

4.5.2 PUBLIC SECONDARY HEALTH CARE FACILITIES

The public secondary health facilities which includes Community Health Centres (CHCs) and the District hospitals (DHs) were surveyed. As of February 2019, of all the surveyed health facilities, the NPCDCS implementing CHCs were 281, and DHs were 290, while NPCDCS non-implemented CHCs were 105 and DHs were 44. Twenty-nine CHCs and one DH reported status of NPCDCS as unknown, these have been excluded from the analysis. Accordingly, the results from these surveyed facilities have been presented in *tables 4.5.2.1 to 4.5.2.7* below.

KEY FINDINGS

- **Higher** number of **Hypertension and Diabetes mellitus** patients visited NPCDCS implemented DHs in a month than those with other NCDs.
- Among the NPCDCS implemented health facilities, **68.7% of CHCs** and **65.9% of DHs** had written standard treatment guidelines under NPCDCS.
- **1.7%** of NPCDCS implemented DHs had all the essential medicines and technologies as defined by NPCDCS guidelines.

Table 4.5.2.1 Overall facilities and infrastructure available in CHCs and district hospitals for all conditions (Percentage)

| Availability of facilities and infrastructure | CHCs | | DHs | |
|---|-----------------------------|---------------------------------|-----------------------------|--------------------------------|
| | NPCDCS Implemented (n= 281) | NPCDCS Non-implemented (n= 105) | NPCDCS Implemented (n= 290) | NPCDCS Non-implemented (n= 44) |
| Types of services provided | | | | |
| Outpatient services | 100.0 | 100.0 | 100.0 | 100.0 |
| Inpatient services | 91.8 | 92.4 | 96.9 | 95.5 |
| Emergency services | 84.7 | 77.1 | 94.5 | 90.9 |
| Intensive Care Unit or Cardiac Care Unit | 11.0 | 9.5 | 62.8 | 65.9 |
| Telephone, electricity and ambulance services | | | | |
| Landline or a mobile telephone number functional on the day of assessment | 71.2 | 65.7 | 75.2 | 72.7 |
| Electricity backup functional on the day of assessment | 95.0 | 90.5 | 99.3 | 95.5 |
| Ambulance services | 96.1 | 88.6 | 100.0 | 100.0 |

Among the secondary health care facilities, where NPCDCS was implemented, 91.8% CHCs and 96.9% district hospitals provided inpatient services, while 71.2% (CHCs) and 75.2% (DHs) had a functional landline or a mobile telephone number. (*Table 4.5.2.1*)

Table 4.5.2.2 Services available for NCDs in CHCs and district hospitals (Percentage)

| Availability of services for NCDs | CHCs | | DHs | |
|--|--------------------------------|------------------------------------|--------------------------------|-----------------------------------|
| | NPCDCS Implemented (n= 281) | NPCDCS Non-implemented (n= 105) | NPCDCS Implemented (n= 290) | NPCDCS Non-implemented (n= 44) |
| Availability of written standard treatment guidelines under NPCDCS | 68.7 | - | 65.9 | - |
| Management of patients with NCDs | | | | |
| All are referred/not managed | 3.9 | 14.3 | 0.7 | 6.8 |
| Fixed days/day in a week | 11.7 | 1.9 | 7.9 | 4.5 |
| Seen daily/no dedicated day | 84.3 | 83.8 | 91.4 | 88.6 |
| Availability of facilities for management of NCDs | | | | |
| NCD clinic | 49.5 | 1.9 | 60.3 | 61.4 |
| NCD counselling services | 37.7 | 23.8 | 64.1 | 47.7 |
| Physiotherapy | 26.7 | 10.5 | 75.9 | 72.7 |
| Laboratory testing for major NCDs | 95.7 | 89.5 | 99.7 | 100.0 |
| Day care facilities for management of cancer patients (available for chemotherapy) | 2.1 | 1.0 | 18.3 | 34.1 |

Among surveyed NPCDCS implemented secondary health facilities, 68.7%, 49.5% and 37.7% CHCs and 65.9%, 60.3% and 64.1% district hospitals had written standard treatment guidelines under NPCDCS, NCD clinics and NCD counselling services, respectively. Overall proportion of 84.3% and 91.4% NPCDCS implementing CHCs and DHs had no dedicated day/saw patients with NCDs daily. The day care facilities for management of cancer patients (available for chemotherapy) were reported only in 2.1% and 18.3% of NPCDCS implemented CHCs and DHs correspondingly. (*Table 4.5.2.2*)

Table 4.5.2.3 Average number of patients attending public secondary health centres in the month prior to the survey

| NCD category | CHCs | | DHs | |
|-------------------------|--------------------------------|------------------------------------|--------------------------------|-----------------------------------|
| | NPCDCS Implemented (n= 281) | NPCDCS Non-implemented (n= 105) | NPCDCS Implemented (n= 290) | NPCDCS Non-implemented (n= 44) |
| Diabetes mellitus | 199 | 265 | 508 | 432 |
| Hypertension | 272 | 271 | 586 | 518 |
| Cardiovascular diseases | 42 | 36 | 147 | 134 |
| Stroke | 9 | 6 | 40 | 33 |
| COPD | 143 | 118 | 288 | 95 |
| Cancer | 22 | 1 | 20 | 37 |

In the month before the survey it was observed that average number of patients attending NPCDCS implemented CHCs and DHs with cancer were only 22 and 20, respectively. (*Table 4.5.2.3*)

Table 4.5.2.4 Service availability for management of NCDs in public secondary health centres (Percentage)

| Available services for management of NCDs | CHCs | | DHs | |
|---|-----------------------------|---------------------------------|-----------------------------|--------------------------------|
| | NPCDCS Implemented (n= 281) | NPCDCS Non-implemented (n= 105) | NPCDCS Implemented (n= 290) | NPCDCS Non-implemented (n= 44) |
| Inpatient services* | | | | |
| Diabetes mellitus | 75.1 | 72.4 | 95.9 | 88.6 |
| Hypertension | 78.6 | 73.3 | 95.2 | 95.5 |
| Cardiovascular diseases including Stroke | 45.2 | 46.7 | 86.9 | 86.4 |
| COPD | 66.9 | 64.8 | 87.6 | 84.1 |
| Cancer | 17.6 | 11.4 | 45.2 | 54.5 |
| Outpatient services** | | | | |
| Diabetes mellitus | 99.6 | 97.1 | 99.3 | 97.7 |
| Hypertension | 99.6 | 99.0 | 99.7 | 97.7 |
| Cardiovascular diseases including Stroke | 82.2 | 69.5 | 96.2 | 95.5 |
| COPD | 85.4 | 82.9 | 94.8 | 93.2 |
| Cancer | 49.5 | 32.4 | 66.9 | 79.5 |

*among those facilities providing inpatient services; ** among those facilities providing outpatient services

More than two-thirds and four-fifth of the NPCDCS implemented CHCs and DHs provided inpatient services for diabetes, hypertension and COPD, respectively. While nearly all NPCDCS implemented CHCs and DHs provided outpatient services for diabetes and hypertension. Whereas, inpatient and outpatient services for cancer and CVDs including stroke were comparatively low in NPCDCS implemented CHCs. (*Table 4.5.2.4*)

Table 4.5.2.5 Available human resources (medical staff) in public secondary health centres (Percentage)

| Medical staff | CHCs | | | DHs | | |
|--|---|---|---|---|---|---|
| | NPCDCS implemented (n= 281) | | NPCDCS Non-implemented (n= 105) | NPCDCS implemented (n= 290) | | NPCDCS Non-implemented (n= 44) |
| | Proportion of health facilities reporting availability of human resources | Proportion trained under NPCDCS / NHM (NCD related)/State | Proportion of health facilities reporting availability of human resources | Proportion of health facilities reporting availability of human resources | Proportion trained under NPCDCS / NHM (NCD related)/State | Proportion of health facilities reporting availability of human resources |
| Endocrinologist | 0.7 | 0.4 | - | 1.7 | - | 4.5 |
| Cardiologist | 2.5 | 0.7 | 2.9 | 16.9 | 3.8 | 15.9 |
| Medical oncologist | - | - | - | 7.2 | 2.8 | 18.2 |
| Cytopathologist | 2.8 | 0.0 | 3.8 | 15.2 | 2.8 | 9.1 |
| Medicine specialist | 23.8 | 4.6 | 28.6 | 77.6 | 15.2 | 93.2 |
| Surgeon | 24.9 | 3.2 | 32.4 | 87.6 | 10.3 | 93.2 |
| Obstetrician and Gynaecologist | 44.8 | 6.8 | 46.7 | 80.0 | 13.1 | 93.2 |
| Ophthalmologist | 22.1 | 2.5 | 20.0 | 81.4 | 9.0 | 81.8 |
| Other specialists (Anaesthesia, ENT, Paediatrics etc.) | 45.2 | 5.3 | 51.4 | 94.5 | 12.1 | 100.0 |
| General duty medical officer (MBBS) | 94.3 | 22.4 | 86.7 | 93.1 | 15.5 | 95.5 |
| AYUSH medical officer | 59.4 | 7.5 | 51.4 | 54.5 | 6.6 | 47.7 |
| Dentist | 59.4 | 7.1 | 61.0 | 90.7 | 11.7 | 90.9 |

Overall, NPCDCS implemented 23.8% CHCs and 77.6% district hospitals reported availability of medicine specialist, while 94.3% and 93.1% CHCs and DHs reported having general duty medical officer (MBBS). 22.4% and 15.5% CHCs and DHs had trained NPCDCS/NHM general duty medical officers. Only 2.5% and 16.9% of NPCDCS implemented CHCs and DHs had a cardiologist. (*Table 4.5.2.5*)

Table 4.5.2.6 Available human resources (paramedical/other staff) in public secondary health centres (Percentage)*

| Paramedical / other staff | CHCs | | | DHs | | |
|--|---|---|--|--|---|---|
| | NPCDCS Implemented (n= 281) | | NPCDCS Non- implemented (n= 105) | NPCDCS Implemented (n= 290) | | NPCDCS Non- implemented (n= 44) |
| | Proportion of health facilities reporting availability of human resources | Proportion trained under NPCDCS / NHM (NCD related) / State | Proportion of health facilities reporting availability of human resources | Proportion of health facilities reporting availability of human resources | Proportion trained under NPCDCS / NHM (NCD related) / State | Proportion of health facilities reporting availability of human resources |
| Staff nurse | 97.5 | 23.8 | 99.0 | 97.2 | 18.6 | 95.5 |
| Lady health visitor/ Female health assistant/PHN | 47.7 | 8.2 | 46.7 | 32.8 | 4.5 | 54.5 |
| Male health assistant | 20.3 | 4.3 | 25.7 | 11.4 | 1.7 | 18.2 |
| Auxiliary nurse midwife (ANM) | 75.8 | 12.5 | 78.1 | 59.3 | 8.3 | 75.0 |
| Male health worker (MPW) | 24.6 | 2.1 | 27.6 | 14.1 | 1.7 | 13.6 |
| Male nurse assistant | 21.7 | 0.7 | 24.8 | 33.1 | 1.0 | 34.1 |
| Pharmacist | 94.0 | 11.0 | 97.1 | 99.0 | 9.3 | 100.0 |
| Lab technician | 96.8 | 10.7 | 90.5 | 99.0 | 13.4 | 97.7 |
| Counsellor | 59.1 | 10.0 | 54.3 | 82.4 | 13.8 | 72.7 |
| Physiotherapist | 24.6 | 3.2 | 11.4 | 75.2 | 10.7 | 79.5 |
| Cytopathology technician | 1.8 | 0.0 | 1.0 | 7.9 | 0.7 | 9.1 |
| Care coordinator | 7.1 | 2.5 | 1.0 | 11.4 | 1.0 | 9.1 |
| Data entry operator | 61.6 | 7.1 | 70.5 | 77.6 | 10.3 | 84.1 |

*Denominator includes not applicable and don't know responses

More than three-fourth of the NPCDCS implemented CHCs reported availability of nurses, auxiliary nurse midwife, pharmacist and lab technician. Whereas, less than one-third reported availability of male health assistant, MPW, male nurse assistant, physiotherapist, cytopathology technician, care coordinator. It was also observed that 59.1% and 82.4% of NPCDCS implemented CHCs and DHs respectively, reported availability of counsellor, while 99.0% and 75.2% of DHs had pharmacists and physiotherapists, respectively. (*Table 4.5.2.6*)

The percentage of NPCDCS implemented CHCs and district hospitals had trained nurses (23.8% and 18.6%), ANMs (12.5% and 8.3%), pharmacist (11.0% and 9.3%) and lab technician (10.7% and 13.4%), counsellor (10.0% and 13.8%) and data entry operator (7.1% and 10.3%) under NPCDCS/NHM. (*Table 4.5.2.6*)

Table 4.5.2.7 Availability¹ of essential technologies and medicines for NCDs as per NPCDCS guidelines in public secondary health centres (Percentage)

| Essential technologies and medicines for NCDs | | CHCs | | DHs | |
|---|---|--------------------------------|------------------------------------|--------------------------------|-----------------------------------|
| | | NPCDCS Implemented (n= 281) | NPCDCS Non-implemented (n= 105) | NPCDCS Implemented (n= 290) | NPCDCS Non-implemented (n= 44) |
| Technologies | | | | | |
| Diabetes ² | | 21.7 | 15.2 | 50.3 | 52.3 |
| Hypertension and Cardiovascular diseases ³ | | 1.1 | 2.9 | 20.3 | 11.4 |
| Chronic respiratory diseases ⁴ | | 75.4 | 65.7 | 94.5 | 84.1 |
| Cancer ⁵ | | NA* | NA* | 9.7 | 13.6 |
| All ⁶ | | 0.0 | 0.0 | 3.1 | 0.0 |
| Medicines | | | | | |
| Diabetes ⁷ | | 55.2 | 44.8 | 74.5 | 75.0 |
| Hypertension and Cardiovascular diseases ⁸ | | 39.9 | 21.9 | 59.0 | 63.6 |
| Chronic respiratory diseases ⁹ | | 19.2 | 16.2 | 36.6 | 29.5 |
| Cancer ¹⁰ | | NA* | NA* | 96.6 | 97.7 |
| All ¹¹ | | 10.0 | 6.7 | 25.5 | 22.7 |
| Both technologies and medicines | | | | | |
| Diabetes ^{2,7} | | 17.1 | 10.5 | 42.1 | 43.2 |
| Hypertension and Cardiovascular diseases ^{3,8} | | 1.1 | 1.0 | 16.6 | 9.1 |
| Chronic respiratory diseases ^{4,9} | | 17.4 | 14.3 | 35.2 | 29.5 |
| Cancer ^{5,10} | | NA* | NA* | 9.7 | 13.6 |
| All ^{6,11} | | 0.0 | 0.0 | 1.7 | 0.0 |
| 1 | Availability of an item is defined as being available within the facility. | | | | |
| 2 | Availability of any technology related to diabetes refers to availability of at least one "glucometer, biochemical analyser, glucostrips, urine strips reagents/kits for glucose test, reagents/kits for lipid profile, centrifuge and lancets". | | | | |
| 3 | Availability of any technology related to hypertension/CVDs refers to availability of at least one "blood pressure measuring instrument, weighing scale, stadiometer/wall markings for height, measuring tape, stethoscope, cardiac monitor, defibrillator, ECG machine, 12-Channel stress ECG tread mill and ECG roll". | | | | |
| 4 | Availability of any technology related to chronic respiratory diseases refers to availability of at least one "nebuliser and pulse oximeter". | | | | |
| 5 | Availability of any technology related to cancer refers to availability of at least one "torch/examination light, vaginal speculum, x-ray machine, ultrasound machine, CT Scan machine, haemoglobinometer, microscope, dental chair, dental mirror, 5% acetic acid and cotton tipped swabs". | | | | |
| 6 | All technologies related to major NCDs are at least one "glucometer, biochemical analyser, glucostrips, urine strips reagents/kits for glucose test, reagents/kits for lipid profile, centrifuge, lancets, blood pressure measuring instrument, weighing scale, stadiometer/wall markings for height, measuring tape, stethoscope, cardiac monitor, defibrillator, ECG machine, 12-Channel stress ECG tread mill, ECG roll, nebuliser and pulse oximeter, torch/examination light, vaginal speculum, x-ray machine, ultrasound machine, CT Scan machine, haemoglobinometer, microscope, dental chair, dental mirror, 5% acetic acid and cotton tipped swabs". | | | | |
| 7 | Availability of medicines related to diabetes includes at least one "hypoglycaemic agent and insulin". | | | | |
| 8 | Availability of medicines related to hypertension/CVDs are at least one "anti-platelet agent, statin/cholesterol lowering drugs, ACE inhibitor, diuretic, nitrates, long acting calcium channel blocker, beta blocker, drugs for shock and heart failure". | | | | |
| 9 | Availability of medicines related to chronic respiratory diseases includes at least one "bronchodilator, a steroid inhalant". | | | | |
| 10 | Availability of medicines related to cancer at least one of each "sedative/tranquilizer, local anaesthetic". | | | | |
| 11 | All the medicines to be available for major NCDs are at least one of each "hypoglycaemic agent, insulin, anti-platelet agent, statin/cholesterol lowering drugs, ACE inhibitor, diuretic, nitrates, long acting calcium channel blocker, beta blocker, drugs for shock and heart failure, bronchodilator, a steroid inhalant, sedative/tranquilizer, local anaesthetic". | | | | |
| NA* – Not applicable, since NPCDCS guidelines do not prescribe technology and medicines for cancer in CHCs. | | | | | |

Among the NPCDCS implemented CHCs and DHs, essential technologies were available at 21.7% CHCs and 50.3% DHs for diabetes mellitus, 1.1% CHCs and 20.3% DHs for hypertension and cardiovascular problems and 75.4% CHCs and 94.5% DHs for chronic respiratory diseases. Whereas, essential medicines were available for diabetes mellitus at 55.2% CHCs and 74.5% DHs, hypertension and

cardiovascular problems at 39.9% CHCs and 59.0% DHs and chronic respiratory diseases at 19.2% CHCs and 36.6% DHs. Only 1.7% of NPCDCS implementing district hospitals reported availability of all essential medicines and technologies as per NPCDCS guidelines. (*Table 4.5.2.7*)

IEC materials related to NCDs displayed/available in waiting room/ outpatient department in CHCs and District hospitals

Among the NPCDCS implemented secondary health facilities, 86.8%, 13.2%, 54.4% and 40.2% of CHCs and 83.1%, 19.3%, 61.7% and 48.3% of DHs had posters, videos, pamphlets and booklets related to NCDs displayed/available in waiting room/outpatient department respectively. (*Annexure table 4.5.1a*)