

## Assessment Of Facility-Level Preparedness At Primary And Secondary Health Care Levels For Prevention And Control Of Non-Communicable Diseases

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**Abstracts:** Background: Non-communicable diseases (NCDs) are of significant public health concern, causing high mortality, lifelong morbidity and high out of pocket expenditure. Primary and secondary level health facilities can play a key role for screening, treatment, and referral and follow up services. With this view, study is designed to find out facility-level preparedness at primary and secondary health care levels. Identified gaps though this tool will be valuable for decision makers to develop NCDs prevention and control services. Objective: To find out facility-level gaps for prevention and control of Non-communicable diseases and To prepare monitoring tool for NCD prevention and control services Methodology: Baseline study has been done with pre tested standardized checklist. Key details has been taken from responsible health personnel working at primary and secondary health care levels – primary health center (PHC), urban health center (UHC) and community health center (CHC). Availability of equipments and Treatment guidelines, health personnel training need assessment, drug supply, and laboratory services has been assessed. Results: Gaps regarding were lack of trained health personnel, no system of collection of health statistics about non communicable diseases, Diagnostic criteria, Treatment protocol & Referral criteria was not available. Only screening criteria of diabetes and hypertension were available. Conclusion: Gaps exist in the human resource capacity and service delivery at the primary care level in both urban and rural area and secondary care level at community health center. [ Ahir G Natl J Integr Res Med, 2018; 9(6):36-39]

**Key Words:** Assessment, Preparedness, Non communicable diseases, Health care level

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**Introduction:** out of 56.4 million global deaths in 2015, 39.5 million, or 70%, were due to non communicable diseases (NCDs). The four main NCDs are cardiovascular diseases, cancers, diabetes and chronic lung diseases. The burden of these diseases is raising disproportionately among lower income countries and populations<sup>1</sup>

In India, the estimated deaths due to NCDs in 2008 were 5.3 million. [1] Government of India has responded to the increasing burden of NCDs through launch of a National Program for Prevention & Control of Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) in 2008. Programme is under implementation in all 36 States/ UTs. So far, a total of 195 District NCD Cells and 201 District NCD Clinics have been established in the country. Coverage of population under this programme still needs to increase swiftly considering high causing high mortality, lifelong morbidity and high out of pocket expenditure. NPCDCS aims at integration of NCD interventions in the overall public-health delivery framework for optimization of scarce resources and provision of quality services to patients as also for ensuring long term sustainability of interventions<sup>2</sup>. Considering Gujarat state NCD high risk factors like smoking, tobacco chewing, lack of physical activity, dyslipidemia overweight and obesity are highly prevalent<sup>3</sup>. One of the Key strategies for

prevention and control of non communicable diseases is identification of risk factor through screening, Early diagnosis and prompt treatment<sup>4</sup>.

Public Health Facilities of Primary health center and community health center in both urban and rural area may be vital for screening and early identification of risk factors thus for prevention and control of morbidity and mortality<sup>5</sup>. Over the years, focus of primary care in India has been communicable diseases, and reproductive and child health services. Facility level preparedness at PHC and CHC level has not been assessed till date for offering screening, treatment and follow up services in Gujarat state and particularly bhavnagar district of Gujarat up to best of our knowledge. Assessment of preparedness of public health facilities is first most important for quality services of prevention and control of NCDs to needy population. Study questionnaire may be used by health authorities for preparing standard monitoring and supervision tool with wider applicability. After studying basic situation analysis of health facilities in Bhavnagar district, identified gaps will be evidence for upgrading the NCD prevention and control services at PHCs and CHCs. Identified gaps may be utilized by health officials of district as well as state for extension of NCD service delivery at other similar facilities.

**Material and Methods:** There are total 331 CHCs and 1342 PHCs functional in state of Gujarat at present. Among them 44 PHCs and 12 CHCs are belong to Bhavnagar district. Design of this study is cross sectional. After written permission from chief district health officer of Bhavnagar district and medical officer of health of Bhavnagar Municipal Corporation, one PHC, One CHC and one urban primary health center (UPHC) was selected for study considering representative of available health facilities of Bhavnagar. Health facilities were selected by random sampling method. Data collection of this Baseline study was done with pretested structured monitoring tool based on World Health Organization, package of essential NCD interventions (WHO PEN) for low resource settings<sup>6,7</sup>. Between June 2016 and September 2016, this cross sectional survey was done in health facilities. Essential details were taken from responsible health personnel of health facility. Domains like equipments, treatment protocols, health personnel training need assessment, surveillance activity, drug availability and laboratory services related to Major NCD's particularly ischemic heart disease, Hypertension, Diabetes and Cancer had been assessed during data collection. Expected outcome were

1. Status of capacity building of health Personnel as well as surveillance activity
2. Disease Burden ( NCD Morbidity and Mortality) ODP base or Field survey
3. Availability of Screening or Diagnostic criteria, Treatment protocol & Referral criteria (Hypertension, Diabetes, Obesity, cancer)
4. Availability of Essential medicines for NCDs

**Results and discussion:** overall in this study we were able to find out critical gaps in service delivery of NCDs care.

Important finding was none of all three facilities, any kind of training was not imparted to any health personnel. There was felt need of training among all health personnel regarding capacity building for diagnosis and standard treatment guidelines for NCDs. Considering burden of NCDs , training should be key strategy for Abhijit Pakhare et al<sup>8</sup> in his study on assessment of primary care facilities did not training component of health personnel. In other study of Robert peck et al<sup>9</sup> in their study assessed training component, but training status was nil at all health facilities of the study. Reporting of

diabetes screening was being done PHC, Songadh and Urban PHC of Vadva. While IDSP reporting was in practice at CHC vartej. None of health facilities Rose gebart et al<sup>10</sup> had found out those lower-level health facilities were noted to have limited capacity to measure blood glucose as well as significant gaps in the availability of first-line pharmaceuticals for both hypertension and diabetes. Only screening guidelines for hypertension and diabetes have been given to health facilities[Table 1,2].

**Table 1: Availability of Screening or Diagnostic criteria, Treatment protocol & Referral criteria (Hypertension, Diabetes, Obesity, cancer)**

Particulars	PHC Songadh	UPHC Vadva	CHC - Vartej
Hypertension screening criteria Diagnostic & Referral criteria	Only screening criteria	Only screening criteria	Only screening criteria
Diabetes screening criteria Diagnostic & Referral criteria	Only screening criteria	Only screening criteria	Only screening criteria
Obesity Diagnostic & Referral criteria	NO	NO	NO
CHD Diagnostic & Referral criteria	NO	NO	NO
Warning signs of cancer	NO	NO	NO
Blood pressure measurement protocol	NO	NO	NO
Anthropometry protocols (weight ,waist hip ratio, waist circumference)	NO	NO	NO

Other diagnostic and referral criteria, treatment protocols are not available at any of health facilities. Health facilities may miss opportunity to identify high risk individuals due to these critical gaps. JS thakur et al<sup>11</sup> had shown that Prevalence of hypertension in population was 40.1% (95% CI: 37.3–43.0). Which may lead to significant morbidity and mortality and out of pocket expenditure.

**Table 2: Status of logistics and equipments**

Particulars	PHC - songadh	UPHC Vadva	CHC Vartej
Functional stethoscope & Numbers	Yes-2	Yes-1	Yes -4
Functional weighing machine and numbers	Yes-2	Yes-1	Yes-2
Functional stadiometer and numbers	NO	No	Yes-2
Functional mercury or digital sphygmomanometer & numbers	Yes-2	Yes-2	Yes-4
Functional ECG Machine & Numbers	No	No	Yes-1

Table 3 shows that there is lack of stadiometer and ECG machine at PHC Songadh and UPHC Vadva. Abhijit Pakhare et al <sup>8</sup> has also shown that only 34.21 % of total assessed CHC and 10.64 % of Total assessed PHC did have facility of functional ECG machine. There was no availability of any drug for related NCD treatment and secondary prevention at UPHC Vadva of Bhavnagar Municipal Corporation [Table 3]. After assessment of Lab facilities it was found that HB1AC estimation which is essential for follow up of diabetic patients is not done at any of the health facilities. Even serum lipid profile for dyslipidemia is not available at any of health facility [Table 4].

**Table 3: Availability of Essential Medicines**

Essential medicines	PHC Songadh	UPHC Vadva	CHC vartej
Anti hypertensive	Atenlol	NIL	Amlodipin e/ Atenlol Enalpril/ Losartan
Anti diabetic drugs	Metformin Glipizide Gilbenclamide	NIL	Metformin Glipizide
Pre referral emergency drugs for Myocardial infarction	Isosorbide dinitrate	NIL	Isosorbide dinitrate
Secondary prevention ( Anti platelet, statins, beta blockers)	Aspirin		Aspirin Atenlol

**Table 4: Availability of Lab services and Lab Equipments and IEC material for health education**

Basic Laboratory services and equipments	PHC Songadh	UPHC Vadva	CHC vartej
Glucometer with lancets and strips for sugar estimation	Available	Available	Available
HB1AC Estimation	No facility	No facility	No facility
Serum lipid profile	No facility	No facility	No facility
Urinary ketone strips	Not available	Not available	Not available

If these services are provided at public health facilities significant number of high risk individuals for NCDs will be identified and may avail prevention services at their doorstep without economic burden.

**Conclusion:** Gaps do exist in the human resource capacity and service delivery for NCD prevention and control at the primary care level in both urban and rural area and secondary care level at community health center assessed in bhavnagar district.

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