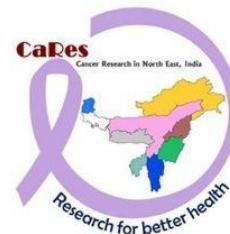




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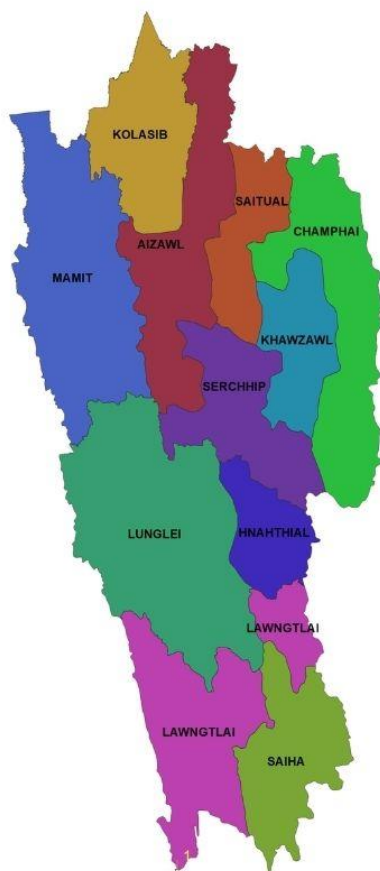
NCDIR

NATIONAL CENTRE FOR DISEASE
INFORMATICS AND RESEARCH



REPORT ON MONITORING SURVEY OF CANCER RISK FACTORS AND HEALTH SYSTEM RESPONSE IN NORTH EAST REGION (NER)

2022



MIZORAM

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Secretary
Health & Family Welfare Department
Govt. of Mizoram



Date.....

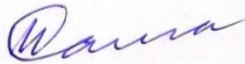
Message

I am happy to note that ICMR-NCDIR has successfully completed the “Monitoring Survey of Cancer Risk Factors and Health System Response in North – Eastern Region” as a part of the ‘Prevention and Control of Cancer in the North Eastern States in India (CaRes NER Programme)’. The survey has comprehensively covered all districts and included study sites based on reliable statistical estimates based on existing PBCR data. The reported prevalence rate of risk factors may provide answers to questions related to the likely reasons for the rising trends in the burden of cancer in Mizoram state.

While the survey has generated a baseline database of risk factors and health system capacity, there is a need for periodic monitoring of trends in the baseline estimates over time. This reiterates the importance of setting up surveillance sites at the Population Based Cancer Registries (PBCRs) for conducting subsequent surveys.

The results of this survey will provide substantive data to understand the depth of cancer associated risk factor burden, the current response of existing health care facilities towards cancer prevention, control and patient care. Overall, this survey will greatly benefit state health officials and policy makers in formulating cancer control measures and its implementations. It will also accelerate operational research for designing evidence-based measures for the prevention and control of cancer in the region.

Place : Aizawl
Date : May 17, 2022


(R. LALRAMNGHAKA)
Secretary to the Govt. of Mizoram,
Health and Family Welfare Department

Foreword

The rising burden of cancer across the country is a cause for worry. The incidence and mortality rates for cancer are highest in the North East Region (NER) of the country. The ICMR-NCDIR has successfully completed the 'Monitoring survey of cancer risk factors and health system response in NER 2019-2021' as part of the cancer research NER (CaRes NER) Programme in the state of Mizoram. The aim of the survey was to estimate the prevalence of major cancer-associated behavioral and metabolic risk factors and pattern of their distribution in the population. The response of the health system towards cancer prevention and control at the primary and secondary level in public and private sector health facilities has also been assessed. The findings from this survey will form a baseline for monitoring of risk factors for comparison in subsequent surveys.

This report contains the findings that were generated from the monitoring survey which was conducted in the state of Mizoram, implemented through PBCR Mizoram situated at Civil Hospital, Aizawl.

I sincerely appreciate the efforts of the Principal Investigator and Co-Principal Investigator of the study site for their role in supervising and coordinating a smooth and efficient conduct of the survey. The role and support provided by the scientific and technical staff at ICMR-NCDIR, Bengaluru is duly acknowledged.

I hope that this survey will aid in establishing a cancer surveillance program in the region which has so far been compiling data on cancer related statistics. As cancer registration is an integral part of cancer surveillance, an ongoing surveillance of risk factors will help to correlate trends in cancer incidence and risk factors. Valuable information shared with the state and local authorities shall facilitate efforts to reduce the cancer burden through appropriate interventions.



Prashant Mathur



Foreword

The burden of cancer in Mizoram has seen a worrying trend in unabated incident numbers and cancer being the number one cause of death in Mizoram for the last couple of years. The incidence and mortality rates for cancer appear to be highest for the North East Region (NER) of the country. In view of this, ICMR-NCDIR has successfully completed the 'Monitoring survey of cancer risk factors and health system response in NER' as a part of the 'Prevention and control of cancer in the North Eastern States in India (CaRes NER Programme)'. The aim of the survey was to understand the burden of major cancer-associated behavioural and metabolic risk factors and its pattern of distribution in the local general and cancer affected population. The findings from this survey will form a baseline for monitoring of risk factors for comparison in subsequent surveys. This Report contains the findings that were generated from the monitoring survey which was conducted in the State of Mizoram, implemented through the existing Population Based Cancer Registry (PBCR) site at Civil Hospital, Aizawl, Mizoram.

It is hoped that this survey will aid in establishing a cancer risk factor surveillance program at this PBCR site which has so far been compiling data on cancer related statistics since 2003. It is hoped that this survey report will greatly aid in the attempt to achieve universal health coverage, determine outcomes of different prevention and control initiatives which are being implemented in the site.

I express great appreciation for the efforts of the Principal Investigator, Co- Investigator/s and all the staff of Mizoram PBCR and 'Monitoring survey of cancer risk factors and health system response in NER', for their role in supervising and coordinating a smooth and efficient conduct of the survey.

I would also like to recognise the work of the Principal Investigator and staff of NCDIR for the remarkable dedication, hard work and coordination to bring out this scientific report which is vital and timely.

It is hoped that this report will provide constructive and valuable information to policy, program implementation and health care officials for planning and managing cancer prevention and control efforts in the State.

DR. THANCHUNGNUNGA
Deputy Medical Superintendent
Civil Hospital, Aizawl
Mizoram



Dr. Eric Zomawia
Mission Director
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Date :

Acknowledgement

I am truly grateful to NCDIR-ICMR, under the leadership of Dr. Prasanth Mathur, for the successful implementation of the project "Monitoring survey of cancer risk factors and health system response in North – Eastern Region".

I also acknowledge with immense gratitude the co-investigators and all staff who worked tirelessly towards the successful completion of this project. I also applaud all Mizoram PBCR staff who contributed tremendously in all aspects of the project's functioning.

I also express heartfelt gratitude to members of Village Councils, staff of various PHCs and all other district health coordinators in our survey area for their co-operation, coordination and invaluable dedication in aiding survey staff in all areas of their travel and data collection.

(DR. ERIC ZOMAWIA)
Principal Investigator
Population Based Cancer Registry
Civil Hospital, Aizawl
Mizoram

List of Abbreviations

BMI	Body Mass Index
BP	Blood pressure
CCA	Central Coordinating Agency
CEBs	Census Enumeration Blocks
CHCs	Community Health Centres
Co-PI	Co-Principal Investigator
CSA	Coordinating PBCR covering State Agency
CVDs	Cardiovascular Diseases
DHs	District Hospitals
HHs	Households
ICMR	Indian Council of Medical Research
MSW	Medical Social Worker
NCDs	Noncommunicable Diseases
NCDIR	National Centre for Disease Informatics and Research
NER	North-East Region
NHM	National Health Mission
NNMS	National NCD Monitoring Survey
NPCDCS	National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke
PBCR	Population Based Cancer Registry
PHCs	Primary Health Centres
PI	Principal Investigator
PPS	Probability Proportional to Size
PSUs	Primary Sampling Units
SDGs	Sustainable Development Goals
TWG	Technical Working Group
WHO	World Health Organization
STEPS	STEPwise approach to surveillance
SARA	Service Availability and Readiness Assessment
WC	Waist Circumference

Executive Summary

The incidence, mortality, and cumulative risk of developing cancer has been consistently high in the Northeastern Region (NER) of India, according to reports of the National Cancer Registry Programme (NCRP). While the Population Based Cancer Registries (PBCRs) under the NCRP have been instrumental in providing the much-needed cancer data for the geographic area covered by a registry, it is vital to understand the likely reasons for the reported cancer incidence and its outcomes. Cancers share several common risk factors, and comparable health system needs with other significant NCDs (cardiovascular diseases, diabetes, stroke, chronic obstructive pulmonary disease and chronic kidney disease) for prevention, early detection and control. These include major behavioural and metabolic risk factors such as tobacco use, unhealthy diet, inadequate physical activity, alcohol use, raised blood glucose and overweight/obesity. Therefore, establishing a cancer risk factor surveillance system within a cancer registry is essential to track changes, implement suitable interventions and evaluate their impact, which would be reflected in the magnitude of cancer that is periodically reported from the registry.

Hence, this survey is an approach to implement a baseline monitoring system to drive us in understanding the linkage between exposures to risk factors, other NCDs and cancer incidence derived from the PBCRs in the NER and would aid in analysing the trends over time. This will enable the policymakers and stakeholders at making best decisions to address cancer prevention and control in the state.

The survey objectives included:

Primary objectives: To generate prevalence of key cancer and other NCD related risk factors and estimate health system response in the state of Mizoram.

Secondary objectives:

- To set a baseline to monitor and track trends in the prevalence of risk factors associated with cancer and other NCDs in the state of Mizoram.
- To link or correlate risk factors with cancer incidence and burden collected by the PBCR in the Mizoram state.

Key findings:

- The proportion of solid fuel use was high in rural areas (77.3%). More than two third of the rural population (76.4%) used wood as cooking fuel. About 77% of the rural population used 'open stove' or 'chulha' for cooking.

- Over 77% of the total population were current tobacco users, comprising 81.2% men and 72.9% women. More than half (66.6%) of men were current users of smoked tobacco.
- 17.2% of the respondents reported to have consumed alcohol over the past 12 months and 12.5% reported alcohol use within the past month.
- The mean number of days on which either fruits or vegetables were consumed was 6.3 days in a week.
- According to the WHO criteria, the proportion of those who were obese was 6.9%, while the prevalence of obesity was higher (35.9%) using Asian cut off points.
- The prevalence of raised blood pressure was 21.6%, of which the proportion of newly detected (14.1%) was higher than previously known (7.5%).
- The proportion of respondents whose blood glucose level was over 126 mg/dl was 5.4%, among whom the proportion of known diabetics was 4.5%.
- Nearly 23.5% of the cancer patients had sought health care outside of their state, the majority (65.7%) were availing of treatment at a government health facility.
- Around 40% of the cancer patients were self-financing their treatment; 20% were covered by health insurance.
- Cancer screening for all three types of cancers (cervical, breast, oral) was available in 20% of the PHCs, 55.6% of the CHCs' and 33.3% of the District hospitals.
- A few CHCs had a specialist in position in the following departments: medicine (44.4%), surgery (11.1%) and gynaecology (11%).
- Nearly 83% of the General Duty Medical Officers at the District hospitals had been trained for NPCDCS/NHM (NCD related)/State program. Likewise, the proportion of staff from other cadres who had undergone NCD-related programme management training was low in PHC, CHC and District hospitals.
- Around 33% of the District hospitals had daycare facilities for chemotherapy.

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Chapter 1: Introduction

The National Cancer Registry Programme (NCRP) was established as early as 1981, and has its coordinating centre at ICMR-NCDIR, Bengaluru. The role of NCRP is vital in assessing indicators like incidence & prevalence of cancer, mortality trends and the quality of the healthcare systems being provided in different regions. The relevant health indicators are then collected, assessed, analysed and interpreted to provide inputs that help in formulating policies, programmes, and research activities. The cancer data is collected from the respective State PBCR for the analysis as mentioned above. The PBCR of Mizoram is situated in Civil Hospital, Aizawl. The PBCR was established in 2003 with 37 sources of registrations. The data analysed from these PBCRs helps study the cancer pattern of the population of a defined region and helps with time trend analysis of predominant cancers in the State. This leads to the formulation of prevention and control strategies for cancers prevalent in the region.

Sociodemographic profile of Mizoram		
	Population	Literacy Rate
Males	555339	93.4
Females	541867	89.3
Total	1097206	91.3

Source ^[1]

PBCR Coverage – Mizoram	
PBCR name	Mizoram
PBCR location	Civil Hospital, Aizawl
Coverage area	Mizoram State
Year of establishment	2003
Number of sources of registration	37
Area (in Sq. km)	21087
Coverage of urban and rural area (%)	52.1 & 47.9

1.1 Profile of cancer in Mizoram ^[2]

Cancer is among the top five leading causes of death in the State ^[3]. In Mizoram, the leading site of cancer was the stomach (18.0%) among males, which was followed by cancer of the oesophagus (15.4%) and cancer of the lung (14.3%). Whereas in females, the cervix uteri ranked as the leading cancer site (15.4%), followed by lung (14.1%) and breast (13.5%). Tobacco use related cancer sites were seen as high as a little over one third (43.3%)

among males and close to one fourth (22.1%) among females. Across both the gender, cancer of the lung (males-14.3%, females-14.1%) constituted the leading site, followed by oesophagus males-15.4%, females-3.7%).

Table.1.1 Number of cancer cases and Age Adjusted Incidence Rate (AAR) per 1,00,000 population

Gender	Mizoram State		Aizawl District	
	Number of New Cancer Cases	AAR	Number of New Cancer Cases	AAR
Males	4323	207.0	2180	269.4
Females	3736	172.3	1900	214.1

Table.1.2 Probability of one in number of persons developing any of leading cancer in 0-74 years in males and females, Mizoram.

Sl. No	PBCR Mizoram			
	Males		Females	
	Type of Cancer	Probability	Type of Cancer	Probability
1.	Stomach	1 in 21	Lung	1 in 29
2.	Lung	1 in 26	Cervix uteri	1 in 43
3.	Oesophagus	1 in 29	Breast	1 in 43
4.	Hypopharynx	1 in 83	Stomach	1 in 43
5.	Liver	1 in 86	Oesophagus	1 in 110

1.3 Availability of Health Services related to Cancer Care in Mizoram State

The geographical indisposition, rugged terrain, vast hilly areas, and many ethnic groups contribute to the shortage of quality cancer-related health care facilities. Treatment seeking behaviour and delay in diagnosis often impact the mortality of the population in Mizoram. The public health cancer continuum ranges from prevention to screening to treatment, including palliative care.

Table. 1.3 Availability of public health care services

A. Public sector health facilities ^[4,5,6]	Number
Sub centres (SC)	377
Health and Wellness Centre - Sub Centre (HWC-SC)	42
Primary Health Centres (PHC)	68
Health and Wellness Centre - Primary Health Centre (HWC-PHC)	54
Community Health Centres (CHC)	9
Sub-district Hospitals (SDH)	2
District Hospitals (DH)	12
Number of government allopathic doctors and dental surgeons	423
B. Tertiary health care facilities	
Medical Colleges ^[7]	1
Tertiary cancer care centre ^[8]	1
Regional cancer care centre ^[9]	1
C. State government health scheme ^[10]	Mizoram State Health Care Scheme (MSHCS)

1.4 Background

This survey was conducted as a part of Cancer Research in the North East Region (CaRes NER), a multidisciplinary programme for preventing and controlling cancer in the northeastern states run by ICMR-NCDIR, Bengaluru. It aims to form a baseline database of cancer and other NCD-related risk factors for comparison in subsequent surveys, which would help establish an NCD risk factor surveillance program. As cancer registration is an integral part of cancer surveillance, ongoing surveillance of risk factors will correlate with cancer incidence and risk factors. Moreover, with the set time-bound and attempts provided by NCD targets (10) and indicators (21) by 2025 ^[11] to achieve universal health coverage, ongoing surveillance would determine the outcomes of national health programmes. Therefore, establishing a surveillance system is of vital importance to track changes and evaluate interventions. The survey objectives were as follows.

1.5 Objectives

1.5.1 Primary objective

To generate key cancer and other NCD related risk factors and health system response indicators in the PBCR covered regions of Mizoram.

1.5.2 Secondary objectives

To set a baseline to monitor and track trends in the prevalence of risk factors associated with cancer and other NCDs in the PBCR covered regions of Mizoram. To link or correlate risk factors with cancer incidence in the region. The survey included four broad components

1. Household level Interview
2. Adult Interview
3. Cancer patient interview
4. Health Facility Interview

Chapter 2: Methodology

2.1 Survey Design

A cross sectional survey design was used to cover the target study population. A multistage cluster sampling was adopted for the survey. The population from the 2011 census was sorted by state, district, sub-district, town/village code , ward number to identify survey Primary Sampling Units (PSUs). Similar to the National NCD Monitoring Survey, the study procedures consisted of household, adult and health facility level interviews ^[12]. Cancer patient interviews were also conducted if any such patient was identified in the selected household. Questions that were specific to cancer prevention and access to care were included in the study tools.

2.2 Study Population

The target population for the survey was defined as all residents aged 18 or above residing in their usual residence. The institutional population comprising those living in collective places like students' dormitories, hospitals, hotels, prisons, military barracks, etc., were not included in the survey.

2.3 Sample size

The sample size for the survey was worked out to obtain reliable estimates for cancer risk factors related to adults in Population Based Cancer Registry (PBCR) covering areas. The sample size was estimated by considering the objectives of estimating the prevalence of behavioural risk factors for cancer and other NCDs (including tobacco use, alcohol consumption, and physical inactivity). The sample size was 2880 for the State of Mizoram with 100% coverage by the PBCR as show in the table below:

Table 2.3.1– Sample size charting for the survey

Registry Name	State Name	State Total Population	State Total Population (Age 18+)	Total Population (Age 18+) covering PBCR by state wise	Total Population of Study site (as per census 2011) - (Age 18+)	% of under PBCR covering area	Total sample size per Study Site (Approximately)	Total PSUs (48 HH per PSU)
Mizoram - PBCR	Mizoram	1097206	674279	674279	674279	100	2880	60
Total Sample Size and Total PSU							2880	60

2.4 Data Collection Tools

The study tools used for different levels included (i) Household (ii) Adult, (iii) Adult with cancer, and (iv) Health facility (PHC or urban equivalent, CHC/ District Hospital and private facilities). These instruments were adapted from the National NCD Monitoring Survey (NNMS) to suit survey objectives. Standard references were used to define the data variables.

2.5 Survey Period

The survey was conducted between November 2019 and December 2020.

2.6 Governance of Survey

The survey implementation was under the supervision, coordination and monitoring of the Central Coordinating Agency (CCA) at ICMR - National Centre for Disease Informatics & Research (NCDIR), Bengaluru.

The CCA provided all technical and scientific assistance for the survey. It was responsible for overall coordination, monitoring, quality assurance, data maintenance, cleaning, analysis and report writing with

the technical support from its partners. A team of experts were identified for survey supervision, monitoring and scientific guidance.

2.7 Quality Assurance and Training

The quality control measures were followed to standardise the survey at all stages and all levels of governance. This included preparing training materials, undertaking training, calibration and standardisation of equipment, data collection tools, field data collection and storage, handling blood samples and safe disposal mechanisms of the generated biomedical waste. A dashboard was created to monitor the live status of data collection and troubleshooting, or any queries or issues faced at the time of the field was solved through FAQ's and virtual calls.

Principal Investigators (PI) and Co-Principal Investigators (Co-PI) from both PBCRs were trained in all survey procedures as part of the CCA's two-day Training of Trainers program. A classroom-based training, demonstrations, hands-on and mock field drills were undertaken for the research team during the 3-day training program from 20th-22nd November, 2019 at Regional cancer centre at Tripura.

2.8 Data Management and Analysis

The field team used the handheld devices loaded with the software application for data collection and entered the data in field . Provision of keeping back up of data in SD cards in the handheld was also present. The data from the handheld devices were uploaded/ synced to the Central server at ICMR-NCDIR.

The data from all PSUs' were compiled and cleaned, following which weighting procedures were followed for adjusting for sampling and population proportions and response rates. The detailed statistical analysis plan was prepared based on the identified indicators and subgroups. The data analysis was done using STATA 14.1 with prior developed analysis commands by complex survey analysis. Descriptive statistics has presented the survey results with means and proportions with 95% confidence intervals (CIs) as a measure of precision on the estimated population parameters.

2.9 Ethical Considerations

Mizoram PBCR received its institutional ethical clearance from their institutional ethics committee [No.B.12018/1/13/CH(A)/IEC/95].The survey received ethical clearance from the Ethics review committee of the CCA, ICMR – NCDIR (NCDIR/IEC/2017/2).

Chapter 3: Survey Results

Figure.1 Household Response Rate

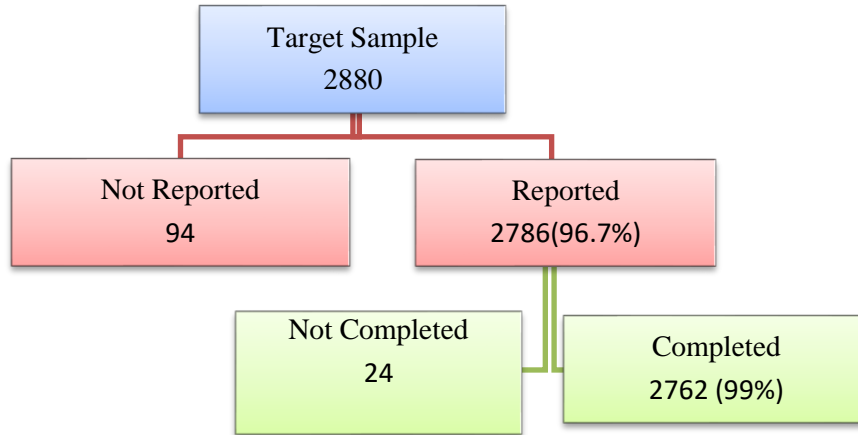
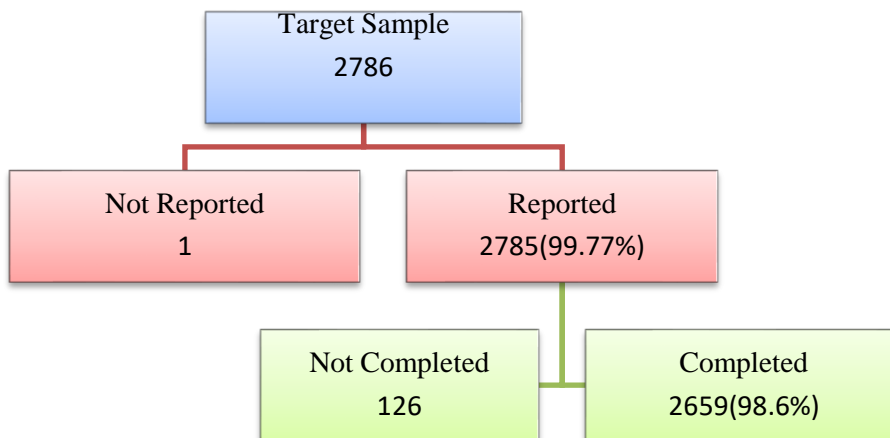


Figure.2 Adult – level Response Rate



A. Household level interview

3.1 Household Characteristics

3.1.1 Average size of the household* by place of residence

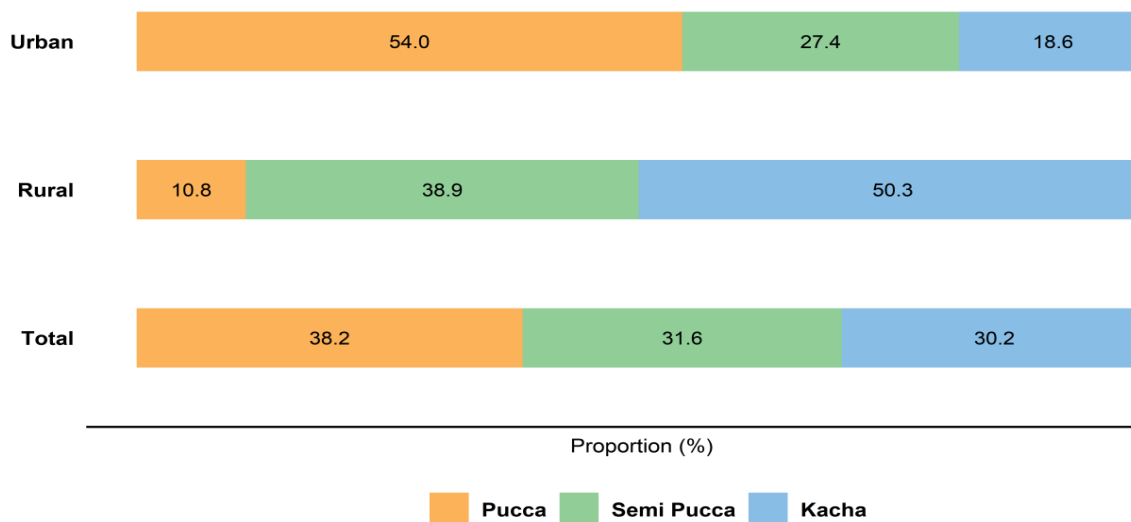
	Urban	Rural	Combined
Median (IQR*)	5(3)	5(3)	5(3)

Size of the household- Number of members in the household [*IQR: - Interquartile Range]

*Household: A person or group of persons who could be biologically related/not related, living together in the same unit(s), who recognise a joint head of the household (an adult male or female) and are considered a single unit, sharing the same household arrangements.

3.1.2 Household characteristics by place of residence (Percentage)

3.1.2 (a) Type of House*



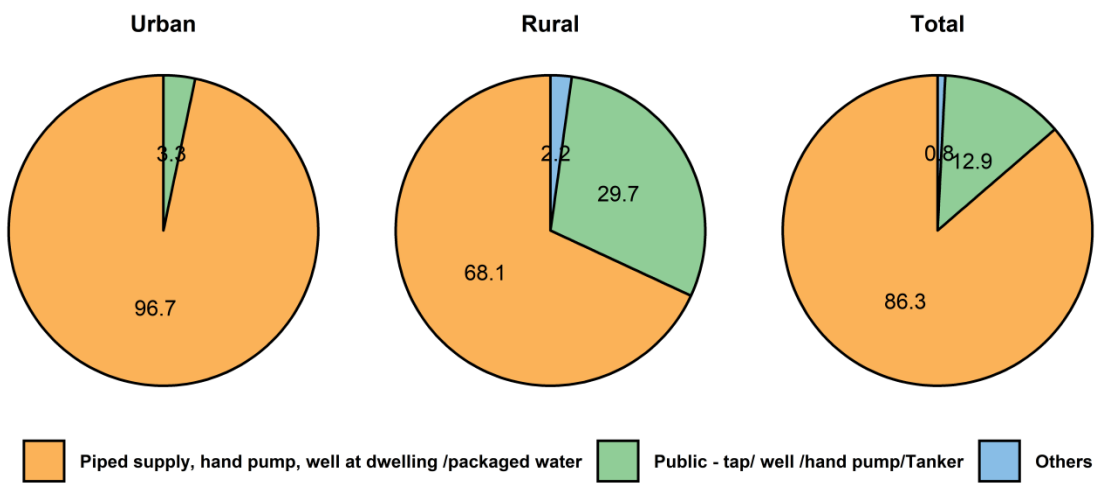
* **Type of house** is defined based on roof, floor and walls.

Pucca house: A pucca house is one, which has walls and a roof made of the following material. Wall material include burnt bricks, stone and cement. Roof material includes tiles, cement, iron or asbestos sheets

Semi pucca house: A house with fixed walls made up of pucca material, but the roof is made up of material other than those used for pucca house.

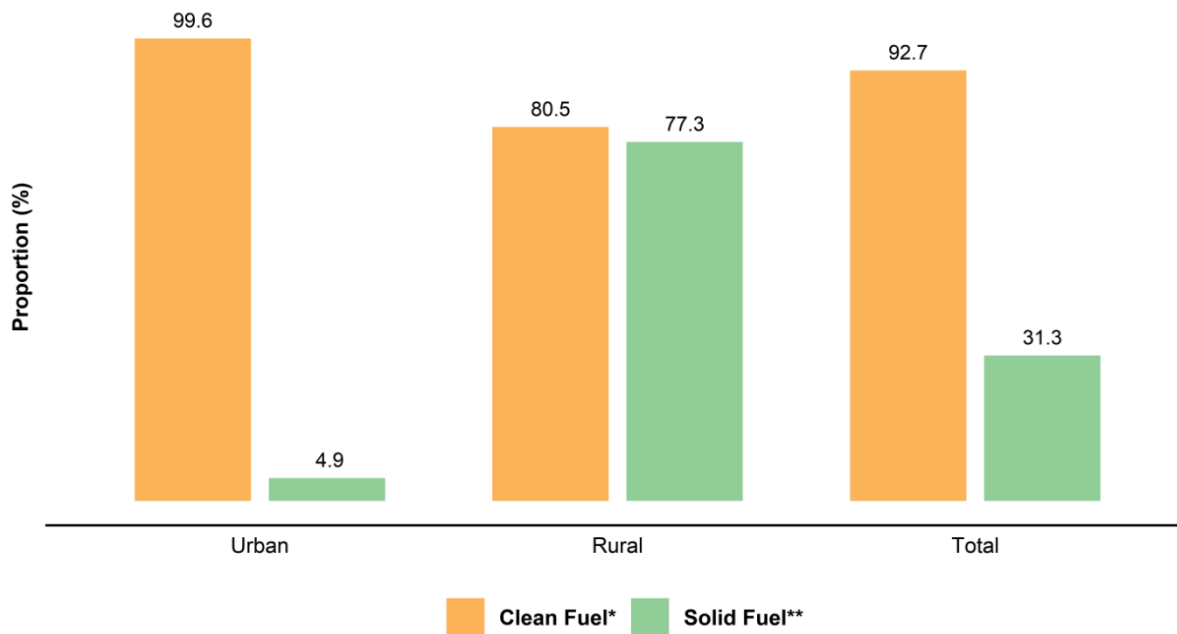
Kutcha House: The walls and /or roof are made of material other than those mentioned above, such as unburnt bricks, bamboos, mud, grass, reeds, thatch, loosely packed stones, etc.

3.1.2 (b) Main source of drinking water



3.1.3 Fuel used for cooking and type of kitchen among households by place of residence (Percentage)

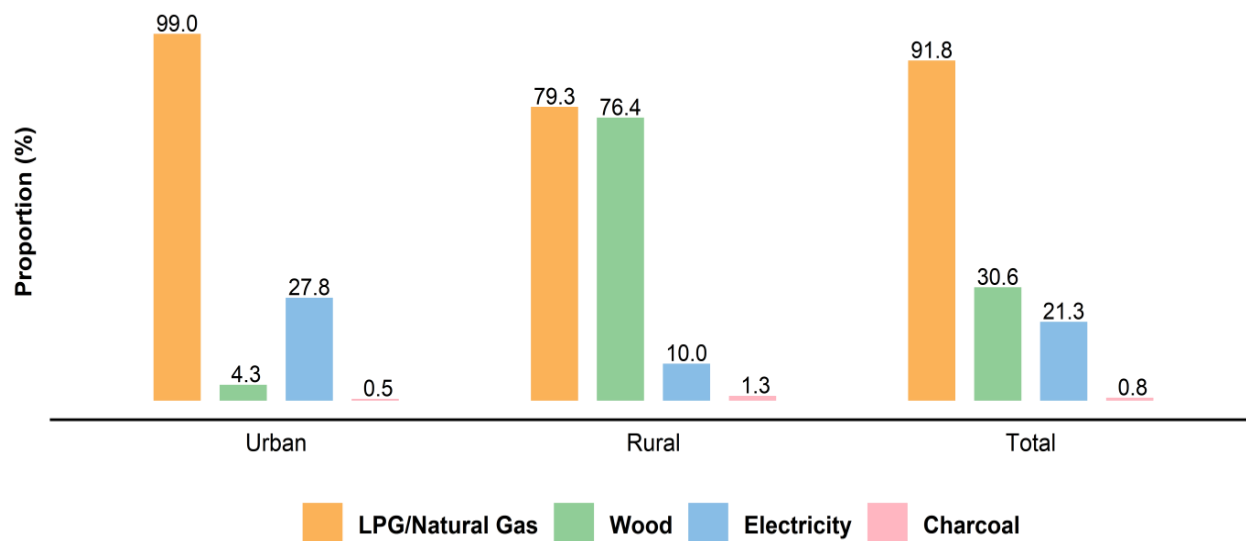
3.1.3 (a) Type of fuel



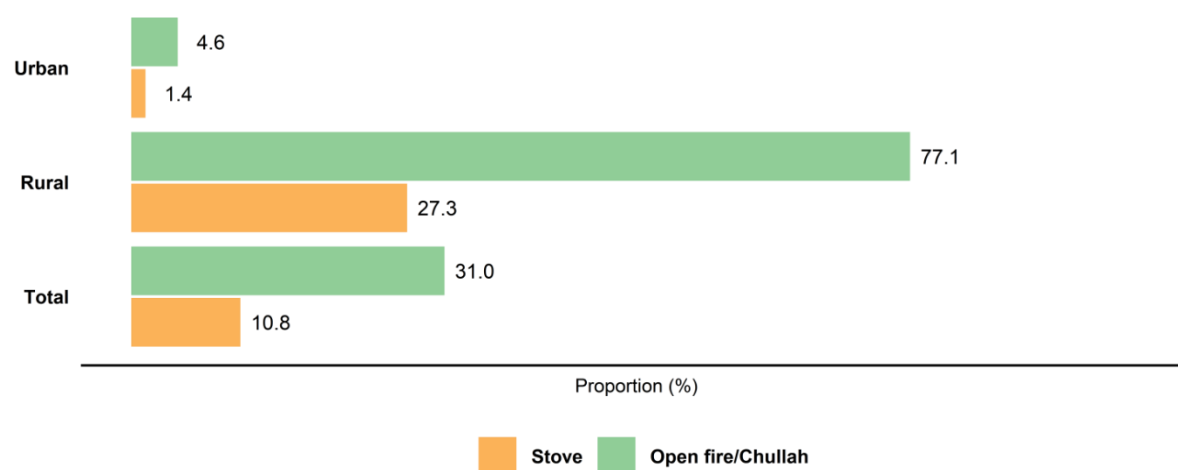
*Clean fuel: Electricity, LPG /Natural Gas, Biogas

**Solid Fuel: Charcoal, Coal/lignite, wood, Straw/Shrubs/Grass, Agricultural crop waste, Dung cakes

3.1.3 (b) Type of fuels used for cooking purposes



3.1.3 (c) Type of stove/ fire used among households using solid fuels



3.2 Awareness and Attitudes towards Cancer

Nearly all (99.7%) of the respondents conceded that they never felt ashamed or hesitant to talk about a cancer case in the household. Only 0.3% of the households were aware about the Human Papilloma Virus (HPV) vaccine.

3.3 Descriptive Profile of Cancer Cases Identified at the Household Level

3.3.1- Households with cancer cases by place of residence

	Urban (N=1338)	Rural (N=1321)	Combined (N=2659)
Percentage of households with diagnosed cancer cases			
Percentage – alive	32 (2.4)	13 (1.0)	45 (1.7)
Percentage – deceased	78 (5.8)	85 (6.4)	163 (6.1)

3.3.2 - Duration of Cancer from the time of diagnosis by place of residence

	Urban	Rural	Male	Female	Combined
Duration of diagnosis for cancer patients who were alive during the survey*	(N=33)	(N=13)	(N=17)	(N=28)	(N=45)
< 6 months	1 (3.0)	0 (0.0)	0 (0.0)	1 (3.6)	1 (2.2)
6-12 months	7 (21.2)	6 (46.1)	5 (29.4)	7 (25.0)	12 (26.7)
13– 24months	3 (9.1)	1 (7.7)	1 (5.9)	3 (10.7)	4 (8.9)
> 24 months	18 (54.6)	6 (46.2)	9 (52.9)	15 (53.6)	24 (53.3)
Don't know	4 (12.1)	0 (0.0)	2 (11.8)	2 (7.1)	4 (8.9)
Duration between diagnosis and death of the patient *	(N=84)	(N=95)	(N=67)	(N=96)	(N=163)
< 6 months	30 (35.7)	37 (38.9)	28 (41.8)	32 (33.3)	60 (36.8)
6-12 months	7 (8.3)	9 (9.5)	4 (6.0)	10 (10.5)	14 (8.6)
13– 24months	25 (29.8)	25 (26.3)	23 (34.3)	24 (25.0)	47 (28.8)
> 24 months	16 (19.1)	23 (24.2)	10 (14.9)	25 (26.0)	35 (21.5)
Don't know	6 (7.1)	1 (1.1)	2 (3.0)	5 (5.2)	7 (4.3)

*Prior to the date of interview: extracted from the date of diagnosis

3.3.3 - Duration of Cancer (in months) by place of residence (Mean)*

	Urban	Rural	Combined
Average duration of cancer (alive)	64.9	31.7	55.7
Average duration of cancer (deceased)	15.7	16.7	14.9
Average duration of cancer (alive/deceased)	29.0	18.5	23.4

*Extracted from the date of diagnosis

B. Adult Level Interview

3.4 Demographic Characteristics of Adults by Place of Residence and Gender

3.4.1 Socio -demographic characteristics of adults by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Age (in years)					
18–44	71.1	70.0	70.2	71.3	70.8
45 –69	24.9	26.0	26.0	24.5	25.2
70 and above	4.0	4.0	3.8	4.2	4.0
Marital Status					
Never married	21.7	13.9	20.9	17.5	19.2
Currently married/ cohabiting	63.8	74.2	71.3	62.9	67.1

Separated/Not living together/ Divorced	7.4	5.1	5.8	7.5	6.7
Widowed	7.1	6.8	2.0	12.1	7.0
Highest level of Education					
Less than class 6	11.9	28.0	13.7	19.8	16.7
Class 6 to 10	45.5	55.3	47.2	49.6	48.4
Class 11 or 12	23.0	9.6	19.8	18.3	19.0
Graduation or diploma completed	15.4	6.5	15.2	10.2	12.8
Post-graduation	4.2	0.6	4.1	2.0	3.1
No response	0.04	0.0	0.0	0.1	0.03
Occupation					
Professional	8.4	3.8	9.3	4.5	6.9
Medium or large Business	0.8	0.1	1.0	0.1	0.6
Middle / Senior Executive/officer in organization	7.8	2.1	8.7	3.2	6.0
Agricultural land owner	1.4	16.1	8.5	3.7	6.1
Sales and Marketing executives/Clerical	0.8	0.1	0.6	0.6	0.6
Self-employed and small business	21.4	12.2	19.1	17.8	18.5
Skilled manual labourer	5.2	3.2	6.7	2.4	4.5
Unskilled manual/agricultural labourer	10.3	26.5	22.3	8.5	15.5
Student	7.8	2.0	6.4	5.5	6.0
Homemaker	22.7	24.7	1.0	46.1	23.3
Retired	4.9	1.5	5.8	1.7	3.8
Unemployed (able to work)	7.1	5.7	8.9	4.4	6.7
Unemployed(unable to work)	1.3	1.6	1.3	1.5	1.3
No response	0.1	0.4	0.4	0.05	0.2

3.4.2 Religion and Social Status of adults by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Religion					
Hinduism	1.1	0.4	0.6	1.1	0.8
Islam	0.1	0.04	0.1	0.0	0.1
Christian	98.7	78.0	92.6	91.6	92.1
Sikhism	0.0	0.0	0.0	0.0	0.0
Buddhism	0.1	21.6	6.7	7.3	7.0
Social Group					
General	0.4	0.1	0.1	0.5	0.3
OBC	0.0	0.0	0.0	0.0	0.0
SC	0.2	0.3	0.4	0.1	0.2
ST	99.4	99.6	99.5	99.4	99.5

3.5 Obstetric History of Adult Females

	Urban	Rural	Total
Ever Pregnant (%)	78.4	86.7	81.1
Age at first Pregnancy (%)			
<18 Years	7.2	12.6	9.1
18 – 29 Years	84.6	82.2	83.7
≥ 30 Years	8.2	5.2	7.2
Average age at first pregnancy*(in years)	23	21	22
Gravida*#	2.8	2.9	2.8
Ever breast fed	96.2	97.5	96.7
Never breast fed	3.8	2.5	3.3
Mean/Median duration(in months) of breastfeeding among ever pregnant women@	54.8	62.2	57.4

*Values are expressed as Mean;

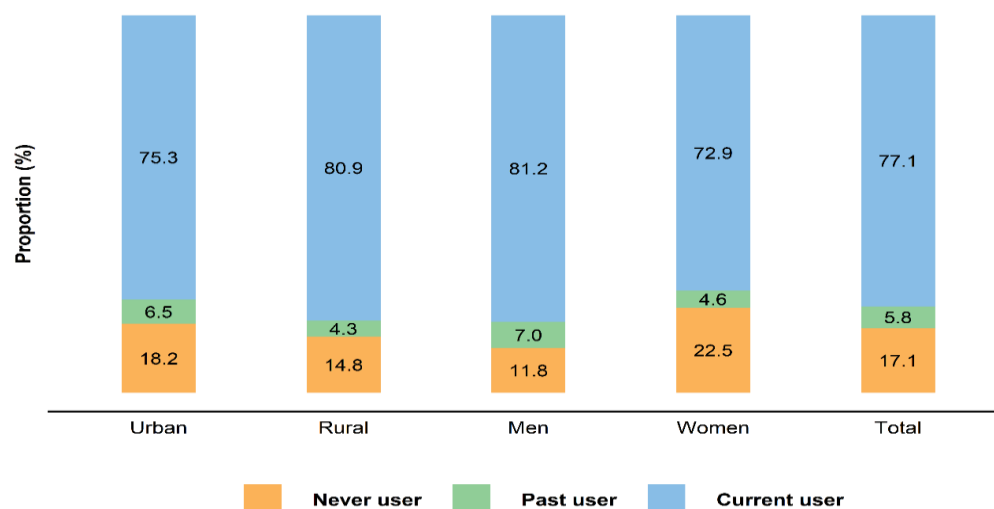
#Includes total number of confirmed pregnancies that a woman has had (includes abortion, still births or live births)

@Combined breastfeeding duration of all live births

3.6 Behavioural Characteristics

3.6.1 Tobacco use

3.6.1.1 - Prevalence of tobacco use (any form) by residence and gender



3.6.1.2 - Prevalence of smoked tobacco use by place of residence and gender(percentage)

	Urban	Rural	Men	Women	Total
Never user*	50.7	42.4	22.9	73.5	48.0
Past user**	8.7	7.6	10.5	6.3	8.4
Current user***	40.6	50.0	66.6	20.2	43.6

*A person who has never smoked/used smokeless tobacco during their lifetime.

**Use of smoke and/or smokeless tobacco in the past either daily or occasionally prior to 12 months preceding the survey

***Use of any form of tobacco (smoke and/or smokeless) over the last 12 months preceding the survey.

3.6.1.3 - Smokeless tobacco use by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Never user	42.4	39.8	54.1	28.8	41.6
Past user	4.7	3.5	4.6	4.0	4.3
Current user	52.9	56.7	41.3	67.2	54.1

3.6.1.4 - Type of current Tobacco use among adults by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Only Smoked Tobacco	22.3	24.1	40.0	5.5	22.9
Only Smokeless Tobacco	34.7	30.9	14.6	52.6	33.5
Both Smoked and Smokeless Tobacco	18.3	25.9	26.6	14.7	20.7
Either Smoked or Smokeless Tobacco	75.3	80.9	81.2	72.8	77.1

3.6.1.5 - Current daily tobacco* use by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Only Smoked Tobacco	22.6	24.7	40.7	5.6	23.3
Only Smokeless Tobacco	32.6	31.2	13.6	51.0	32.1
Both Smoked and Smokeless Tobacco	15.0	22.7	23.6	11.2	17.5
Either Smoked or Smokeless Tobacco	70.2	78.6	77.9	67.8	72.9

* Use of any form of tobacco (smoke and/or smokeless) daily over the last 12 months preceding the survey

3.6.1.6 - Current daily tobacco use* by type of product, place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Smoked Tobacco					
Bidis	1.4	9.6	3.6	7.0	4.4
Manufactured Cigarettes	55.2	17.6	46.2	25.1	41.4
Hand-rolled Cigarettes	35.7	58.1	45.4	39.0	43.9
Pipes /Chilam	0.0	2.6	0.8	1.5	1.0
Cigars, Cheroots	0.0	0.0	0.0	0.0	0.0
Hookah/No. of Shisha session	0.0	0.0	0.0	0.0	0.0
Local smoked tobacco products	10.2	14.9	11.0	14.9	11.9
Others	0.0	0.0	0.0	0.0	0.0
Smokeless Tobacco					
Chewing tobacco	52.7	56.2	45.2	59.2	53.9
Pan with Zarda, Betel with Tobacco quid	23.0	26.2	37.1	16.0	24.1
Tuibur, Tobacco Snuff, by mouth	28.2	29.5	17.0	35.9	28.6
Snuff, by nose	0.0	0.1	0.0	0.0	0.0
Others	0.0	0.0	0.0	0.0	0.0

*Among current users

3.6.1.7 - Age (in years) at initiation and cessation of different forms of tobacco use by place of residence and gender (Mean)

	Urban	Rural	Men	Women	Total
Age at initiation					
Any form of tobacco*	20.5	19.6	19.2	21.4	20.2
Smoked tobacco	20.3	20.0	18.9	24.0	20.2
Smokeless tobacco	22.8	22.4	23.3	22.2	22.7
Age at cessation					
Any form of tobacco**	40.7	38.3	38.7	41.9	40.0
Smoked tobacco	41.2	38.6	39.7	41.8	40.4
Smokeless tobacco	40.1	37.6	36.9	42.6	39.5

*Minimum age of smoked and smokeless tobacco use

**Maximum age of smoked and smokeless tobacco use

3.6.1.8 - Duration (years) of tobacco use among past users* by place of residence and gender (Mean)

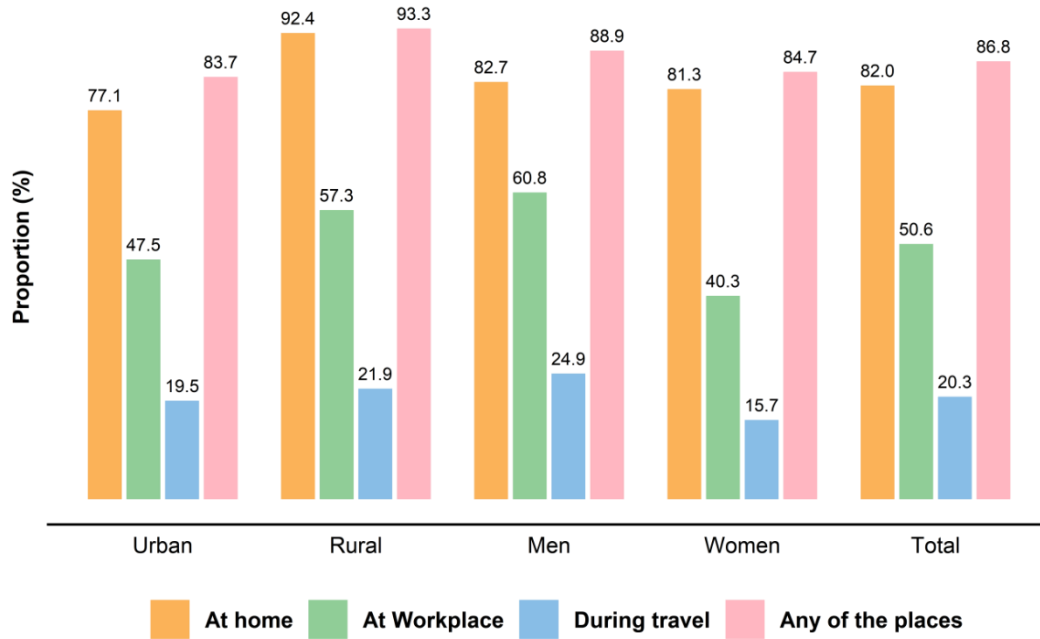
	Urban	Rural	Men	Women	Total
Any form of tobacco	21.4	19.8	20.2	22.0	20.9
Smoked tobacco	21.6	19.2	21.1	20.5	20.9
Smokeless tobacco	18.5	17.7	15.7	21.5	18.3

3.6.1.9 - Personal attempts to quit and advised to quit tobacco use by doctor/health worker by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Attempted to quit					
Smoked tobacco (among current users)	16.7	14.0	15.7	15.9	15.7
Advised to quit					
Any form of tobacco use	6.5	8.3	7.4	6.8	7.1
Smoked tobacco use	3.7	5.1	6.4	1.9	4.1
Smokeless tobacco use	4.7	6.6	4.1	6.6	5.3

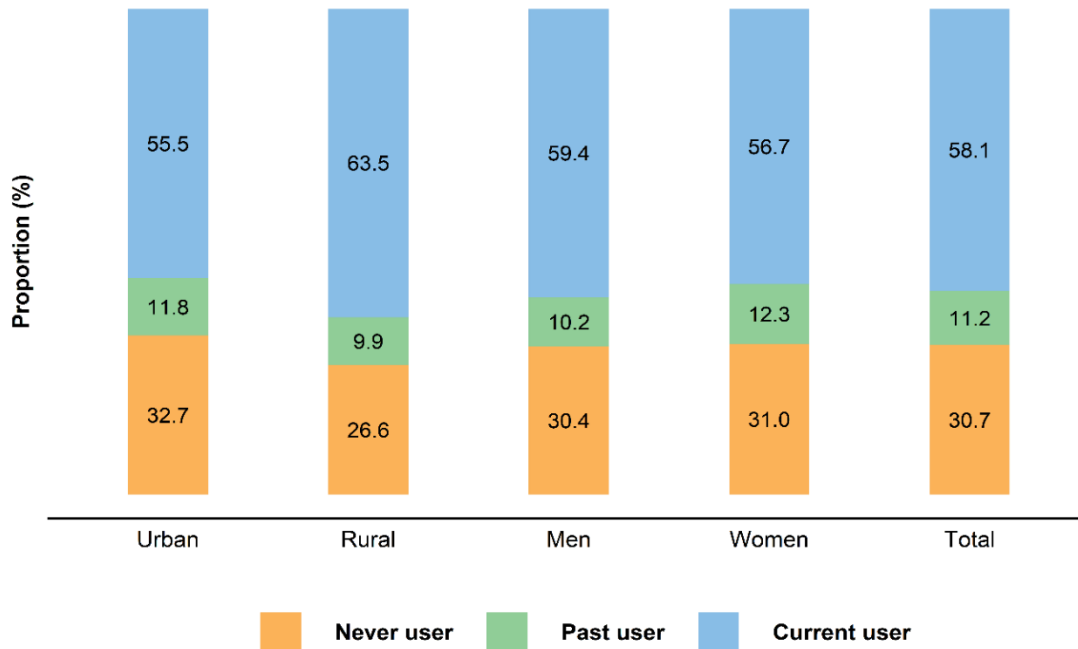
3.6.2 Exposure to Second Hand Smoke

3.6.2.1 - Exposure to second hand tobacco smoke in the past 30 days by place of residence and gender (Percentage)



3.6.3 Non – Tobacco Betel Products

3.6.3.1 - Consumption of betel products without tobacco (any form) * by place of residence and gender (Percentage)



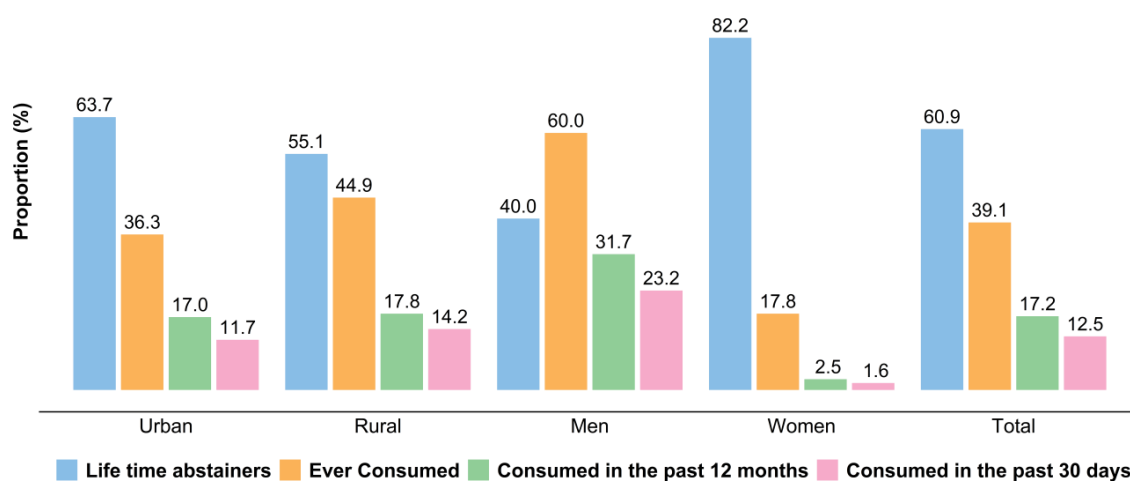
*Includes pan masala, betel quid, areca nut.

3.6.3.2- Consumption of different betel products without tobacco by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Pan Masala					
Never user	84.0	82.3	82.9	84.0	83.5
Past user	13.8	16.3	15.7	13.5	14.6
Current user	2.2	1.4	1.4	2.5	1.9
Betel quid					
Never user	39.2	30.1	34.3	38.3	36.3
Past user	9.8	7.6	8.3	9.8	9.1
Current user	51.0	62.3	57.4	51.9	54.6
Areca nut					
Never user	61.0	56.5	57.3	61.8	59.5
Past user	22.9	27.5	24.7	24.1	24.4
Current user	16.1	16.0	18.0	14.1	16.1

3.6.4 Alcohol Use

3.6.4.1 - Alcohol use *by place of residence and gender (Percentage)



*Lifetime abstainer: A person who has never consumed one or more drink of any type of alcohol in their lifetime.

Ever consumed: A person who has consumed any of the alcoholic products (such as beer, wine, whisky, locally prepared alcohol etc.) at least once in their lifetime.

Current alcohol use: Consumption of alcohol in the last 12 months preceding the survey.

3.6.4.2 – Age (in years) of initiation of Alcohol consumption by place of residence and gender (Mean)

	Urban	Rural	Men	Women	Total
Age of initiation of Alcohol consumption	20.7	20.5	19.8	23.5	20.6

3.6.4.3 - Patterns of alcohol use in the past 12 months by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Unable to stop drinking					
Never	74.3	68.7	72.6	70.4	72.4
Daily/ almost daily	2.1	1.0	1.9	0	1.7
Weekly	5.2	3.1	4.7	1.8	4.5
Monthly	5.4	6.0	5.6	5.8	5.6
Less than Monthly	11.8	20.7	14.1	21.9	14.7
Failed to do usual routine work due to drinking habit					
Never	79.3	79.0	78.3	89.7	79.2
Daily/ almost daily	0.7	0.0	0.5	0.0	0.5
Weekly	3.3	0.0	2.4	0.0	2.2
Monthly	2.5	2.7	2.8	0.0	2.5
Less than Monthly	13.8	17.4	15.4	10.3	15.0
Need of first drink in the morning					
Never	73.0	74.4	72.4	87.5	73.5
Daily/ almost daily	2.4	0.0	1.8	0.0	1.6
Weekly	2.3	0.9	1.6	3.7	1.8
Monthly	5.6	6.1	6.2	0.0	5.8
Less than Monthly	13.7	16.8	15.6	4.3	14.7

**Among those who consumed alcohol in the past 12 months*

3.6.4.4 - Heavy episodic drinking* among adults in the past 30 days by age category, place of residence and gender (Percentage)

≥6 standard drinks **	Urban	Rural	Men	Women	Total
18- 44 Years	6.4	7.0	12.8	0.3	6.6
45 – 69 Years	3.2	4.3	6.9	0.0	3.6
70 years and above	0.0	1.6	1.0	0.0	0.5
18+ years	5.3	6.1	10.8	0.2	5.6

**Drinking ≥6 standard drinks in a single drinking occasion*

***Contains a net pure alcohol content of 10 gm*

3.6.4.5- Received advice to avoid alcohol use by doctor/health worker in the last one year by age category, place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
18- 44 Years	1.7	1.9	2.8	0.7	1.8
45 – 69 Years	3.5	2.0	5.3	0.6	3.0
70 years and above	2.2	1.7	1.1	2.9	2.1
18+ years	2.2	1.9	3.4	0.8	2.1

3.6.5 Diet

3.6.5.1 - Number of days of consumption of fruits, vegetables and fruit or vegetable juices in a week by place of residence and gender (Mean)

	Urban	Rural	Men	Women	Total
Fruits	2.3	2.0	2.0	2.4	2.2
Vegetables	6.3	6.1	6.2	6.3	6.2
Fruits and/or Vegetables	6.3	6.2	6.2	6.3	6.3
Fruit or Vegetable juice**	1.4	0.9	1.2	1.3	1.2

3.6.5.2 - Number of servings of fruits, vegetables and fruit or vegetable juices consumed per day by place of residence and gender (Mean)

	Urban	Rural	Men	Women	Total
Fruits	0.4	0.3	0.3	0.4	0.4
Vegetables	1.7	1.6	1.7	1.7	1.7
Fruits and/or Vegetables*	2.1	1.9	2.0	2.1	2.0
Fruit or Vegetable Juice **	0.2	0.1	0.2	0.2	0.2

**One standard serving of fruits and/or vegetables is equivalent to 80-100 grams.*

The quantity of intake was measured by servings; for vegetables, this refers to one cup of raw, leafy green vegetables (spinach, salad etc.), half cup of other vegetables, cooked or raw (tomatoes, pumpkin, beans etc.), or a half cup of vegetable juice.

For fruits, this refers to one medium-sized piece of fruit (banana, apple etc.) or a half cup of raw, cooked or canned fruit.

*** Includes fresh juice made at home/shop.*

3.6.5.3 - Number of days of Consumption of different meat items (any form) in a typical week by place of residence and gender (Mean)

	Urban	Rural	Men	Women	Total
Birds/Poultry	1.6	1.3	1.5	1.5	1.5
Fish	1.3	1.4	1.3	1.3	1.3
Red Meat	1.7	1.3	1.6	1.6	1.6
Either Birds/Poultry or Fish or Red Meat*	1.9	1.6	1.9	1.8	1.8

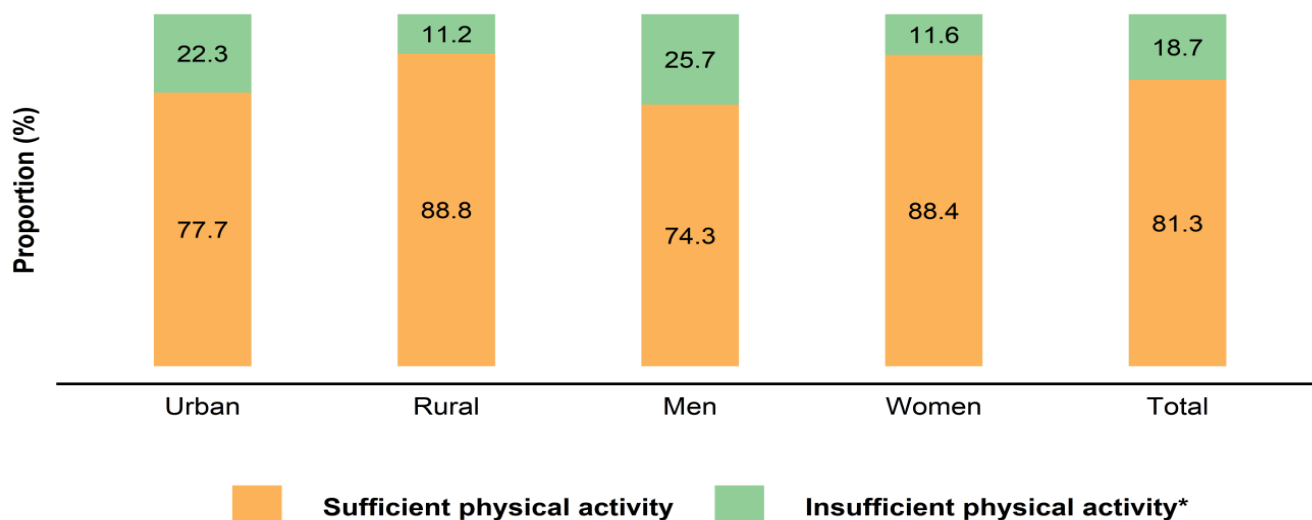
**If an adult consumed more than one meat item, the maximum number of days for any one item was considered*

3.6.5.4 - Consumption of preserved/salt curated and fermented products among adults by place of residence and gender

	Urban	Rural	Men	Women	Total
Percentage of consumption	86.9	92.9	88.2	89.5	88.8
Mean number of days of consumption per week	2.6	3.5	2.9	2.9	2.9

3.6.6 Physical Activity

3.6.6.1 - Levels of physical activity by place of residence and gender (Percentage)



**Insufficient physical activity less than 150 minutes of moderate – intensity physical activity per week OR <75 minutes of vigorous – intensity physical activity per week OR an equivalent combination of moderate – and vigorous intensity physical activity accumulating at least 600 MET minutes per week*

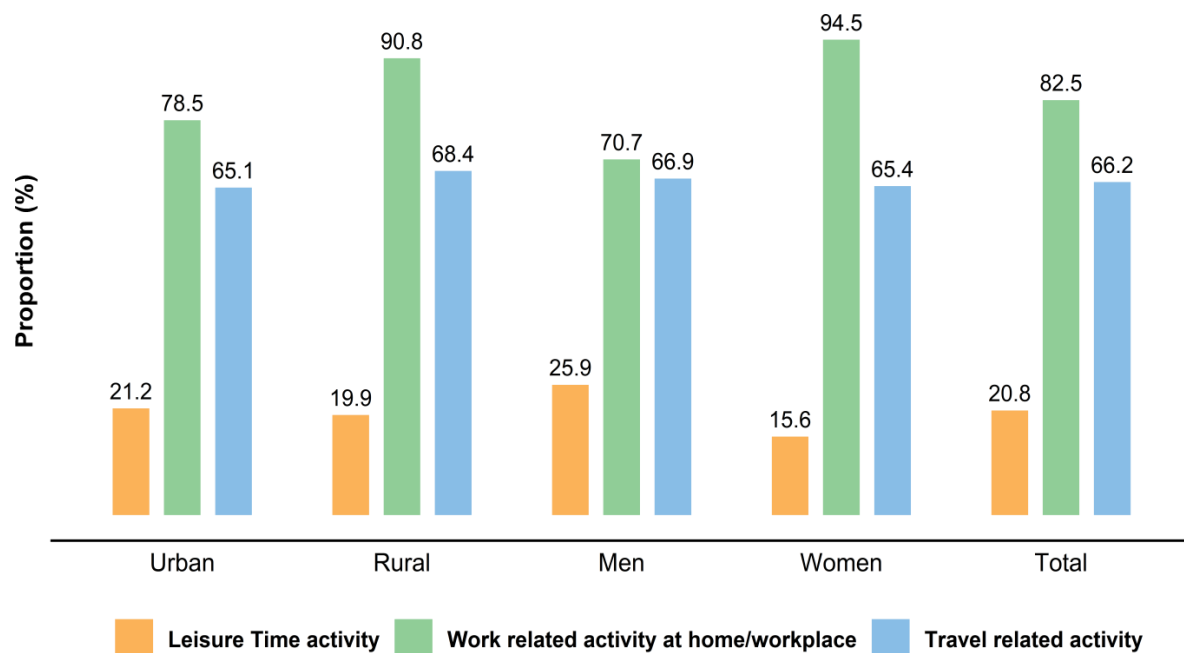
3.6.6.2 - Nature of physical activity in which the participants are engaged by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Routine work at home/workplace					
Vigorous-intensity activity*	16.6	46.6	38.8	13.5	26.3
Moderate intensity activity**	72.8	77.8	55.1	94.1	74.4
Recreational/leisure activities					
Vigorous-intensity activity	4.6	3.8	8.3	0.3	4.4
Moderate intensity activity	18.3	17.2	20.4	15.4	17.9

*An activity which requires hard physical effort, and causes one to breathe much harder than normal.

** An activity that requires moderate physical effort and causes one to breathe somewhat harder than normal.

3.6.6.3 -Proportion of work, transport and leisure activity contributing to total activity by place of residence and gender (Percentage)



3.6.6.4 - Received Advice to increase physical activity by doctor/health worker in the last one year by age category, place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
18- 44 Years	4.1	2.8	3.2	4.1	3.7
45 – 69 Years	7.2	5.3	7.0	6.2	6.6
70 years and above	7.1	5.0	4.7	8.0	6.4
18+ years	5.0	3.5	4.2	4.8	4.5

3.6.7 High risk behaviour and Sexually Transmitted Infections

3.6.7.1- Responses to questions on sexual behaviour by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Responded	73.8	86.2	76.9	78.7	77.8

3.6.7.2- Age at first sexual intercourse by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
<15 Years	0.0	0.7	0.0	0.5	0.3
15 – 19 Years	27.0	37.2	17.9	43.3	30.6
20 -24 Years	41.3	37.8	41.5	38.5	40.1
> 25 Years	22.8	17.4	29.1	12.8	20.8

3.6.7.3 - Number of sexual partners by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Single sexual partner	76.1	83.7	76.6	80.5	78.5
Multiple sexual partner*	4.5	5.4	6.2	3.4	4.8

*Two or more sexual partners

3.6.7.4 - Mean age at first sexual intercourse by place of residence and gender (Mean)

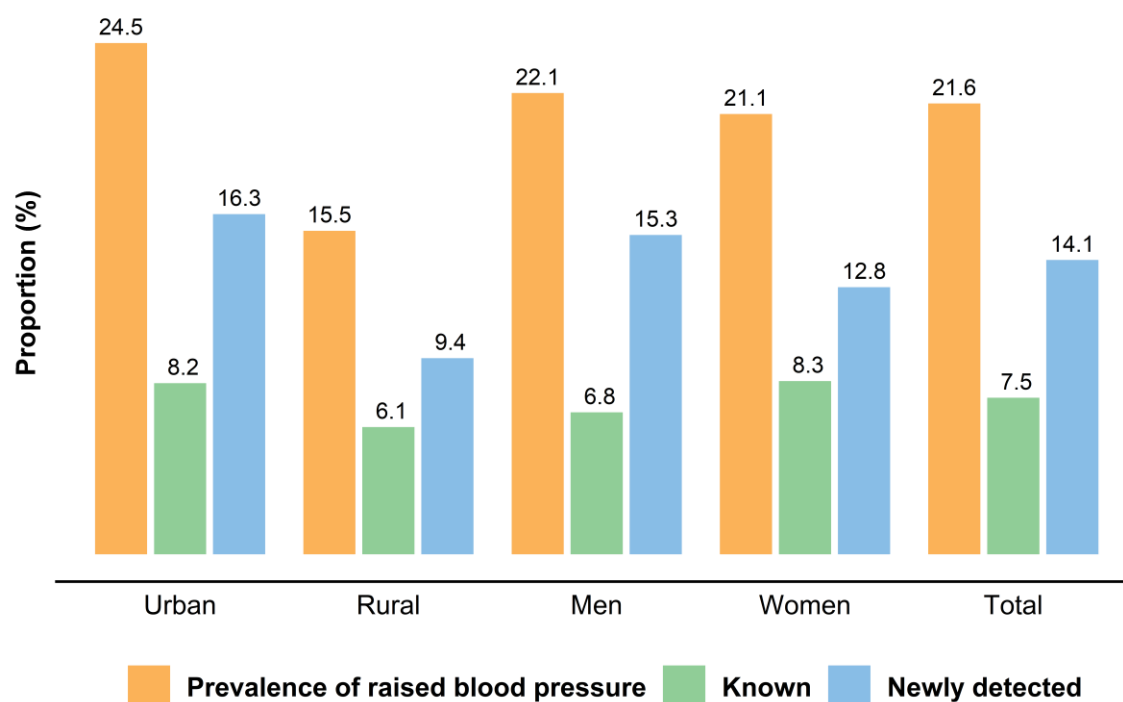
The mean age at first sexual intercourse was 22.4 years, which was slightly lower among women (21.1 years) than men (23.8 years)

3.6.7.5 - High risk behaviour and Sexually Transmitted Infection (STI) among adults by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Ever had STI	0.2	0.0	0.0	0.2	0.1
Type of symptoms					
Urethral /vaginal discharge	0.0	0.0	0.0	0.0	0.0
Blisters or ulcers (sores) on the mouth, lips, genitals, anus, or surrounding area	0.0	0.0	0.0	0.0	0.0
Burning or pain during urination	0.0	0.0	0.0	0.0	0.0
Warts or bumps on the genitals, anus, or surrounding areas	0.0	0.0	0.0	0.0	0.0
Small, dimpled bumps or lesions on the skin	100	0.0	0.0	100	100

3.7 Blood Pressure Measurement

3.7.1 - Raised Blood Pressure *by place of residence and gender (Percentage)



*Raised Blood Pressure – Systolic BP≥140 and/or diastolic blood Pressure ≥90

3.7.2- Blood Pressure categories among those measured by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Normal	30.3	36.7	24.0	40.7	32.3
Pre - Hypertension	48.7	49.6	56.5	41.4	49.0
Hypertension – Stage 1	16.4	10.2	15.3	13.5	14.4
Hypertension – Stage 2	4.6	3.5	4.2	4.4	4.3

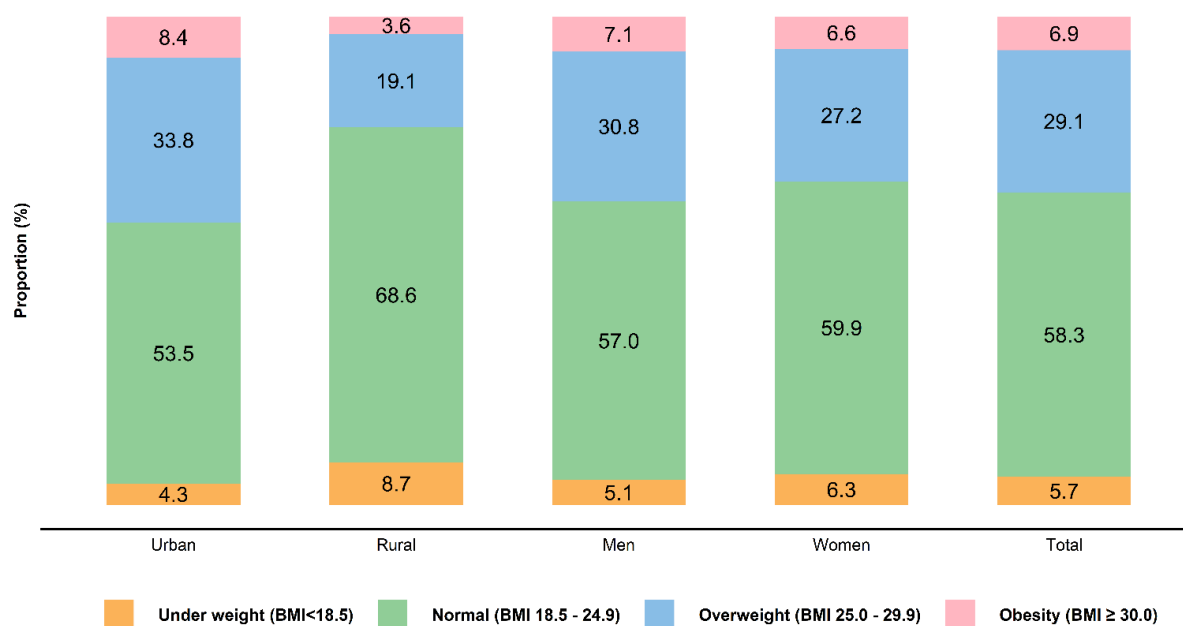
** Normal-(SBP <120,DBP<80); Pre – hypertension (SBP:120-139,DBP: 80-89);

Hypertension Stage 1(SBP:140 -159, DBP:90-99); Hypertension Stage 2(SBP≥160; DBP≥100) among measured.

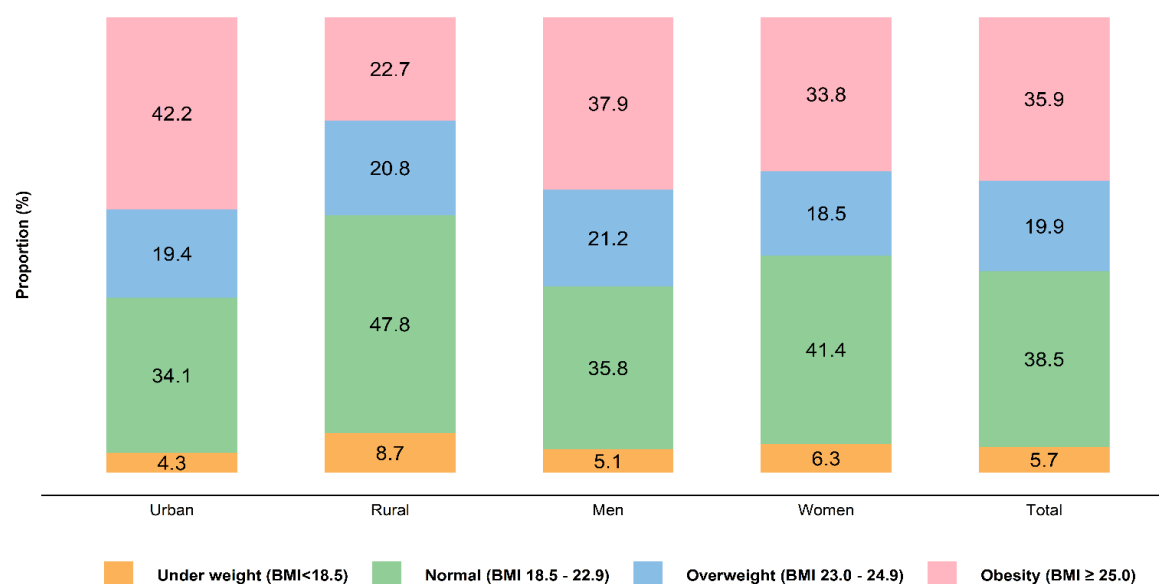
3.8 Physical Measurement

3.8.1-BMI categories based on WHO and Asian cut off by place of residence and gender (Percentage)

3.8.1 (a)- BMI categories (WHO cut off) by area of residence and gender (Percentage)



3.8.1 (b)- BMI categories (Asian cut off) by area of residence and gender (Percentage)



3.8.2- Prevalence of Overweight (including obesity) and Obesity by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Overweight (BMI ≥ 25.0)	42.2	22.7	37.9	33.8	35.9
Obese (BMI ≥ 30.0)	8.4	3.6	7.1	6.6	6.9

* kg/m²

3.8.3-Central Obesity* by age categories, place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
18- 44 Years	40.8	29.6	23.0	52.3	37.3
45 – 69 Years	59.2	40.0	37.9	68.8	52.9
70 years and above	46.0	24.8	35.8	42.3	39.1
18+ years	45.7	32.2	27.3	56.1	41.3

* A waist circumference of ≥90cm in males and ≥80cm in females (as per South Asia Pacific Guidelines)

3.8.4- Received Advice to maintain healthy body weight by doctor or health worker in the last one year by age category, place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
18- 44 Years	2.9	1.6	2.4	2.6	2.5
45 – 69 Years	5.4	2.5	4.4	4.6	4.5
70 years and above	4.7	1.5	4.5	2.9	3.7
18+ years	3.6	1.8	3.0	3.1	3.0

3.9 Blood Glucose Measurement

3.9.1- Raised fasting blood glucose levels (mg/dl) by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Prevalence of raised blood glucose	6.4	3.2	5.6	5.1	5.4
Known	5.5	2.5	5.0	4.1	4.5
Newly detected	0.9	0.7	0.6	1.0	0.9

*Raised fasting blood glucose - ≥ 126 mg/dl including those on medication for diabetes

3.9.2-Fasting blood glucose levels (mg/dl) among those measured by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
<100 mg/dl	91.7	90.4	91.2	91.3	91.2
100 – 109 mg/dl	3.8	5.7	4.3	4.6	4.5
110 – 125 mg/dl	1.8	2.5	1.9	2.2	2.0
≥ 126 mg/dl	2.7	1.4	2.6	1.9	2.3

3.10 Clustering of risk factors

3.10.1 Clustering of at least ≥ 3 risk factors among adults by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
18- 44 Years	45.4	27.9	48.5	31.1	39.8
45 – 69 Years	65.3	45.1	59.6	57.5	58.6
70 years and above	73.0	56.7	77.3	58.9	67.8
18+ years	51.4	33.5	52.5	38.8	45.7

*Clustering of risk factors – Presence of ≥ 3 risk factors like daily tobacco use, inadequate fruits and/or vegetable consumption, insufficient physical activity, overweight (≥ 25.0 Kg/m²), raised blood pressure and raised fasting blood glucose including those on medication.

3.11 Health Seeking Behaviour and Management Indicators

3.11.1 Blood Pressure

3.11.1.1 - Measurement of blood pressure by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Never measured in life	3.5	13.4	8.8	4.6	6.7
Measured ever in life	96.5	86.6	91.2	95.4	93.3
Within past 1 year	75.1	57.8	64.0	75.2	69.6
> 1 year	21.3	28.7	27.2	20.2	23.7

3.11.1.2 - Awareness, advice on treatment, adherence to treatment and control of blood pressure among those with raised blood pressure by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Received advice for treatment	83.1	73.8	83.3	78.6	80.7
On treatment*	33.0	37.4	29.9	37.7	34.2
Adherence to treatment**	29.0	32.1	25.6	33.3	29.8
Blood pressure under control ***	42.4	29.8	38.6	39.6	39.1

* Taken medication for at least one day in the last two weeks

**Among those on treatment, consistently took treatment as prescribed over the last two weeks

***Among those who known to have raised blood pressure

3.11.1.3 - Source of measurement and current treatment for raised blood pressure by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Source of measurement of blood pressure*					
Government screening camp/Health facility	40.1	71.2	46.5	50.1	48.4
Private/NGO screening camp/Health facility	59.9	28.8	53.5	49.9	51.6
Current source of consultation for raised blood pressure					
Allopathic doctor from Public sector	31.8	45.1	36.1	34.5	35.2
Allopathic doctor from Private/ NGO health facility	21.2	3.6	13.5	19.2	16.6

*Among those who got it measured in the last 1 year

3.11.1.4 - Received advice to check blood pressure by doctor/health worker in the last one year by age category, place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
18- 44 Years	75.9	63.4	67.7	76.1	71.9
45 – 69 Years	81.5	67.7	75.4	78.6	77.0
70 years and above	82.7	76.8	77.7	83.6	80.8
18+ years	77.6	65.0	70.1	77.0	73.6

3.11.2 Raised Blood Glucose

3.11.2.1 - Measurement of blood glucose by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Never measured in life	46.0	63.2	60.2	42.6	51.5
Measured ever in life	54.0	36.8	39.8	57.4	48.5
Measured in the past					
Within 1 year	39.7	21.9	31.0	37.0	34.0
> 1 year	14.3	14.9	8.8	20.3	14.5

3.11.2.2 - Awareness, advice and on treatment, adherence to treatment and control of blood glucose among those with raised blood glucose by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Received advice for treatment	93.2	81.8	92.2	90.0	91.2
On treatment*	69.9	50.5	61.1	73.2	66.5
Adherence to treatment**	63.4	45.8	53.8	68.4	60.3
Blood glucose under control ***	64.3	70.4	56.1	76.8	65.3

* Taken medication for at least one day in the last two weeks

**Among those on treatment, consistently took treatment over the last two weeks

***Among those who are already aware that they have raised blood glucose, (Fasting Blood Glucose level \leq 126 mg/dl)

3.11.2.3 - Source of measurement and current consultation for raised blood glucose by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Source of measurement of blood glucose*					
Government screening camp/Health facility	47.1	79.6	48.0	58.7	53.8
Private/NGO screening camp/Health facility	52.9	20.4	52.0	41.3	46.2
Current consultation for raised blood glucose					
Allopathic doctor from Public sector	47.7	62.7	52.0	48.2	50.3
Allopathic doctor from Private/ NGO health facility	28.0	10.5	18.1	33.4	24.9

*Among those who got it measured in the last 1 year

3.11.2.4 - Advised to check blood glucose by doctor/health worker in the last one year by age category, place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
18- 44 Years	38.7	24.2	26.4	41.8	34.1
45 – 69 Years	59.6	33.0	49.8	52.0	50.8
70 years and above	63.8	43.2	53.3	60.9	57.2
18+ years	44.9	27.3	33.5	45.1	39.2

3.12 Cancer Screening

3.12.1 - Level of awareness and source of information about cancer screening by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Awareness levels by age groups					
18- 29 Years	40.3	37.5	36.2	42.3	39.4
30 – 49 Years	49.7	34.7	37.0	53.6	45.0
50- 69 Years	45.6	31.9	39.4	42.4	40.9
70 years and above	37.4	43.6	32.4	46.0	39.4
18+ years	46.5	35.1	37.1	48.6	42.8
Source of information*					
TV/Newspaper/social media	76.0	71.1	80.9	69.9	74.7
Friends/family	94.6	95.5	93.8	95.7	94.9
Health worker	51.7	58.9	57.1	50.9	53.6
Health awareness camps	17.8	9.5	18.7	13.3	15.6

*Among those who are aware of cancer screening.

3.12.2 - Adults who had ever undergone oral/breast/cervical cancer screening by place of residence (Percentage)

	Urban	Rural	Total
Cervical cancer	8.2	4.7	7.1
Breast cancer*	5.0	1.7	4.0
Oral cancer	1.6	0.6	1.3

*Among women more than 30 years of age

3.12.3 - Methods of breast cancer screening by place of residence (Percentage)

Screening for breast cancer	Urban	Rural	Total
Forms of screening*			
Only clinical breast examination by doctor / health care professional	100	93.5	99.1
Only Ultrasound of breast or mammogram	51.4	74.2	54.5
Performed breast self-examination	56.4	65.2	57.6

*Among those who reported to have undergone breast cancer screening ever in life.

3.12.4 - Methods of Cervical cancer screening by place of residence (Percentage)

	Urban	Rural	Total
VIA	2.3	22.2	6.6
PAP	84.9	61.7	79.9
HPV-DNA	0.0	2.8	0.6
Others	0.0	3.4	0.7

*Among those who reported to have undergone cervical cancer screening ever in life.

3.12.5 - Received advice to screen for cancer by doctor/health worker in the last one year by place of residence and gender (Percentage)

	Urban	Rural	Men	Women	Total
Oral Cancer	1.2	0.1	0.8	0.9	0.9
Breast Cancer*	4.3	1.2	-	3.3	3.3
Cervical Cancer*	8.3	4.1	-	7.0	7.0

*Among women respondents

C. Health Facility Assessment

3.13 Public Primary Health Care Centres*

3.13.1 - Infrastructure and type of available services

	Urban (n=4)	Rural (n =16)	Total(n=20)
Types of services			
Outpatient services	4 (100.0)	16 (100.0)	20 (100.0)
In patient services	4 (100.0)	15 (93.8)	19 (95.0)
Emergency services	3 (75.0)	15 (93.8)	18 (90.0)
Availability of functional telephone facility	2 (50.0)	6 (37.5)	8 (40.0)
Availability of ambulance facility¹	2 (50.0)	9 (56.3)	11 (55.0)
Electricity and functional electricity back up	3 (75.0)	16 (100.0)	19 (95.0)

* First point of contact with a qualified doctor in the public sector, providing preventive, promotive and curative health care.

¹Includes ambulance owned by health center, centralised ambulance services, outsourced and hired as and when required

3.13.2 - Availability of cancer related services

	Urban (n=4)	Rural (n =16)	Total(n=20)
Written standard treatment guidelines under NPCDCS availability	2 (50.0)	11 (68.8)	13 (65.0)
Cancer screening availability			
Oral Cancer	2 (50.0)	3 (18.8)	5 (25.0)
Cervical Cancer	2 (50.0)	3 (18.8)	5 (25.0)
Breast Cancer	2 (50.0)	3 (18.8)	5 (25.0)
All three cancers	2 (50.0)	2 (12.5)	4 (20.0)
Method of screening cancer			
Organized Screening*	0 (0.0)	2 (12.5)	2 (10.0)
Opportunistic screening**	1 (25.0)	2 (12.5)	3 (15.0)
Place of referral of patients found positive after screening			
CHC	0 (0.0)	1 (6.3)	1 (5.0)
DH	1 (25.0)	2 (12.5)	3 (15.0)
Tertiary Care Hospital	1 (25.0)	1 (6.3)	2 (10.0)
Private Health facility	0 (0.0)	0 (0.0)	0 (0.0)
Availability of Physiotherapy facility	1 (25.0)	0 (0.0)	1 (5.0)

* Systematic screening of all persons in a defined target group

**A person's participation results from a referral made by a healthcare provider or based on their own choice.

3.13.3 - Counselling facilities for risk behaviour

	Urban (n=4)		Rural (n =16)		Total(n=20)	
	In house	In Vicinity	In house	In Vicinity	In house	In Vicinity
Availability of Counselling facilities for risk behaviour through counsellor or specialised personnel*						
Tobacco cessation	1 (25.0)	0 (0.0)	2 (12.5)	1 (6.3)	3 (15.0)	1 (5.0)
Dietary Modification	2 (50.0)	0 (0.0)	1 (6.3)	1 (6.3)	3 (15.0)	1 (5.0)
Physical Activity	2 (50.0)	0 (0.0)	1 (6.3)	1 (6.3)	3 (15.0)	1 (5.0)
Alcohol Cessation	2 (50.0)	0 (0.0)	2 (12.5)	1 (6.3)	4 (20.0)	1 (5.0)

*Available in-house and in vicinity(within 5 km)

3.13.4 - Availability of Information, Education and Communication (IEC) material on cancer

	Urban (n=4)		Rural (n =16)		Total(n=20)	
	IEC materials related to Cancer displayed/available in the patient waiting room/outpatient department					
Posters	4 (100.0)		8 (50.0)		12 (60.0)	
Videos	0 (0.0)		1 (6.3)		1 (5.0)	
Pamphlets	2 (50.0)		5 (31.3)		7 (35.0)	
Booklets	1 (25.0)		5 (31.3)		6 (30.0)	

3.13.5 Availability of Human Resources

Staff	Urban (n=4)		Rural (n =16)		Total(n=20)	
	Proportion of facilities reporting the availability of Human Resources	Proportion trained for NPCDCS/NHM (NCD related)/State program	Proportion of facilities reporting the availability of Human Resources	Proportion trained for NPCDCS/NHM(NCD related)/State program	Proportion of facilities reporting the availability of Human Resources	Proportion trained for NPCDCS/NHM (NCD related)/State program
Medical Officer (MBBS)	4 (100.0)	1 (25.0)	15 (93.8)	11 (68.8)	19 (95.0)	12 (60.0)
AYUSH Medical Officer	0 (0.0)	0 (0.0)	2 (12.5)	1 (6.3)	2 (10.0)	1 (5.0)
Staff Nurse	4 (100.0)	1 (25.0)	16 (100.0)	10 (62.5)	20 (100.0)	11 (55.0)
Auxiliary Nurse Midwife (ANM)	4 (100.0)	0 (0.0)	16 (100.0)	4 (25.0)	20 (100.0)	4 (20.0)
Lady Health Visitor/ Female Health Assistant/PHN	1 (25.0)	0 (0.0)	5 (31.3)	1 (6.3)	6 (30.0)	1 (5.0)
Male Health Assistant	1 (25.0)	0 (0.0)	5 (31.3)	0 (0.0)	6 (30.0)	0 (0.0)
Accountant cum data entry operator	4 (100.0)	0 (0.0)	13 (81.3)	0 (0.0)	17 (85.0)	0 (0.0)
Pharmacist	4 (100.0)	0 (0.0)	10 (62.5)	3 (18.8)	14 (70.0)	3 (15.0)
Lab Technician	4 (100.0)	1 (25.0)	13 (81.3)	4 (25.0)	17 (85.0)	5 (25.0)
Health educator	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Cold Chain & Vaccine Logistic Assistant	0 (0.0)	0 (0.0)	4 (25.0)	1 (6.3)	4 (20.0)	1 (5.0)

3.13.6 Availability of Laboratory procedures and equipment & supplies

	Urban (n=4)	Rural (n =16)	Total(n=20)
Availability of Laboratory ¹			
Routine investigations ²	4 (100.0)	16 (100.0)	20 (100.0)
Cancer screening ³	3 (75.0)	3 (18.8)	6 (30.0)
Equipment & supplies available in stock			
General ⁴	4 (100.0)	16 (100.0)	20 (100.0)
Cancer screening ⁵	3 (75.0)	15 (93.8)	18 (90.0)

1. Includes generally available in house, free of cost; generally available in house, on payment; and outsourced, but paid for by the program
2. Includes blood glucose, urine routine, haemoglobin and total leucocyte count
3. For cervical cancer screening: Visual Inspection with Acetic Acid(VIA)
4. Includes availability of at least one of each adult weighing scale, Stadiometer/Wall markings for height, Measuring tape, Stethoscope, B.P Apparatus and Glucometer
5. Includes availability of both Vaginal Speculum (CUSCO's and Sims) and Torch / Examination light

3.14 Public Secondary Health Care Facilities

3.14.1 - Infrastructure and available services

	CHC(n=9)	DH(n=6)
Location		
Rural	3 (33.3)	0 (0.0)
Urban	6 (66.7)	6 (100.0)
Types of services		
Outpatient services	9 (100.0)	6 (100.0)
In patient services	9 (100.0)	6 (100.0)
Emergency services	7 (77.8)	6 (100.0)
Intensive Care Unit(ICU) or Cardiac Care Unit	0 (0.0)	3 (50.0)
Availability of functional Telephone facility	5 (55.6)	4 (66.7)
Availability of ambulance facility¹	8 (88.9)	6 (100.0)
Electricity and Functional electricity back up	9 (100.0)	6 (100.0)

¹Includes ambulance owned by health center, centralised ambulance services, outsourced and hired as and when required

3.14.2 -Availability of Cancer related services

	CHC(n=9)	DH(n=6)
Written standard treatment guidelines under NPCDCS availability	6 (75.0)	6 (100.0)
Cancer screening availability		
Oral Cancer	5 (55.6)	3 (50.0)
Cervical Cancer	5 (55.6)	2 (33.3)
Breast Cancer	5 (55.6)	2 (33.3)
All three cancers	5 (55.6)	2 (33.3)
Method of detecting cancer		
Organised Screening	3 (33.3)	2 (33.3)
Opportunistic screening	3 (33.3)	2 (33.3)
Management of patients with Cancer	3 (33.3)	2 (33.3)
Fixed days/day in a week	1 (11.1)	0 (0.0)
Seen daily, no dedicated day	3 (33.3)	3 (50.0)
All are referred/Not managed	2 (22.2)	0 (0.0)
Availability of Day care facility for management of cancer patients (for Chemotherapy)	0 (0.0)	2 (33.3)

3.14.3 -Availability of counselling facilities for risk behaviour and Cancer related IEC materials

	CHC(n=9)	DH(n=6)
Availability of Counselling facilities for risk behaviour through counsellor or specialised personnel*		
Tobacco cessation	4 (44.4)	6 (100.0)
Dietary Modification	2 (22.2)	2 (33.3)
Physical Activity	2 (22.2)	5 (83.3)
Alcohol Cessation	3 (33.3)	3 (50.0)
IEC materials related to Cancer displayed/available in the patient waiting room/outpatient department		
Posters	7 (77.8)	5 (83.3)
Videos	2 (22.2)	3 (50.0)
Pamphlets	7 (77.8)	5 (83.3)
Booklets	5 (55.6)	5 (83.3)
Others	0 (0.0)	0 (0.0)

*Available in-house and in vicinity(within 5 km)

3.14.4 - Availability of Human Resources (Medical Staff)

	CHC(n=9)		DH(n=6)	
	Proportion of facilities reporting the availability of Human Resources	Proportion trained for NPCDCS/NHM(NCD related)/State program	Proportion of facilities reporting the availability of Human Resources	Proportion trained for NPCDCS/NHM(NCD related)/State program
Medicine	4 (44.4)	1 (11.1)	6 (100.0)	5 (83.3)
Surgery	1 (11.1)	0 (0.0)	5 (83.3)	3 (50.0)
Gynaecology	1 (11.1)	0 (0.0)	6 (100.0)	4 (66.7)
Radiology	3 (33.3)	1 (11.1)	3 (50.0)	1 (16.7)
Pathology	1 (11.1)	1 (11.1)	5 (83.3)	3 (50.0)
General duty Medical Officer	9 (100.0)	4 (44.4)	6 (100.0)	5 (83.3)
AYUSH	7 (77.8)	4 (44.4)	6 (100.0)	3 (50.0)
Paediatrics	2 (22.2)	0 (0.0)	6 (100.0)	2 (33.3)

3.14.5 - Availability of Human Resources (paramedical / other Staff)

	CHC(n=9)		DH(n=6)	
	Proportion of facilities reporting the availability of Human Resources	Proportion trained for NPCDCS/NHM(NCD related)/State program	Proportion of facilities reporting the availability of Human Resources	Proportion trained for NPCDCS/NHM(NCD related)/State program
Staff Nurse	9 (100.0)	6 (66.7)	6 (100.0)	6 (100.0)
Pharmacist	9 (100.0)	1 (11.1)	6 (100.0)	2 (33.3)
Lab Technician	9 (100.0)	3 (33.3)	6 (100.0)	5 (83.3)
Physiotherapist	2 (22.2)	1 (11.1)	6 (100.0)	4 (66.7)
Radiographer	4 (44.4)	0 (0.0)	6 (100.0)	2 (33.3)
O.T technician	0 (0.0)	0 (0.0)	1 (16.7)	1 (16.7)
Social worker	4 (44.4)	0 (0.0)	4 (66.7)	2 (33.3)
Data Entry Operator	4 (44.4)	1 (11.1)	6 (100.0)	2 (33.3)
Rehabilitation therapist	0 (0.0)	0 (0.0)	2 (33.3)	0 (0.0)
Counsellor	7 (77.8)	3 (33.3)	6 (100.0)	3 (50.0)
Others	5 (55.6)	4 (44.4)	1 (16.7)	0 (0.0)

3.14.6 - Availability of prevention / treatment procedures

	CHC(n=9)	DH(n=6)
HPV Vaccination	0 (0.0)	1 (16.7)
General surgical procedures	1 (11.1)	4 (66.7)
Laparoscopic procedures	0 (0.0)	2 (33.3)
Radiotherapy	2 (22.2)	2 (33.3)
Palliative care	3 (33.3)	3 (50.0)

3.14.7- Availability of prevention/treatment procedures, laboratory and Equipment & supplies in Public Secondary Health Care facilities (Percentage)

	CHC(n=9)	DH(n=6)
Laboratory and other investigations¹		
Routine blood investigations²	9 (100.0)	6 (100.0)
Biochemistry³	9 (100.0)	6 (100.0)
Cardiac investigations⁴	2 (22.2)	6 (100.0)
Radiology⁵	7 (77.8)	6 (100.0)
Endoscopy⁶	0 (0.0)	4 (66.7)
Histopathology	1 (11.1)	1 (16.7)
Cervical cancer screening⁷	1 (11.1)	2 (33.3)
Available equipment in stock		
Essential⁸	6 (66.7)	4 (66.7)
Imaging ⁹	0 (0.0)	2 (33.3)
Cardiopulmonary¹⁰	0 (0.0)	2 (33.3)
Dental¹¹	4 (44.4)	5 (83.3)
Laboratory¹²	4 (44.4)	3 (50.0)
Cancer screening¹³	0 (0.0)	1 (16.7)

1. Includes Generally available in house, free of cost; Generally available in house, on payment; and Outsourced, but paid for by the program
2. Includes Haemoglobin, Total Leucocyte count
3. Includes blood glucose, Kidney function test and Liver function test
4. Includes ECG
5. Includes X ray, Low frequency USG, High frequency USG, Mammography and CT Scan/MRI
6. Includes Endoscopy and Colposcopy
7. Includes Visual Inspection with Acetic acid (VIA)

8. *Includes atleast one of each adult weighing scale, Stadiometer/Wall markings for height, Measuring tape, Stethoscope and B.P Apparatus*
9. *Includes X ray Machine, Ultrasound machine and C.T scan Machine*
10. *Includes Nebulizer, infusion set, Oxygen mask, Oxygen cylinder, Pulse Oximeter, Laryngoscope, Adult ambu bag, Cardiac monitor, Defibrillator, ECG Machine, ECG roll, 12 Channel stress ECG Tread Mill.*
11. *Includes Dental mirror and Dental chair.*
12. *Includes at least one of each Centrifuge, Glucometer, Haemoglobin meter, Biochemical analyser, Lancets, Glucostrips, Urine strips, Microscope and Reagents/ kits for Glucose test*
13. *Includes Vaginal speculum (Cusco's and sims), Cotton tipped swabs, Punch biopsy forceps, Colposcope, Laryngoscope and Torch / Examination light.*

3.15 Private Secondary Health Care Facility

3.15.1 - Infrastructure and available services

	Urban (n =13)	Rural (n=0)	Total (n =13)
	Types of services		
Outpatient services	12 (92.3)	0 (0.0)	12 (92.3)
In patient services	12 (92.3)	0 (0.0)	12 (92.3)
Emergency services	12 (92.3)	0 (0.0)	12 (92.3)
Intensive Care Unit	7 (53.8)	0 (0.0)	7 (53.8)
	Cancer screening availability		
Oral Cancer	1 (7.7)	0 (0.0)	1 (7.7)
Cervical Cancer	2 (15.4)	0 (0.0)	2 (15.4)
Breast Cancer	1 (7.7)	0 (0.0)	1 (7.7)
Other Cancers	0 (0.0)	0 (0.0)	0 (0.0)
	Method of detecting cancer		
Organized Screening	1 (7.7)	0 (0.0)	1 (7.7)
Opportunistic screening	2 (15.4)	0 (0.0)	2 (15.4)
Treatment provided for Cancer	6 (46.2)	0 (0.0)	6 (46.2)
Availability of standard treatment guidelines for cancer	5 (38.5)	0 (0.0)	5 (38.5)

3.15.2 - Counselling facilities for risk behaviour and Cancer related IEC materials availability

	Urban (n =13)	Rural (n=0)	Total (n =13)
Availability of Counselling facilities for risk behaviour through counsellor or specialised personnel*			
Tobacco cessation	5 (38.5)	0 (0.0)	5 (38.5)
Dietary Modification	3 (23.1)	0 (0.0)	3 (23.1)
Physical Activity	3 (23.1)	0 (0.0)	3 (23.1)
Alcohol Cessation	4 (30.8)	0 (0.0)	4 (30.8)

*Available in-house and in vicinity (within 5 km)

3.15.3 - IEC materials related to Cancer displayed/available in the patient waiting room/outpatient department

	Urban (n =13)	Rural (n=0)	Total (n =13)
Posters	5 (38.5)	0 (0.0)	5 (38.5)
Videos	2 (15.4)	0 (0.0)	2 (15.4)
Pamphlets	5 (38.5)	0 (0.0)	5 (38.5)
Booklets	4 (30.8)	0 (0.0)	4 (30.8)

3.15.4 - Availability of Human Resources

Staff	Urban (n =13)	Rural (n=0)	Total (n =13)
Medical Officer (MBBS and above)	12 (92.3)	0 (0.0)	12 (92.3)
Specialist*	1 (7.7)	0 (0.0)	1 (7.7)
Staff Nurse	13 (100.0)	0 (0.0)	13 (100.0)
Lab Technician	12 (92.3)	0 (0.0)	12 (92.3)
Radiographer	9 (69.2)	0 (0.0)	9 (69.2)
Medical imaging and therapeutic equipment technicians	7 (53.8)	0 (0.0)	7 (53.8)
Radiation therapy technologist	1 (7.7)	0 (0.0)	1 (7.7)
Counselor/ dietician/ educator/ care coordinator	8 (61.5)	0 (0.0)	8 (61.5)
Others	2 (15.4)	0 (0.0)	2 (15.4)

*Includes Physician/Surgeon/ Oncosurgeon/ /Medical oncologist/ Haematologist/ /Radiologist/ Nuclear medicine/ Medical physicist/ Radiation Oncologist/Palliative care Physician

3.15.5 - Availability of prevention/treatment procedures

	Urban (n =13)	Rural (n=0)	Total (n =13)
HPV Vaccination	1 (7.7)	0 (0.0)	1 (7.7)
General surgical procedures	11 (84.6)	0 (0.0)	11 (84.6)
Laparoscopic procedures	4 (30.8)	0 (0.0)	4 (30.8)
Radiotherapy	5 (38.5)	0 (0.0)	5 (38.5)
Chemotherapy	3 (23.1)	0 (0.0)	3 (23.1)
Palliative care	6 (46.2)	0 (0.0)	6 (46.2)

3.15.6 - Availability of prevention/treatment procedures, laboratory and Equipment& supplies

	Urban (n =13)	Rural (n=0)	Total (n =13)
Laboratory and other investigations¹			
Routine blood investigations²	13 (100.0)	0 (0.0)	13 (100.0)
General pathology³	4 (30.8)	0 (0.0)	4 (30.8)
Biochemistry⁴	13 (100.0)	0 (0.0)	13 (100.0)
Cardiac investigations⁵	11 (84.6)	0 (0.0)	11 (84.6)
Radiology⁶	11 (84.6)	0 (0.0)	11 (84.6)
Nuclear Imaging⁷	0 (0.0)	0 (0.0)	0 (0.0)
Endoscopy⁸	4 (30.8)	0 (0.0)	4 (30.8)
Cancer	1 (7.7)	0 (0.0)	1 (7.7)
Available Technology			
Essential⁹	12 (92.3)	0 (0.0)	12 (92.3)
Imaging¹⁰	2 (15.4)	0 (0.0)	2 (15.4)
Cardiopulmonary¹¹	0 (0.0)	0 (0.0)	0 (0.0)
Dental¹²	7 (53.8)	0 (0.0)	7 (53.8)
Laboratory¹³	7 (53.8)	0 (0.0)	7 (53.8)

1. Includes Generally available in house, free of cost; Generally available in house, on payment; and Outsourced, but paid for by the program
2. Includes Haemoglobin and Total Leucocyte count ,
3. Includes histopathology, cytopathology, immunohistochemistry, histochemical stains
4. Includes blood glucose, blood chemistry – alkaline, phosphatase, calcium Kidney function test, Liver function test, Serum protein electrophoresis, Immunoassay test, Tumor lysis syndrome panel- LDH. Uric acid, potassium, Calcium, phosphate
5. Includes ECG and Echo

6. Includes X ray, Low frequency USG, High frequency USG, Mammography and CT Scan/MRI
7. Includes Nuclear scan and PET Scan
8. Includes Endoscopy and Colposcopy
9. Includes at least one of each adult weighing scale, Stadiometer/Wall markings for height, Measuring tape, Stethoscope and B.P Apparatus
10. Includes X ray Machine, Ultrasound machine and C.T scan Machine
11. Includes ECG Machine, ECG roll, 12 Channel stress ECG Tread Mill, Diagnostic spirometer, Nebulizer, infusion set, Oxygen mask, Oxygen cylinder, Pulse Oximeter, Laryngoscope, Adult ambu bag, Cardiac monitor and Defibrillator.
12. Includes dental Mirror and Dental Chair.
13. Includes atleast one of each Centrifuge, Glucometer, Haemoglobin meter, Biochemical analyser, Lancets, Glucostrips, Urine strips, Microscope and Reagents/ kits for Glucose testing

D. Profile of adults with cancer

3.16.1 - Number of cancer patients by place of residence and gender

	Urban	Rural	Male	Female	Combined
Number of cancer patients	27	8	11	24	35

3.16.2 - Age at diagnosis and duration of cancer among cancer patients by place of residence and gender (Mean)

	Urban (27)	Rural (8)	Male (11)	Female (24)	Combined (35)
Age at diagnosis	59.3	49.0	59.5	55.8	57.0
Duration of cancer *	49.3	31.5	30.8	51.8	45.2

*months

3.16.3 - Site of cancer and other chronic illness among cancer patients by place of residence and gender (Percentage)

	Urban (27)	Rural (8)	Male (11)	Female (24)	Combined (35)
Site of Cancer					
Oesophagus	2 (7.4)	0 (0.0)	1 (9.1)	1 (4.2)	2 (5.7)
Lung	1 (3.7)	1 (12.5)	1 (9.1)	1 (4.2)	2 (5.7)
Stomach	0 (0.0)	1 (12.5)	0 (0.0)	1 (4.2)	1 (2.9)
Throat	5 (18.5)	0 (0.0)	5 (45.5)	0 (0.0)	5 (14.3)
Mouth	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Cervix	2 (7.4)	5 (62.5)	0 (0.0)	7 (29.2)	7 (20.0)
Gall bladder	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Breast	9 (33.3)	1 (12.5)	0 (0.0)	10 (41.7)	10 (28.6)
Diagnosed with co-morbidity					
Type of comorbidity					
Tuberculosis	3 (11.1)	0 (0.0)	1 (9.1)	2 (8.3)	3 (8.6)
Kidney failure	1 (3.7)	0 (0.0)	0 (0.0)	1 (4.2)	1 (2.9)
Diabetes Mellitus	1 (3.7)	0 (0.0)	1 (9.1)	0 (0.0)	1 (2.9)
Heart Failure	1 (3.7)	0 (0.0)	0 (0.0)	1 (4.2)	1 (2.9)
Stroke	1 (3.7)	0 (0.0)	1 (9.1)	0 (0.0)	1 (2.9)
Others	5 (18.5)	0 (0.0)	1 (9.1)	4 (16.7)	5 (14.3)

3.16.4- Type of health facility or health care provider from where cancer care was taken among those who sought treatment by place of residence and gender (Percentage)

	Urban (27)	Rural (8)	Male (11)	Female (24)	Combined (35)
Type of health facility / health care provider					
Within the state	20 (76.9)	6 (75.0)	9 (81.8)	17 (73.9)	26 (76.5)
Outside the state*	6 (23.1)	2 (25.0)	2 (18.2)	6 (26.1)	8 (23.5)
Govt facility	16 (59.3)	7 (87.5)	8 (72.7)	15 (62.5)	23 (65.7)
Private facility**	11 (40.7)	2 (25.0)	4 (36.4)	9 (37.5)	13 (37.1)
Self-healers	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Alternative form of medicine (AYUSH)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Others	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

*Outside the State includes Other states within NER and Outside NER

**Private facility includes within the State, Other states within NER and Outside NER

3.16.5- Source of finances for cancer treatment among cancer patients by place of residence and gender
(Percentage)

	Urban (27)	Rural (8)	Male (11)	Female (24)	Combined (35)
Self-Financing/Taking loan/Sale of assets	12(44.4)	2(25.0)	5 (45.5)	9 (37.5)	14 (40.0)
Family support	13 (48.1)	2(25.0)	5(45.5)	10(41.7)	15(42.9)
Health Insurance Schemes/Hospital Incentives	6 (22.2)	1 (12.5)	2(18.2)	5 (20.8)	7 (20.0)

Key Findings

I. Behavioural risk factors

Tobacco use

- The prevalence of current tobacco use (smoked or smokeless) was as high as 77.1%. The prevalence of smokeless tobacco use (54.1%) was higher than smoked tobacco use (43.6%).
- Nearly three fourth (72.9%) of current tobacco users (smoked or smokeless) were daily users.
- The mean age at initiation of use was 20.2 years.
- The average duration of tobacco use among past smokers was 20.9 years.
- Only 15.7 % of the smoked tobacco users had made self-attempts to quit smoking, while only 7.1% had been advised to quit tobacco use by doctor/health worker

Exposure to second hand smoke

- As high as 86.8% respondents reported exposure to second hand tobacco smoke in the past 30 days, either at home, during travel or at the work place.

Non tobacco betel products

- Over a half (58.1%) of the respondents were current users of non-tobacco betel products in the form of pan masala, betel quid or areca nut. The use of Betel quid (54.6%) was highest among current users.

Alcohol use

- A little over 15% had consumed alcohol over the past 12 months, while 12.5% had consumed alcohol over the past 30 days.
- The mean age of initiation of alcohol use was 20.6 years.
- Among those who consumed alcohol in the past 12 months, 1.7% were daily users and 1.6% felt the need for a drink first thing in the morning every day.
- 5.6 % of the respondents engaged in heavy episodic drinking
- Only 2.1% of the respondents had been advised to quit alcohol use by doctor/health worker

Diet

- The average number of days of fruit intake was 2.2 per week
- The average number of servings of fruits and vegetables was 2 per day.
- Over 80 % of the respondents consumed preserved/salt curated and fermented products.
- Over 80% of surveyed adults reported to be having sufficient level of physical activity.

II Raised blood pressure

- Prevalence of raised blood pressure was reported to be 22.1% in males and 21.1% in females. It was found to be slightly higher in adults from urban than in rural region
- Nearly half of the respondents (49%) were pre-hypertensive.

III Overweight/Obesity

- According to WHO cut off values, 35.9% of the respondents were overweight, while 6.9% were obese.
- The prevalence of obesity was higher in males (7.1%) than females (6.6%).
- Nearly 41.3% of the respondents had central obesity

IV Raised blood glucose

- The prevalence of raised fasting blood glucose was 5.4%.

V Clustering of risk factors

- Nearly half of respondents had a clustering of ≥ 3 risk factors (45.7%)

VI Health seeking behaviour

- Around 6.7% of respondents had never had their blood pressure ever measured in life.
- Among those with raised blood pressure, around 39% of the respondents had their blood pressure under control.

VII Cancer screening

- Around 42.8% of the respondents were aware of cancer screening for the three common cancers: Oral, breast and cervical cancer. Less than 2% had ever undergone screening for oral cancer, 4% for breast cancer and 7% for cervical cancer.

VIII: Health system response:

- Less than 25% of the surveyed PHCs' provided cancer screening services.
- Less than 5% of the PHCs' had availability of counselling facilities for risk behaviour through counsellor or specialised personnel
- 60% of the Medical Officers positioned at the PHCs' Proportion had been trained for NPCDCS/NHM (NCD related)/State program.
- 30% of the PHCs' reported to have lab facilities for cancer detection.
- Over 50% of the CHCs' and 33% of District Hospitals provided cancer screening services.
- Physicians trained in NPCDCS / NHM were available 11% of the CHCs'. No Gynaecologists trained for NPCDCS/NHM (NCD related) were available in CHCs'
- Around 8%of the private secondary health facilities that were surveyed provided cancer screening for oral cancers and 15% for cervical cancer, and close to half (46.2%) had cancer treatment facilities.
- HPV vaccination was provided by 16.7% of the DHs' and 7.7% of the private health facilities.

Recommendations

Tobacco use:

- The prevalence of smoked tobacco products between both males and females does not show much differences. Hence awareness program on Cancer should focus both the gender.
- Prevalence of smokeless tobacco was significantly high among females, therefore awareness needs to be intensified among them.
- Tobacco control awareness program needs to be started from High School level.
- All healthcare workers need better sensitisation on tobacco control, so as to enable them to create awareness to the public.
- Better IEC material focusing on secondhand tobacco smoke.

Raised blood pressure:

Regular blood pressure management and BP screening camp need to be conducted.

Overweight/Obesity:

Lifestyle modification and increase physical activity needs to be promoted. Dietary counselling center at the Hospital settings should also be strengthened.

Cancer screening:

Even though the awareness regarding cancer screening was high, the people who had undergone cancer screening were in less proportion. Hence more cancer screening camps should be arranged in the community to increase the accessibility towards cancer screening.

Health system response:

As a whole, the health system related to cancer screening, counselling, treatment, human resources, laboratory facilities and vaccination related facilities need to be upgraded immediately.

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Photographs of the Survey

