Effectiveness Study JGO JGO004614; published online on October 12, 2016.
2. Nandakumar A, Rath GK, Kataki AC, Bapsy PP, Gupta PC, Gangadharan P et al (2016). Survival in Head and Neck Cancers - Results of a Multi Institution Study. *Asian Pac J Cancer Prev.* 17, 1745-54.
3. Jeemon P, Narayanan G, Kondal D, Kahol K, Bharadwaj A, Purty A, Negi P, Ladhani S, Sanghvi J, Singh K, Kapoor D, Sobti N, Lall D, Manimunda S, Dwivedi S, Toteja G, Prabhakaran D; DISHA Study Investigators. Task shifting of frontline community health workers for cardiovascular risk reduction: design and rationale of a cluster randomised controlled trial (DISHA study) in India. *BMC Public Health.* 2016 Mar 15; 16:264. doi: 10.1186/s12889-016-2891-6.
4. Srinivasan S, Swaminathan G, Kulothungan V, Sharma T, Raman R. The association of smokeless tobacco use and pack-years of smokeless tobacco with age-related macular degeneration in Indian population. *Cutan Ocul Toxicol.* 2017 Jan 11:1-6. doi: 10.1080/15569527.2016.1265548. [Epub ahead of print] PubMed PMID: 27903086.
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6. Gella L, Raman R, Kulothungan V, Saumya Pal S, Ganesan S, Sharma T. Retinal sensitivity in subjects with type 2 diabetes mellitus: Sankara Nethralaya - Diabetic Retinopathy Epidemiology and Molecular Genetics Study (SN-DREAMS II, Report No. 4). *Br J Ophthalmol.* 2016 Jun; 100(6):808-13. doi: 10.1136/bjophthalmol-2015-307064. PubMed PMID: 26338972.

7. Raman R, Pal SS, Ganesan S, Gella L, Vaitheeswaran K, Sharma T. The prevalence and risk factors for age-related macular degeneration in rural-urban India, Sankara Nethralaya Rural-Urban Age-related Macular degeneration study, Report No. 1. Eye (Lond). 2016 May; 30(5):688-97. doi: 10.1038/eye.2016.14. PubMed PMID: 26915746; PubMed Central PMCID: PMC4869128.
8. Ramakrishna BS, Makharia GK, Chetri K, Dutta S, Mathur P, Ahuja V, Amarchand R, Balamurugan R, Chowdhury SD, Daniel D, Das A, George G, Gupta SD, Krishnan A, Prasad JH, Kaur G, Pugazhendhi S, Pulimood A, Ramakrishna K, Verma AK. Prevalence of Adult Celiac Disease in India: Regional Variations and Associations. Am J Gastroenterol. 2016; 111:115–123 (IF- 10.7).
9. NCD Risk Factor Collaboration (NCD-RisC). Trends in adult body-mass index in 200 countries from 1975 to 2014: a pooled analysis of 1698 population-based measurement studies with 19.2 million participants. The Lancet, April 2, Lancet 2016; 387: 1377–96.
10. NCD Risk Factor Collaboration (NCD-RisC). A century of trends in adult human height. eLife 2016;5:e13410. DOI: 10.7554/eLife.13410 (2016).

### Other Achievements :

1. Dr. Roli Mathur, Scientist E & Head, ICMR Bioethics Unit was elected as the Executive Committee member of the Council of International Organizations of Medical Sciences (CIOMS) in March 2016.
2. Dr. Roli Mathur, Dr. Rajib Hazam, Dr. Kalyani Thakur received the International TRUST award for development of case studies towards reducing the risk of exporting unethical practices to low and middle income countries which was ranked among the five best case studies by INSERM.

## LIST OF CONFERENCES / MEETINGS / WORKSHOPS ATTENDED

### Dr. Prashant Mathur

1. Meeting of Karnataka Cancer Control Committee meeting with Health Secretary Karnataka at Bengaluru on 27<sup>th</sup> May 2016.
2. Meeting on Virtual Knowledge Network, NIMHANS ECHO at Bengaluru on 9<sup>th</sup> July 2016.
3. Meeting of Standing Committee on Tertiary Centre Cancer Control at New Delhi on 26<sup>th</sup> July 2016.
4. BRICS workshop on Health Surveillance Systems & Best Practices at Bengaluru on 1<sup>st</sup> August 2016 as Indian Delegate.
5. Training Programme for the project on Prevention and Control of Non-Communicable Diseases in Kerala at Thiruvananthapuram on 22<sup>nd</sup> and 23<sup>rd</sup> August 2016 as key resource person.
6. A Key Discussant in the India Africa Health Sciences Meet at New Delhi from 1<sup>st</sup> to 3<sup>rd</sup> September 2016.
7. Meeting on Sharing perspectives in Public Health: New Paradigms at Delhi on 10<sup>th</sup> September 2016.
8. Meeting of Epidemiological Research Experts at NIREH, Bhopal on 27<sup>th</sup> September 2016.
9. Scientific Advisory Group Meeting of Division of NCD at ICMR, New Delhi on 3<sup>rd</sup> and 4<sup>th</sup> October, 2016.
10. Research Advisory Committee meeting for Multidisciplinary Research Unit (MRU) at Mysore, Karnataka on 17<sup>th</sup> October 2016.
11. Core Group meeting of the ICMR Strategic Plan at New Delhi on 19<sup>th</sup> and 20<sup>th</sup> October 2016.
12. Tribal Health Research Forum, at NIRTH, Jabalpur on 1<sup>st</sup> and 2<sup>nd</sup> November 2016.
13. Faculty in the Training on setting up of PBCR for participants from Bangladesh, Bhutan, Korea, Indonesia, Maldives, Myanmar, Nepal and Sri Lanka at Mumbai from 7<sup>th</sup> - 11<sup>th</sup> November 2016.
14. Workshop on Issues related to NCD during India's BRICS Chairmanship 2016 at New Delhi on 17<sup>th</sup> and 18<sup>th</sup> November 2016.
15. Second Meeting of the State Cancer Control Committee at Bengaluru chaired by Principal Health Secretary, Govt. of Karnataka, at Bengaluru on 5<sup>th</sup> January 2017.
16. IMPRESSIONS AURUM 2017 at DPS-North, Bengaluru on 10<sup>th</sup> January 2017 as Chief Guest.

17. Meeting for Demonstration of e-Mor software for Implementation at the Office of Registrar General of India New Delhi on 11<sup>th</sup> January 2017.
18. South Zonal Consultation for Food Fortification at Bengaluru organised by NCDIR, ICMR for Dept. of Women and Child Development, on 20<sup>th</sup> January 2017.
19. Key discussant during the MFC annual meet at JSS Ganiyari on NCDs of the poor in January 2017, at Ganiyari Bilaspur, Chattisgarh from 27<sup>th</sup> to 29<sup>th</sup> January 2017.
20. Project Review Meeting of Setting up of Hospital Based Cancer Registries (HBCRs) in Regional Cancer Centres (RCC), at Bengaluru on 1<sup>st</sup> February 2017.
21. Meeting of the Research Area Panel on Cancer of NCDIR, at Bengaluru on 2<sup>nd</sup> February 2017.
22. Capacity Building Programme for ICMR Officers at Administrative School College of India, Hyderabad from 6<sup>th</sup> - 11<sup>th</sup> February 2017.
23. Second Workshop on Development of an Atlas of Cancer in Haryana State at Medanta, Gurgaon on 13<sup>th</sup> February 2017.
24. Workshop on Hospital Based Stroke Registry core form at Medanta, Gurgaon on 13<sup>th</sup> February 2017.
25. Meeting with Joint Secretary, e-Health Division, MOFHW to discuss on NCDIR e-Mor and NDRI, Scope of SNOMED CT in disease reporting systems on 15<sup>th</sup> February 2017.
26. Meeting of the Scientific Advisory Board of Ramaiah Medical College Hospital, at Bengaluru on 17<sup>th</sup> February 2017 as a member of the Committee.
27. All India Workshop on Software Modules Developed by NCDIR held at Guwahati on 2<sup>nd</sup> and 3<sup>rd</sup> March 2017.
28. Panelist in the session on “Have low middle income countries (LMIC) used risk factors and cancer surveillance data to inform cancer control?” in the Scientific Symposium-Frontiers in Epidemiology at Mumbai on 6<sup>th</sup> and 7<sup>th</sup> March 2017.

#### **Dr. Roli Mathur**

1. Key faculty in the “Training on Principles of Ethics Committee members” and delivered a talk at Agartala Government Medical College, Agartala, Tripura on 5<sup>th</sup> August 2016.
2. Local Surveyor for the International SIDCER Re-Survey of Tata Memorial Hospital Institutional Ethics Committee, Mumbai from 22<sup>nd</sup> – 23<sup>rd</sup> August 2016.
3. Resource person for Ethics workshop at National Institute for Research in Reproductive Health, Mumbai on 24<sup>th</sup> August 2016.
4. Resource Faculty for Master Program in Research Ethics at Yenepoya University, Mangalore on 1<sup>st</sup> September 2016.
5. Conducted the Regional Consultation on National Ethical Guidelines for Biomedical and Health Research involving Human Participants at NCDIR,

Bengaluru on 4<sup>th</sup> October 2016.

6. Conducted the Advisory Committee Meeting for “Draft National Ethical Guidelines for Biomedical and Health Research involving Human Participants, 2016” at National Centre for Disease Informatics and Research, Bengaluru on 13<sup>th</sup> - 14<sup>th</sup> October 2016.
7. Attended the meeting of Niti Aayog and presented the Ethics Bill on 18<sup>th</sup> October 2016.
8. Attended the meeting with Prof. J J M Van Delden, Chairperson, CIOMS, Geneva at DHR on 19<sup>th</sup> October 2016.
9. Conducted the Advisory Committee Meeting for “Draft National Ethical Guidelines for Biomedical and Health Research involving Human Participants, 2016” at National Centre for Disease Informatics and Research, Bengaluru on 1<sup>st</sup> - 2<sup>nd</sup> November 2016.
10. Attended the “Biomedical and Health Research (Regulation) Bill” meeting on 3<sup>rd</sup> November 2016 at DHR’s Conference Room, Indian Red Cross Society, New Delhi.
11. Attended the Selection Committee Meeting for the ICMR – CNMC STS Excellence Award - 2016 on 3<sup>rd</sup> November 2016 at ICMR Hqrs., New Delhi.
12. Speaker in the first “International Symposium on Pediatric Bioethics” held on 5<sup>th</sup> – 6<sup>th</sup> November 2016 at St. John’s National Academy of Health Sciences, Bengaluru.
13. Conducted the Advisory Committee Meeting for “Draft National Ethical Guidelines for Biomedical and Health Research involving Human Participants, 2016” at National Centre for Disease Informatics and Research, Bengaluru on 7<sup>th</sup> – 8<sup>th</sup> November 2016.
14. Expert Site Visit to the Dystrophy Annihilation Research Trust, Bengaluru for consideration of recognition as Scientific and Industrial Research Organization (SIRO) by DSIR on 12<sup>th</sup> November 2016.
15. Attended the meeting of Project Screening Committee (PSC) under the Chairmanship of Joint Secretary (PNRK), Ministry of AYUSH on 15<sup>th</sup> and 16<sup>th</sup> November 2016 at Ayush Bhawan, New Delhi.
16. Attended the meeting of Scientific Advisory Group (SAG) to the Division of Basic Medical Sciences (BMS) on 16<sup>th</sup> November 2016 at ICMR Hqrs., New Delhi.
17. Resource person for the “National Conference on Health Care system in India and Human Rights Concerns” at CUSAT, Kochi Kerala on 7<sup>th</sup> December 2016.
18. Conducted the National Consultation on National Ethical Guidelines for Biomedical and Health Research involving Human Participants, at ICMR Hqrs. New Delhi on 14<sup>th</sup> December 2016.
19. Attended the IRB / Institutional Ethics Committee meeting of the Centre for Human Genetics, Bengaluru on 17<sup>th</sup> December 2016.

20. Organised an Ethics Seminar at the XL Indian Social Science Congress (ISSA) about 'People Health And Quality of Life in India' at University of Mysore on 20<sup>th</sup> December 2016.
21. Delivered a lecture to students of Master's Programme in Human Disease Genetics on 9<sup>th</sup> January 2017 at Centre for Human Genetics, Bengaluru.
22. Organized the South Zonal Consultation for Food Fortification at Indian Institute of Science, Bengaluru on behalf of NCDIR, ICMR for Dept. of Women and Child Development on 20<sup>th</sup> January 2017.
23. Attended and made a presentation in the International Conference on the theme "Revolution of Laboratory Medicine in Modern Biology" held from 15<sup>th</sup> - 17<sup>th</sup> February 2017 at Nehru Center, Worli Mumbai.
24. Attended the 1<sup>st</sup> meeting for the advisory panel meeting via video conference for the YU-FIC Research Ethics Masters Program for India at Yenepoya University, Mangalore on 20<sup>th</sup> February 2017.
25. Attended the CIOMS Executive Committee Meeting as ICMR Representative member on 28<sup>th</sup> February 2017 via teleconference.
26. Attended the Meeting of the Research Area Panel on Cancer of NCDIR on 2<sup>nd</sup> February 2017.
27. Attended the First Meeting of Advisory Group-NIE-ICMR-WHO Online Course for Ethics Committees in India at National Institute of Epidemiology, Chennai on 17<sup>th</sup> March 2017.
28. Attended the teleconference on the Global Summit for National Ethics Committees Steering Committee Meeting by WHO-Hqrs, Geneva on 21<sup>st</sup> March 2017.

#### **Dr. Sathya Prakash M**

1. Attended the meeting of "Pilot study for establishing nationwide network of registries on management of acute coronary event (MACE Registries)" at ICMR Hqrs., New Delhi on 22<sup>nd</sup> April 2016.
2. Attended the training program on WHO STEPS at Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram on 22<sup>nd</sup> and 23<sup>rd</sup> August 2016.
3. Attended the workshop for finalizing Manual for National NCD Monitoring Survey at Centre for Community Medicine, All India Institute of Medical Sciences, New Delhi on 2<sup>nd</sup> September 2016.
4. Attended the Research Advisory Committee meeting for Multidisciplinary Research Unit (MRU) at Shivamogga Institute of Medical Sciences, Shivamogga on 7<sup>th</sup> October 2016.

#### **Dr. Sukanya R**

1. Attended the meeting of Cancer Burden Methods Workshop at ICMR Hqrs., New Delhi on 18<sup>th</sup> May 2016.

2. Attended and made a presentation on NCDIR-e-Mortality Software in the Meeting with Govt. officials of Dept. of Health and Family Welfare, Tamil Nadu chaired by DG, ICMR and Principal Secretary - Health, Govt. of Tamil Nadu at National Institute of Epidemiology, Chennai on 9<sup>th</sup> September 2016.
3. Attended the review meeting of MRU and MRHRU in Karnataka chaired by Shri Manoj Pant, JS, DHR held at NCDIR on 16<sup>th</sup> September 2016.
4. Attended and made a presentation on NCDIR-e-Mortality Software in the meeting of Stakeholders in Karnataka (Chief Registrar of Births and Deaths, Central Bureau of Health Intelligence – Regional Office of H & FW, Medical Colleges in Bengaluru) on 24<sup>th</sup> October 2016.
5. Attended and made a presentation on NCDIR-e-Mortality Software at the Meeting with Director, Dept. of Public Health, Govt of Tamilnadu to demonstrate NCDIR e-Mor and discuss implementation plan on 27<sup>th</sup> October 2017 at Chennai.
6. Participated as a Resource person at the Pre Annual Review Meeting Workshop of the National Cancer Registry Programme of NCDIR held at Kohima, Nagaland 9<sup>th</sup> and 10<sup>th</sup> November 2016 and presented on, a) Sequence and Laterality and b) Concept of multiple Primary site of cancer.
7. Participated at the XXXII Annual Review Meeting of the National Cancer Registry Programme of NCDIR, Kohima on 11<sup>th</sup> and 12<sup>th</sup> November 2016 and made presentation on 'Classification of Lymphoma and leukemia'.
8. Attended the Meeting with Addl. Registrar General of India, New Delhi to discuss Medical Certification for Cause of Death (MCCD) system and integration of NCDIR e-Mor with the MCCD system 11<sup>th</sup> January 2017.
9. Attended the meeting with Dr. Deepak Agarwal, AIIMS, New Delhi on 11<sup>th</sup> January 2017 to discuss the National Death Registry of India (NDRI) – e Death Note software application at AIIMS, and provided suggestions to improve software features.
10. Organized the workshop on Hospital Based Stroke Registry core form at Medanta, Gurgaon on 13<sup>th</sup> February 2017.
11. Attended the Meeting with Scientists of National Institute of Medical Statistics, ICMR, New Delhi to understand the NIMS-ICMR - WHO study to validate verbal autopsy tools on 14<sup>th</sup> February 2017.
12. Attended the meeting with Joint Secretary, e-Health Division, MOFHW to discuss on NCDIR e-Mor and NDRI, Scope of SNOMED CT in disease reporting systems on 15<sup>th</sup> February 2017.

### **Mrs. F S Roselind**

1. Attended the expert driven meeting on “National Programme on epidemiology data analytics” held on 29<sup>th</sup> and 30<sup>th</sup> April at NIN, Hyderabad as participant and briefed about NCDIR-NCRP data.
2. Attended the meeting of Media Interaction and Press release of Consolidated reports of PBCRs and HBCRs 2012 - 14 on 18<sup>th</sup> May 2016.

3. Attended the Inaugural workshop of Haryana Cancer Atlas held from 20<sup>th</sup> - 21<sup>st</sup> May 2016 at Panchkula, Haryana and done live demonstration of the Online data capture of the project.
4. Attended and delivered a lecture on “NCRP’s Role in Cancer Registration in India” in Indian Cancer Society Registry Meeting 2016 held on 2<sup>nd</sup> September 2016 at TMH, Mumbai.
5. Attended and conducted the sessions on Online data capture (Live demonstration) for HBCRs and Quality checks at the Feasibility Workshop “Development of Population Based Cancer Registries in urban population of mid-size and large size cities along Ganga River” held on 23<sup>rd</sup> and 24<sup>th</sup> Sep 2016 at Kamala Nehru Memorial Hospital, Allahabad.
6. Attended the meeting on “Cause of death information and use of Information Technology” on 24<sup>th</sup> October 2016 at NCDIR, Bengaluru.
7. Attended and conducted the sessions on Software updates – Oncology modules, Data quality of HBCRs at the XXXII Pre-Annual Review Meeting Workshop of National Cancer Registry Programme of NCDIR on 9<sup>th</sup> – 10<sup>th</sup> November 2016.
8. Attended and presented on “Highlights of HBCR/POCSS” at the Annual Review Meeting on 11<sup>th</sup> - 12<sup>th</sup> Nov. 2016 at Naga Hospital Authority, Kohima, Nagaland.
9. Visited Standardization Testing and Quality Certification (STQC), Govt. of India in Bengaluru on 8<sup>th</sup> Dec 2016.
10. Organized the Review Meeting of Regional Cancer Centres (RCC) on 1<sup>st</sup> February 2017 at NCDIR, Bengaluru and presented the Report on RCCs data status of all the 14 RCCs.
11. Attended the 14th Bio Asia Meet held from 6<sup>th</sup> – 8<sup>th</sup> Feb 2017 at Hyderabad International Convention Centre, Hyderabad to know the recent advancements in technology and its implementation.
12. Attended and conducted sessions on Online data capture (Live demonstration) of the project and data quality at the Second Workshop on “Development of a Cancer Atlas in Haryana State” held on 13<sup>th</sup> February 2017 at Medanta the Medicity, Gurgaon, Haryana.
13. Organised All India Workshop on Software Modules Developed by NCDIR and made presentation on NCDIR’s Software Modules, Independent Modules (Surgical Oncology and Medical Oncology) held on 2<sup>nd</sup> and 3<sup>rd</sup> March 2017 at Dr. B Borooah Cancer Institute, Guwahati.

#### **Dr. Meesha Chaturvedi**

1. Participated in National Programme on Epidemiology data analysis, National Institute of Nutrition, Hyderabad 29<sup>th</sup> and 30<sup>th</sup> April 2016 and presented Overview of NCRP.
2. Attended the Cancer Burden Methods Workshop at New Delhi on 17<sup>th</sup> May 2016.
3. Involved in Organization and conduction of Media Interaction and Press release

- of Consolidated Reports of PBCRs and HBCRs 2012 - 14 on 18<sup>th</sup> May 2016 at ICMR Hqrs.
4. Conducted the First workshop on Development of an Atlas of cancer in Haryana State on 20<sup>th</sup> - 21<sup>st</sup> May 2016 at Panchkula, Haryana.
  5. Attended the Karnataka Cancer Control Committee meeting with Health Secretary Karnataka on 27<sup>th</sup> May 2016.
  6. Organised and Conducted the Feasibility Workshop for Cancer Registries along Ganga River at Allahabad on 23<sup>rd</sup> and 24<sup>th</sup> September 2016.
  7. Attended the meeting of National Ethical Guidelines of Biomedical and Health Research involving Human Participants, 2016 on 4<sup>th</sup> October 2016.
  8. Involved in organization and conduction of the Annual Review Meeting Workshop and the Annual Review Meeting and presented on a) Action taken on recommendation of previous ARM b) Revisions in Core Proforma and c) Inclusion of benign CNS tumours in cancer registry at Kohima, Nagaland from 08<sup>th</sup> - 11<sup>th</sup> November 2016.
  9. Participated in the 2<sup>nd</sup> meeting on State Cancer Control Committee, Govt. of Karnataka held on 5<sup>th</sup> January 2017.
  10. Participated in Project Review meeting on Regional Cancer Centres at NCDIR, Bengaluru on 1<sup>st</sup> February 2017.
  11. Involved in organization and conduction of the Second workshop on Development of an Atlas of cancer in Haryana State at Gurgaon on 13<sup>th</sup> February 2017.
  12. Participated in 9<sup>th</sup> Annual Conference of Association of practicing pathologists and delivered Oration on “NCDIR - NCRP - Haryana Cancer Atlas” at MM Institute of Medical Science and Research, Ambala on 26<sup>th</sup> Feb 2017.
  13. Participated in National Symposium on Gallbladder Cancer at Dr. Rammanohar Lohia Institute of Medical Science, Lucknow and presented on Overview of NCRP on 3<sup>rd</sup> and 4<sup>th</sup> March 2017.
  14. Participated in Annual Conference of Indian Society for Neuro-Oncology at NIMHANS, Bengaluru and presented on “synopsis of NCRP data on CNS Tumours” on 12<sup>th</sup> March 2017.
  15. Attended the Consultation meeting of experts for Cancer Research in North Eastern Region - a Multidisciplinary Research Programme for prevention and control of Cancer in North Eastern States in India at NCDIR, Bengaluru on 22<sup>nd</sup> March 2017.
  16. Attended the meeting on methodology for project “Population Based Cancer Survival on Cancers of Breast, Cervix and Head & Neck” at NCDIR, Bengaluru on 26<sup>th</sup> March 2017.
  17. Feasibility Workshop for PBCRs in Urban Population of mid-size and Large Size Cities along Ganga river at IGIMS, Patna on 29<sup>th</sup> March 2017.

### Mr. K Vaitheeswaran

1. Attended the Cancer Burden Methods Workshop at New Delhi on 17<sup>th</sup> May 2016.
2. Attended the media Interaction and Press release of Consolidated Reports of PBCRs and HBCRs 2012 - 14 (18 May) on 18<sup>th</sup> May 2016 at ICMR Hqs.
3. Conducted the First workshop on Development of an Atlas of cancer in Haryana State on 20<sup>th</sup> - 21<sup>st</sup> May 2016 at Panchkula, Haryana.
4. Organised and Conducted the Feasibility Workshop for Cancer Registries along Ganga River at Allahabad on 23<sup>rd</sup> and 24<sup>th</sup> September 2016.
5. Attended the meeting of National Ethical Guidelines of Biomedical and Health Research involving Human Participants, 2016 on 4<sup>th</sup> October 2016.
6. Participated in Project Review meeting on Regional Cancer Centres at NCDIR, Bengaluru on 1<sup>st</sup> February 2017.
7. Participated in the meeting of Research Area Panel of Cancer at NCDIR, Bengaluru on 2<sup>nd</sup> February 2017.
8. Involved in organization and conduction of the Second workshop on Development of an Atlas of cancer in Haryana State at Gurgaon on 13<sup>th</sup> February 2017.
9. Attended and presented poster in Scientific Symposium “Frontiers in Epidemiology” at Mumbai 6<sup>th</sup> - 7<sup>th</sup> March 2017.
10. Attended the Consultation meeting of experts for Ca Res NER - a Multidisciplinary Research Programme for prevention and control of Cancer in North Eastern States in India at NCDIR, Bengaluru on 22<sup>nd</sup> March 2017.
11. Attended the meeting on methodology for project “Population Based Cancer Survival on Cancers of Breast, Cervix and Head & Neck” at NCDIR, Bengaluru on 26<sup>th</sup> March 2017.
12. Attended the Feasibility Workshop for PBCRs in Urban Population of mid-size and Large Size Cities along Ganga river at IGIMS, Patna on 29<sup>th</sup> March 2017.

### Mrs. Priyanka Das

1. Attended the Media Interaction and Press release of Consolidated Reports of PBCRs and HBCRs 2012 - 14 on 18<sup>th</sup> May 2016 at ICMR Hqs.
2. Attended the Meeting on Improving Medical Certification of Cause of Death held at National Institute of Research in Tuberculosis (NIRT), Chennai on 9<sup>th</sup> September 2016.
3. Attended the ICMR – WHO Regional Consultation on “National Ethical Guidelines for Biomedical and Health Research involving Human Participants” at NCDIR on 4<sup>th</sup> October 2016.
4. Attended the meeting of Cause of Death Information and use of Information Technology held at NCDIR on 24<sup>th</sup> October 2016.

5. Involved in organization and conduction of the Workshop and XXXII Annual Review Meeting of NCDIR-NCRP at Naga Hospital Authority, Kohima, Nagaland from 9<sup>th</sup> - 12<sup>th</sup> Nov 2016.
6. Visited Standardization Testing and Quality Certification (STQC), Govt. of India in Bengaluru on 8<sup>th</sup> Dec 2016.
7. Attended the ICMR –WHO National Consultation Meeting on National Ethical Guidelines for Biomedical and Health Research involving Human Participants at New Delhi on 14<sup>th</sup> December 2016.
8. Visited Delhi PBCR at AIIMS, New Delhi from 13<sup>th</sup> – 15<sup>th</sup> December 2016.
9. Attended the Project Review meeting of Regional Cancer Centres on 1<sup>st</sup> February 2017 at NCDIR, Bengaluru.
10. Attended the meeting of Research Area Panel on cancer at NCDIR on 2<sup>nd</sup> February 2016.
11. Attended the Bio-Asia 2017, international conference from 6<sup>th</sup> - 8<sup>th</sup> February 2017 in Hyderabad.
12. Attended the Consultation meeting of Experts for Ca Res NER - a Multidisciplinary Research Programme for Prevention and Control of Cancer in the North Eastern States in India.

#### **Mr. K L Sudarshan**

1. Visited STQC Bengaluru office on 8<sup>th</sup> December 2016 to understand various aspects of IT related security services.
2. Participated in the 2nd meeting on state cancer control committee, Govt. of Karnataka held on 5<sup>th</sup> January 2017.
3. Participated as Resource person in the RCC Review meeting on 1<sup>st</sup> February 2017 and RAP on cancer meeting on 2<sup>nd</sup> February 2017.
4. Participated in the “14<sup>th</sup> Bio Asia Meet” held from 6<sup>th</sup> – 8<sup>th</sup> February 2017 at HICC, Hyderabad.
5. Visited Army Hospital, New Delhi on 28<sup>th</sup> February 2017 to examine IT centre and customizing the NCRP software for deployment.
6. Involved in organization and conduction of the All India Workshop on Software Modules Developed by NCDIR held on 2<sup>nd</sup> and 3<sup>rd</sup> March 2017 at Dr. B. Borooah Cancer Institute, Guwahati and demonstrated the HBCR data entry module and Presented HBCR - POCSS outputs.
7. Attended the Consultation meeting of Experts of Ca Res NER - a Multidisciplinary Research Programme for prevention and control of Cancer in North Eastern States on 22<sup>nd</sup> March 2017.
8. Co-author for the poster presentations in Scientific Symposium “Frontiers in Epidemiology” 6<sup>th</sup> - 7<sup>th</sup> March 2017.
  - a. Non Cutaneous Melanoma in Indian Population –An Epidemiological Insight into National Cancer Registry Programme.

9. Participated in the Training cum workshop of Public Financial Management System on 6<sup>th</sup> and 7<sup>th</sup> March 2017 at Bengaluru.

### Mr. Vinay Urs K S

1. Attended the ICMR – WHO Regional Consultation on “National Ethical Guidelines for Biomedical and Health Research involving Human Participants” at NCDIR on 4<sup>th</sup> October 2016.
2. Visited STQC Bengaluru office on 8<sup>th</sup> Dec 2016 to understand various aspects of IT related security services.
3. Deputation to develop mobile application in ODK for NCD Survey at National Institute of Epidemiology, Chennai on 27<sup>th</sup> and 28<sup>th</sup> February 2017.
4. Attended “First Induction Training Workshop” at National Institute of Epidemiology, Chennai from 3<sup>rd</sup> - 7<sup>th</sup> April 2017.

### Dr. Debjit Chakraborty

1. Attended the Media Interaction and Press release of Consolidated Reports of PBCRs and HBCRs 2012 - 14 on 18<sup>th</sup> May 2016 at ICMR Hqs.
2. Attended the Workshop on Haryana Cancer Atlas and presented on ICD coding of Cancer and Guidelines for Case Abstraction from Medical Records at Panchkula on 20<sup>th</sup> - 21<sup>st</sup> May 2016.
3. Attended the Workshop on Ethical Guidelines of ICMR in ICMR - NCDIR on 4<sup>th</sup> October 2016.
4. Attended the Meeting on E- MoR application with stakeholders from Karnataka at ICMR - NCDIR on 24<sup>th</sup> October 2016.
5. Attended the Meeting on Childhood Cancer with Dr. Ramandeep Singh Arora in ICMR - NCDIR on 6<sup>th</sup> December 2016.
6. Attended the Pre-ARM workshop in Kohima, Nagaland and presented on ICD coding of Cancer, Dealing with Unspecified and Unknown Primary and Guidelines for Case Abstraction from Medical Records on 9<sup>th</sup> - 10<sup>th</sup> November 2016.
7. Conducted Orientation Programme with presentation on Quality Issues in Cancer Registration for PG students of A J College Mangalore at NCDIR, on January 18<sup>th</sup> 2017.
8. Attended the meeting of Research Area Panel on Cancer at NCDIR on February 2<sup>nd</sup> 2017 and presented proposal synopsis.
9. Attended the Bio Asia 2017 conference in Hyderabad from 6<sup>th</sup> - 8<sup>th</sup> February 2017.
10. Participated and presented on Cancer terminologies, ICD coding of Cancer and Guidelines for Case Abstraction from Medical Records at All India Workshop on Software Modules Developed by NCDIR held on 2<sup>nd</sup> and 3<sup>rd</sup> March 2017 at Dr. B. Borooah Cancer Institute, Guwahati.

11. Attended and presented a poster - Non Cutaneous Melanoma in Indian Population - An Epidemiological Insight into National Cancer Registry Programme during the Scientific Symposium on Frontiers in Epidemiology in TMH, Mumbai on 6<sup>th</sup> and 7<sup>th</sup> March 2017.
12. Attended and presented a synopsis of the concept proposal prepared by cancer registries in North East and NCDIR Consultation Meeting of Experts for CaRes NER - a Multidisciplinary Research Programme for Prevention and Control of Cancer in the North Eastern States in India at NCDIR on 22<sup>nd</sup> March 2017.
13. Attended and presented on ICD coding of Cancer and Guidelines for Case Abstraction from Medical Records at the Feasibility workshop on Ganga PBCR at IGIMS Patna, 29<sup>th</sup> March 2017.

#### **Mr. Sathish Kumar**

1. Attended the GBD, Cancer Burden Methods Workshop at New Delhi on 17<sup>th</sup> May 2016.
2. Attended Press release of Consolidated Reports of PBCRs and HBCRs 2012 - 14 on 18<sup>th</sup> May 2016 at ICMR Hqrs.
3. Attended the meeting of National Ethical Guidelines of Biomedical and Health Research involving Human Participants, 2016 on 4<sup>th</sup> October 2016.
4. Involved in organization and conduction of the Annual Review Meeting Workshop and the Annual Review Meeting at Kohima, Nagaland from 08<sup>th</sup> - 11<sup>th</sup> November 2016.
5. Participated in Project Review meeting on Regional Cancer Centres at NCDIR, Bengaluru on 1<sup>st</sup> February 2017.
6. Attended Scientific Symposium "Frontiers in Epidemiology" at Mumbai on 6<sup>th</sup> and 7<sup>th</sup> March 2017.
7. Attended the Consultation meeting of experts for Ca Res NER - a Multidisciplinary Research Programme for prevention and control of Cancer in North Eastern States in India at NCDIR, Bengaluru on 22<sup>nd</sup> March 2017.
8. Meeting on methodology for project "Population Based Cancer Survival on Cancers of Breast, Cervix and Head & Neck" at NCDIR, Bengaluru on 26<sup>th</sup> March 2017.

#### **Mr. V Raju Naik**

1. Attended the All India workshop on software modules developed by NCDIR at Dr. B Borooah Cancer Institute, Guwahati, Assam, on 2<sup>nd</sup> - 3<sup>rd</sup> March 2017.
2. Attended the Feasibility workshop for setting up population based cancer registries in urban population of mid-size and large size cities along Ganga river at IGIMS, Patna on 29<sup>th</sup> March 2017.

# NCDIR Staff





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