



THE PRIMARY HEALTH CARE SYSTEM OF GUJARAT

A PRIMARY HEALTH CARE PERFORMANCE INITIATIVE ASSESSMENT

REPORT PREPARED BY THE WORLD BANK IN CONSULTATION WITH THE HEALTH AND FAMILY WELFARE DEPARTMENT, GOVERNMENT OF GUJARAT.



THE PRIMARY HEALTH CARE SYSTEM OF GUJARAT

A PRIMARY HEALTH CARE PERFORMANCE INITIATIVE ASSESSMENT

REPORT PREPARED BY THE WORLD BANK IN CONSULTATION WITH THE HEALTH
AND FAMILY WELFARE DEPARTMENT, GOVERNMENT OF GUJARAT.



WORLD BANK GROUP
Health, Nutrition & Population



© 2023 The World Bank Group 1818 H Street NW, Washington DC 20433 Telephone: 202-473-1000; Internet: www.worldbank.org and www.ifc.org SOME RIGHTS RESERVED. This work is a product of the staff of The World Bank and the International Finance Corporation (the World Bank Group) with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank's Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the information included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

RIGHTS AND PERMISSIONS. The material in this work is subject to copyright. Because the World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to the work is given. **ATTRIBUTION.** Please cite the work as follows: "World Bank Group. 2023. The Primary Health Care System of Gujarat: A Primary Health Care Performance Initiative Assessment. (c) World Bank Group." All queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; e-mail: pubrights@worldbank.org. **DISCLAIMER.** The PHCPI is a partnership dedicated to transforming the global state of primary health care, beginning with better measurement. While the content in this report represents the position of the partnership as a whole, it does not necessarily reflect the official policy or position of any specific partner organization.

CONTENT

| | |
|------------------------------------|----|
| Acknowledgements | 6 |
| Abbreviations | 8 |
| Executive Summary | 11 |
| Introduction | 15 |
| About PHCPI | 23 |
| Methodology | 25 |
| Results | 27 |
| Access | 28 |
| Coverage | 32 |
| RMNCAH | 34 |
| Infectious Disease | 35 |
| Non-Communicable Disease | 36 |
| Nutrition | 38 |
| Quality | 40 |
| Continuity | 41 |
| Comprehensiveness | 42 |
| Provider Competence | 45 |
| Safety | 46 |
| Person-centeredness | 47 |
| Capacity | 48 |
| Governance | 50 |
| Inputs | 56 |
| Population Health Management | 64 |

Equity69

Financing.....70

Recommendations 73

Recommendation 1: Enhance the quality management infrastructure to foster greater system integration and enhance the effectiveness of CPHC services.74

Recommendation 2: Streamline information systems to enhance care coordination and integration, thereby strengthening the system’s capacity for ongoing monitoring of services, quality, and resource allocation. 80

Recommendation 3: Enhance facility organization and management capacities to foster a collaborative, team-based approach to CPHC service delivery.83

Recommendation 4: Enhance patient and community engagement to improve perceptions, stimulate demand for primary health care, and elevate patient satisfaction.....86

Annex 91

Annex A. PHCPI Conceptual Framework.....92

Annex B. Performance Domain.....93

Annex C. Capacity Domain94

Annex D. Recommendations Impact, Feasibility, and Timelines95

Annex E. Involvement of Stakeholders in the Implementation of Recommendations97

Annex F. Progression Model Participants99

Annex G. Progression Model Documents Reviewed.....102

LIST OF FIGURES

| | | |
|-------------------|--|----|
| Figure 1. | Leading Causes of Death, Gujarat 2019 | 18 |
| Figure 2. | Comprehensive Primary Health Care Services | 20 |
| Figure 3. | Changes in Composition of Health Expenditure by Source in Gujarat, 2014-2020 | 22 |
| Figure 4. | Vital Signs Profile, Gujarat | 29 |
| Figure 5. | Perceived Problems in Accessing Health Care Due to Treatment Costs and Distance, Frontrunner states..... | 30 |
| Figure 6. | Time to PHCs by Village and Population, Gujarat | 31 |
| Figure 7. | Change in Population with High or Very High Blood Sugar Levels or Taking Medication to Lower Their Blood Sugar Levels, Gujarat, 2016 to 2021 | 37 |
| Figure 8. | Breastfeeding indicators, Gujarat, NFHS-5 | 39 |
| Figure 9. | Change in Prevalence of Childhood Anaemia, Gujarat, 2016 to 2021 | 40 |
| Figure 10. | Diabetes and Hypertension Care Cascade Based on CPHC NCD Portal Data, Gujarat, April 2022 to March 2023 | 43 |

LIST OF BOXES

| | | |
|---------------|---|----|
| Box 1. | 2017 National Health Policy Definition of Primary Health Care | 19 |
| Box 2. | Fragmentation among NCD Policies and Programs..... | 51 |
| Box 3. | India Hypertensive Initiative | 56 |
| Box 4. | NCD Portal..... | 60 |

LIST OF TABLES

| | | |
|-----------------|---|----|
| Table 1. | Coverage of RMNHC, Infectious Disease, NCD and Nutrition Services | 32 |
| Table 2. | HMIS Comprehensiveness Indicators, Gujarat 2022-23 | 44 |

ACKNOWLEDGEMENTS

This report presents the key findings of the Primary Health Care Performance Initiatives (PHCPI) assessment in Gujarat. The assessment was part of a long-term lending and technical assistance engagement with the Health and Family Welfare Department (HFWD) of Government of Gujarat (GoG) under the SRESTHA-Gujarat Program (P178252). The HFWD requested technical assistance for a PHCPI assessment to improve the comprehensive primary health care agenda in Gujarat.

The team would like to acknowledge the guidance received from the HFWD senior leadership, including Shri Manoj Aggarwal (Indian Administration Service, Additional Chief Secretary, HFWDt), Smt. Shahmeena Husain (IAS, Commissioner of Health, Medical Services and Medical Education and Ex-Officio Principal Secretary to Government (Public Health and Family Welfare), Smt. Remya Mohan (IAS, Mission Director, National Health Mission), Dr. Nilam Patel (Additional Director, Public Health), and Dr. N P Jani (Additional Director, Family Welfare). The team is grateful for the outstanding support and guidance provided by Gujarat State Health System Resource Centre Gujarat (SHSRC-G) Team, including Dr. A. M. Kadri (Executive Director), Dr. Harsh Bakshi (Team Lead, SHSRC), Dr. Ankita Shah (Consultant, Comprehensive Primary Health Care (CPHC) and Community Processes), Dr. Dhara Jadeja (Junior Consultant, CPHC-CP). Under their leadership, the assessment brought together stakeholders from public, private, and nongovernmental sectors, specifically the officials from the state, districts, taluka (sub-district) and facilities under the HFWD. They also provided additional data and expertise that has been invaluable to the assessment. The team also thanks key informants interviewed for their time and contributions, without which this assessment would be incomplete.

The assessment was led by Manuela Villar Uribe (Senior Health Specialist) in collaboration with the SHSRC and the HFWD. Cameron Feil, Eesha Desai, Kiran Narkhede, Caitlin Noonan, Minjan Patel, and Natalia Rovelo conducted data collection, analysis, and curation. The following experts (listed alphabetically) from the World Bank provided critical input at various phases of the assessment: Oscar Bernal Acevedo, Guru Rajesh Jammy, Ana Krsteska, Navneet Manchanda, Rahul Pandey, and Elina Pradhan.

ABBREVIATIONS

| | |
|----------------|---|
| ANC | Antenatal Care |
| ART | Antiretroviral Therapy |
| AB | Ayushman Bharat |
| AB-HWCS | Ayushman Bharat Health and Wellness Centers |
| ARI | Acute Respiratory Illness |
| ASHA | Accredited Social Health Activists |
| CHE | Current Health Expenditure |
| CHW | Community Health Worker |
| CHOs | Community Health Officers |
| CBAC | Community Based Assessment Checklist |
| CPHC | Comprehensive Primary Health Care |
| DLI | Disbursement Linked Indicator |
| EBAIS | Equipo Básico de Atención Integral de Salud |
| FHW | Frontline Health Workers |
| FMIS | Financial Management Information System |
| GDP | Gross Domestic Product |
| GoI | Government of India |

| | |
|---------------|--|
| HFWD | Health and Family Welfare Department |
| HIV | Human Immunodeficiency Virus |
| HMIS | Health Management Information System |
| HWC | Health and Wellness Centers |
| IFMS | Integrated Financial Management System |
| MPHW | Multi-Purpose Healthcare Workers |
| NCD | Non-Communicable Disease |
| NHM | National Health Mission |
| NHP | National Health Policy |
| NITI | National Institute for Transforming India |
| NRHM | National Rural Health Mission |
| NQAS | National Quality Assurance Standards |
| OOPE | Out of Pocket Expenditure |
| PFMS | Public Financial Management System |
| PHC | Primary Health Care Center |
| PM-JAY | Pradhan Mantri Jan Arogya Yojana |
| PHCPI | Primary Health Care Performance Initiative |
| PPP | Purchasing Power Parity |
| RBSK | Rashtriya Bal Swasthya Karyakram |

| | |
|-----------------|---|
| RMNCAH+N | Reproduction, Maternal, Neonatal, Child, Adolescent Health, and Nutrition |
| SCs | Sub-Centers |
| SHSRC | State Health System Resource Center |
| SRETHA-G | Systems Reform Endeavors for Transformed Health Achievement In Gujarat |
| SNA | Single Nodal Agency |
| TB | Tuberculosis |
| UHC | Universal Health Coverage |
| UPHCs | Urban Primary Health Care Centers |
| VSP | Vital Signs Profile |
| WHO | World Health Organization |



માતા વંદન
બાપુ વંદન

EXECUTIVE SUMMARY

This report presents the findings of the Primary Health Care Performance Initiatives (PHCPI) assessment in Gujarat, conducted by the World Bank in consultation with the Health and Family Welfare Department and the Government of Gujarat. The assessment provides an opportunity to understand the performance of Gujarat's primary health care system, highlighting areas of strengths and opportunities to address ongoing challenges. The assessment uses the Primary Health Care Performance Initiatives framework, which organizes various domains and sub-domains of primary care, with emphasis on the processes of service delivery and performance.

Gujarat has made significant strides in population health and health system performance, particularly in primary healthcare coverage, quality, and access. However, challenges persist in delivering high-quality and equitable care. For example, geographic barriers affect twice as many women (27 percent) as financial barriers (15 percent), especially in rural areas. While notable improvements have been made in comprehensive primary healthcare services, including reproductive, maternal, newborn, child, and adolescent health services, nutrition, infectious diseases, and non-communicable diseases (NCDs), further progress would enable high-quality and equitable care, especially in rural settings. Gujarat also demonstrates promising care continuity in reproductive, maternal, newborn, child, adolescent health, and Nutrition (RMNCAH+N) and NCD services, with opportunities to improve provider availability and patient safety.

The capacity of Gujarat's primary healthcare system exhibits both strengths and areas for improvement across governance, inputs, and population health and facility management. The state demonstrates a strong foundation in primary healthcare policies and governance, notably through its commitment to the Ayushman Bharat Health and Wellness Centers (AB-HWCs) program. Although it boasts a robust health care workforce, it is limited by inadequate essential inputs such as drugs and

supplies and fragmented information systems. While Gujarat maintains a strong empanelment and outreach system, there are substantial opportunities for improvement in facility management and organization, such as engaging communities in local priority setting, promoting team-based clinical care, enhancing facility leadership capabilities, and optimizing information system utilization.

Strategic investments will support Gujarat in transforming primary health care, shifting public perceptions, and building a resilient health care system. The following policy recommendations have been developed with the aim of cultivating a primary health care system that not only provides comprehensive services, but also ensures continuity, coordination, person-centeredness, and integration:

- 1. Enhance the quality management infrastructure to foster greater system integration and enhance the effectiveness of comprehensive primary health care services.**

Gujarat has improved health care quality through accreditation processes like Kayakalp and National Quality Assurance Standard (NQAS), ensuring essential resources for primary health care. Further enhancements can be made by supporting the implementation of a state health care quality plan, consolidating vertical programs under comprehensive primary health care (CPHC), and establishing a comprehensive monitoring framework.

- 2. Streamline information systems to enhance care coordination and integration, strengthening the system's capacity for the ongoing monitoring of services, quality, and resource allocation.**

To enhance the utility of numerous existing information systems, it is critical to improve tracking of essential inputs and fostering interoperability among the state's 40 systems. Additionally, the development of longitudinal patient records and monitoring primary healthcare expenditure using the Systems of National Health

Accounts can significantly boost care coordination and resource allocation.

3. Enhance facility organization and management capacities to foster a collaborative, team-based approach to CPHC service delivery.

Gujarat can further strengthen facility organization and management by aligning with CPHC operational guidelines to facilitate team-based care, enhancing managerial skills through training, and providing ongoing education and support to healthcare providers for continuous improvement of their competencies.

4. Enhance stakeholder and community engagement to transform unfavorable perceptions, stimulate demand for primary health care, and elevate patient satisfaction.

Strong stakeholder and community engagement in policy and service delivery hinge on a robust organizational structure, efficient information systems, and ample human resources. Furthermore, involving communities and stakeholders in shaping public primary health care perceptions, harnessing community health workers (CHW), and employing grassroots policy approaches can effectively boost demand for these services.



INTRODUCTION

Gujarat is a populous state with one of the strongest economies in India.

With a population of over 60 million according to the 2011 census, Gujarat is the ninth most populous state in India.^{1,2} Gujarat is comprised of 33 administrative districts (also referred to as zillas) which span a variety of settings, including urban rural areas, deserts, and coastlines.³ In 2011, 57 percent of the population lived in rural areas compared to 43 percent in urban areas. Gujarat is also diverse: its tribal population comprises of 14 percent of the population and scheduled castes account for 7 percent of the population.⁴ Data from the census (2020) indicates that 68 percent of the population is working age (between 15- and 59-years-old), while 8 percent of the population is aged 60 and above.⁵ Economically, Gujarat has the fourth highest gross state domestic product (GSDP), totaling US\$230 billion, and the eleventh highest GSDP per capita among Indian states. Gujarat's GDP grew at a rate of 12.9 percent per year from 2015 and 2021, and its per capita income grew at a rate of 8.4 percent from 2011 to 2018—well above the Indian average of 5.5 percent.⁶

Gujarat has experienced improvements in life expectancy and reduced poverty in previous decades. Life expectancy at birth is 69.9 years, nearly equivalent with the national average (70.15) but below states with similar economic and demographic characteristics such as Punjab (72.2 years), Maharashtra (72.5 years) and Kerala (75.3 years).⁷ The National

1 Census has not been undertaken since 2011. Population projections estimate population to be approximately 72 million in 2023. Retrieved: <https://www.census2011.co.in/census/state/gujarat.html>

2 Census India. 2011. Retrieved: <https://www.censusindia.co.in/states/gujarat#:~:text=Gujarat%20has%20total%20population%20of,average%20382%20per%20square%20km>.

3 District of Gujarat Portal. "Districts of Gujarat." Retrieved: <https://gujarat.s3waas.gov.in/>

4 Census India. 2011. Retrieved: <https://www.censusindia.co.in/states/gujarat#:~:text=Gujarat%20has%20total%20population%20of,average%20382%20per%20square%20km>.

5 Census India. 2020. Retrieved: <https://censusindia.gov.in/census.website/data/SRSB>

6 Government of Gujarat. Socio-Economic Review. Retrieved: https://financedepartment.gujarat.gov.in/Documents/Bud-Eng_1096_2022-3-3_683.pdf

7 NHFS-5, 2019-21. Retrieved: https://dhsprogram.com/pubs/pdf/FR374/FR374_Gujarat.pdf

Institute for Transformation India (NITI) recently published figures on multi-dimensional poverty in each state, a measure capturing overlapping deprivations in health, education, and living standards. Using hNFHS-5 data, 12 percent of the population lived in multidimensional poverty, versus 18 percent in 2016-17.⁸

Despite economic and social improvements, reproductive, maternal, newborn, child, and adolescent health (RMNCAH+N) and nutrition remain challenging. From 2000 to 2022, infant mortality declined from 62 to 23 deaths per 1,000 live births. However, differences between urban (17 deaths per 1,000 live births) and rural (27 deaths per 1,000 live births) persist, suggesting opportunities for further improvements.^{9,10} The skewed sex ratio, with an overall birth ratio of 955 females per 1,000 males, and 935 females per 1,000 males among the population aged 7 and below, is also a major concern.¹¹ NFHS-5 data reveals that 38 percent of children under the age of 5 were also stunted—10 percent of whom were severely so.¹² An additional 26 percent of children experience wasting.¹³

Non-communicable diseases now account for most of the disease burden, posing an additional threat to improving key health outcomes. The burden of NCDs has surpassed communicable, maternal, neonatal, and nutrition diseases (22.5 percent) and injuries (10 percent), accounting for 67 percent of the total deaths as per 2019 data (see figure 1 below).¹⁴ This

8 NITI AAYOG. "National Multidimensional Poverty Index. A Progress Review 2023." Retrieved: <https://niti.gov.in/sites/default/files/2023-07/National-Multidimensional-Poverty-Index-2023-Final-17th-July.pdf>

9 Office of the Registrar General and Census Commissioner, India. "Sample Registration System, 2022." Retrieved: <https://censusindia.gov.in/census.website/data/SRSB>

10 Office of the Registrar General and Census Commissioner, India. "Sample Registration System, 2000." Retrieved: <https://censusindia.gov.in/nada/index.php/catalog/42701>

11 NHFS-5, 2019-21. Retrieved: https://dhsprogram.com/pubs/pdf/FR374/FR374_Gujarat.pdf

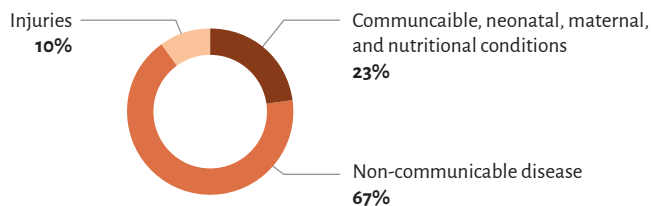
12 NHFS-5, 2019-21. Retrieved: https://dhsprogram.com/pubs/pdf/FR374/FR374_Gujarat.pdf

13 NHFS-5, 2019-21. Retrieved: https://dhsprogram.com/pubs/pdf/FR374/FR374_Gujarat.pdf

14 Institute of Health Metrics and Evaluation (IHME). "Gujarat." 2016. Retrieved: <https://vizhub.healthdata.org/gbd-compare/india#0>

marks a substantial change since the year 2000, when NCDs accounted for 46 percent of all deaths, followed by maternal, neonatal, and child disease (43.3 percent) and injuries (11 percent).¹⁵ NFHS-5 data on key NCD risk factors from 2019-21 indicates that 23 percent of women and 21 percent of men are overweight or obese (defined as body mass index of ≥ 25.0). Urban populations are particularly vulnerable, where 30 percent of women and 25.6 percent of men are overweight or obese, compared to 17 percent of women and 16 percent of men in rural settings. Tobacco uses among men is also high, as 41 percent of all men aged 15 years and older reported using tobacco regularly (34 percent urban, 47 percent rural).

Figure 1. Leading Causes of Death, Gujarat 2019



Source: IHME, 2019.

The Government of India (GoI) has recently introduced publicly funded health programs that aim to achieve universal health care coverage (UHC). The decentralization of healthcare in India gives states such as Gujarat the responsibility to govern public health care services. GoI initiatives include the National Rural Health Mission (NRHM), which was launched in 2005. The NRHM was a key initiative to address healthcare needs in rural areas of India. Over time, the NRHM program expanded to include an urban component, and together they are now known as the National Health Mission (NHM). The NHM comprises programs and several programmatic initiatives, including those focused on reproductive, maternal, newborn, child, adolescent health as well as on nutrition and communicable and non-communicable diseases. In 2017, India published the National Health Policy (NHP), replacing the 2002 policy, and established the government's role

¹⁵ Ibid.

and strategy within the health sector. The 2017 NHP specifically highlights the need to invest in primary health care and to provide a comprehensive range of services. The 2017 NHP also established a common definition of primary health care across India (box 1).

Box 1. 2017 National Health Policy Definition of Primary Health Care

The 2017 NHP defines primary health care as “comprehensive, that spans preventive, promotive, curative, rehabilitative and palliative aspects of care. Primary health care goes beyond first contact care and is expected to mediate a two-way referral support to higher-level facilities (from first-level care providers through specialist care and back) and ensure follow up support for individual and population health interventions.”

Source: National Health Policy 2017.

Gujarat adopted the Ayushman Bharat Scheme (AB) in 2018 to scale up UHC and to move towards more integrated, comprehensive health service and primary health care delivery. The AB program consists of two components: the Pradhan Mantri Jan Arogya Yojana (PM-JAY), which aims to provide financial coverage for secondary and tertiary services for the lowest socioeconomic populations in India (approximately 40 percent of the population), and the Ayushman Bharat Health and Wellness Centers (AB-HWCs) program.¹⁶ The AB-HWCs program aims to provide CPHC services that are free at the point of care, transforming India’s primary health care system from a combination of programmatic initiatives to an integrated system of preventive, promotive, curative, rehabilitative, and palliative services. The core central aim of the CPHC program is to convert all sub-centers (SCs) and primary health centers to health and wellness centers (HWCs).¹⁷

¹⁶ Gupta, I. “How does universal health coverage work?”. Retrieved: <https://www.commonwealthfund.org/international-health-policy-center/countries/india>

¹⁷ National Health Mission. “Atushman Bharat Comprehensive Primary Health Care through Health and Wellness Centers Operational Guidelines. Retrieved: <https://ab-hwc.nhp.gov.in/download/document/45a4ab64b74ab124cfd853ec9a0127e4.pdf>

Gujarat has adopted the CPHC model specified in the AB-HWC program. The adoption of the AB-HWC program in Gujarat will include delivering CPHC through a package of 12 essential services, six of which were implemented prior to the rollout of the program (figure 2). Primary health care facility types differ between urban and rural settings. In rural settings, primary health care facilities include a) sub-centers (SCs), which provide preventative and outreach services for populations of 3,000 to 5,000 people; and b) primary health centers (PHCs), which provide a package of primary care services for 25,000 to 30,000 people. In urban settings, the AB-HWC program is delivered through urban primary health care centers (UPHCs) for 50,000 people. Anganwadi Centers are located at the community level and employ anganwadi workers and auxiliary nurse midwives who are supported by a robust structure of community volunteers known as accredited social health activists (ASHAs). ASHAs work closely with SCs and coordinate with Anganwadi Centers to provide basic health activities at the community level.¹⁸

Figure 2. Comprehensive Primary Health Care Services

| AB expanded range of services currently in place for Gujarat | Expanded range of services that are yet to be implemented |
|---|--|
| <ul style="list-style-type: none"> · Care in pregnancy and childbirth. · Neonatal and infant health care services. · Childhood and adolescent health care services. · Family planning, contraceptive services, and other reproductive health care services. · Management of communicable diseases including national health programs. · Management of common communicable diseases and outpatient care for acute simple illnesses and minor ailments. | <ul style="list-style-type: none"> · Screening, prevention, control and management of non-communicable diseases. · Care for common ophthalmic and ENT problems. · Basic oral health care. · Elderly and palliative health care services. · Emergency medical services. · Screening and basic management of mental health conditions. |

Source: Ayushman Bharat CPHC Operational Guidelines

Ministry of Health and Family Welfare, Government of India. "Ayushman Bharat – Health and Wellness Report Card." Retrieved: <https://ab-hwc.nhp.gov.in/>

¹⁸ Kalne, Poonam S., Pooja S. Kalne, Ashok M. Mehendale, and Pooja Kalne. 2022. "Acknowledging the Role of Community Health Workers in Providing Essential Healthcare Services in Rural India-A Review." *Cureus* 14, no. 9.

In addition to adopting the AB-HWC program, Gujarat has been prioritizing investment in health. At 8 percent of government expenditure in 2019-20, Gujarat's health care spending ranks second highest amongst states with similar economic and demographic characteristics.¹⁹ The changing composition of health spending over time in Gujarat further reflects the government emphasis on health: government spending as a share of total health expenditure (THE) increased from 34 percent in fiscal year 2014-15 to 45 percent in 2019-20. Simultaneously, out-of-pocket expenditure (OOPE) declined from 53 percent of THE in 2014-2015 to 41 percent in 2019-20. Meanwhile, other sources of expenditure (for example, external, and domestic private expenditure) remained at 13 to 14 percent of THE over the same period. Figure 3 (below) presents the composition of health expenditure sources. Both the increasing government spending and lower levels of OOPE correspond with an increase in insurance coverage among adults aged 15-49 years. NFHS-5 data reveals an increase from 16 percent of women and 19 percent of men covered by any health scheme or health insurance in 2014-2015 to 34 percent of women and 39.5 percent of men having coverage in 2019-2021.^{20,21}

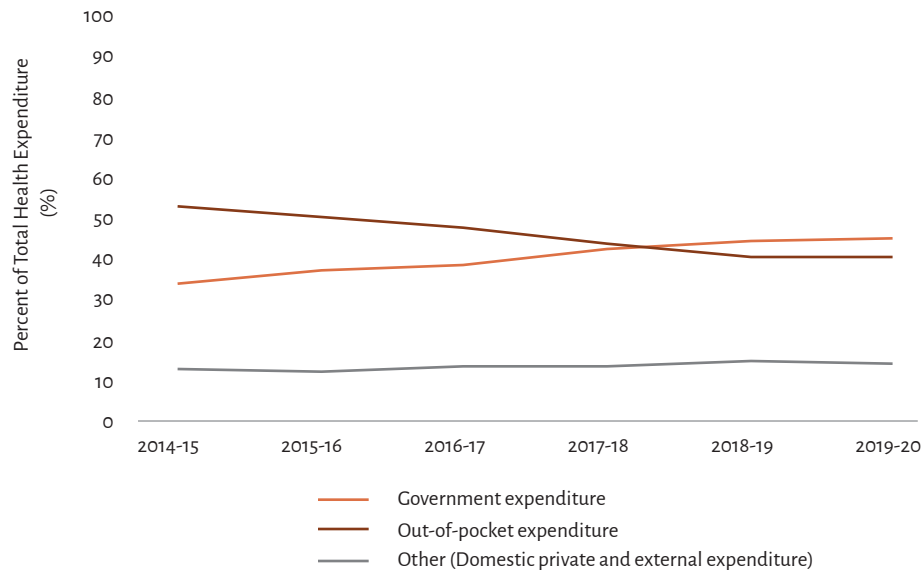
Perceptions of the public health system are poor, and the private sector provides most health services despite investments in the public system. Recent survey data from Gujarat indicates that close to 75 percent of all outpatient visits and 52 percent of all deliveries occur in the private sector. When outpatient and delivery patients were asked why they preferred to use private over public facilities, the most frequently cited reasons were unsatisfactory quality (36.5 percent), unavailability of doctors (31.5 and 35 percent), and preferences for a trusted doctor and/or hospital (29 and 27.5 percent). A smaller but significant proportion of respondents noted that

19 NITI AAYOG. "Health Ranking." Retrieved: <https://social.niti.gov.in/hlt-ranking>

20 NFHS-4. "Gujarat." 2015-16. Retrieved: <http://rchiips.org/nfhs/NFHS-4Reports/Gujarat.pdf>

21 NFHS-5. "Gujarat." 2019-21. Retrieved: https://dhsprogram.com/pubs/pdf/FR374/FR374_Gujarat.pdf

Figure 3. Changes in Composition of Health Expenditure by Source in Gujarat, 2014-2020



Source: NHA 2017-2022.

quality at public facilities was satisfactory, but waiting times were too long (13 percent of delivery patients and 20 percent of outpatients), or the facility was too far (8 percent of delivery patients and 9 percent of outpatients).²²

Considering these ongoing and emerging challenges, continued commitment and investments in the AB-HWC program and CPHC approach are critical for the achievement of UHC. As a cornerstone of UHC, significant efforts must be made to improve Gujarat's primary health care system. Gujarat can use the AB-HWC program and CPHC approach to effectively respond to the changing healthcare landscape, including by promoting a life-course perspective, emphasizing preventive and promotive care and early disease detection, and addressing the social determinants of health. Strengthening primary health care in Gujarat will ensure that the

22 Government of India. "National Sample Survey Office (NSSO), 75th Round." 2017-18. Retrieved: https://www.google.com/search?q=nssso+survey+india&rlz=1C1GCEA_enUS-978CA979&oq=NSSO+survey+India&aqs=chrome.o.0i512joi22i30l2joi390i650l4.3384joj9&sourceid=chrome&ie=UTF-8

entire population has access to comprehensive, continuous, coordinated, and person-centered services.

ABOUT PHCPI

The Primary Health Care Performance Initiative (PHCPI) is dedicated to transforming the global state of primary health care. Founded in 2015 by the Bill & Melinda Gates Foundation, the World Health Organization, the World Bank and UNICEF, in collaboration with Ariadne Labs and Results for Development, PHCPI has supported countries to improve their primary health care systems. PHCPI was built on the belief that primary health care is the cornerstone of sustainable development, and that improving primary health care begins with better measurement. PHCPI teams work closely with governments and development partners looking to strengthen primary health care by helping them to analyze data and providing them with information and support needed to drive evidence-based improvements.

PHCPI uses technical tools to help countries improve the performance of their primary health care systems. PHCPI's conceptual framework (presented in annex 1) was developed to describe the critical components of a strong health care system. The conceptual framework defines five core domains of a primary health care system and serves as the foundation of PHCPI's activities. The framework is operationalized into the Vital Signs Profile (VSP), which provides a snapshot of primary health care systems in individual countries and/or states, shining a light on where systems are strong and where they have challenges. It is designed to help countries and/or states and development partners identify priority areas for improvement, and to track improvements over time.



METHODOLOGY

PHCPI tools were adapted to conduct a comprehensive assessment of primary health care performance in Gujarat. The assessment evaluates the capacity, performance, financing, and equity of the primary health care system using primary and secondary data sources. The performance, equity, and financing sections draw on data from the National Family Health Survey (NFHS), along with data provided by the State Health Systems Resource Centre (SHSRC) and the Health and Family Welfare Department (HFWD) in Gujarat. The section on capacity uses the PHCPI's progression model methodology, using data collected from an extensive document review and key informant interviews. Additional questions on the capacity of the primary health care system to deliver NCD services were included. These NCD related questions were developed in consultation with global experts and were not included in the progression model scoring. The results from the NCD assessment are presented in Box's 1 to 4. The completed primary health care assessment for Gujarat aims to provide important insights on issues across multiple levels of the primary health care system.

The World Bank partnered with the SHSRC and the HFWD to assess the performance of primary health care in Gujarat. The assessment was requested within the World Bank lending project Systems Reform Endeavors for Transformed Health Achievement in Gujarat (SRESTHA-G). SRESTHA-G aims to improve the quality, equity, and governance of CPHC, adolescent girl services, and disease surveillance in Gujarat. The assessment will be used to inform Results Area 1: improved service delivery for CPHC including RMNCAH+N nutrition (N), NCDs, and mental health. Specifically, the primary health care assessment is connected to disbursement linked indicator (DLI) 2: Strengthened systems for data quality and performance tracking for CPHC. Gujarat will prepare the Performance Monitoring Framework for CPHC monitoring based on the PHCPI findings.



RESULTS

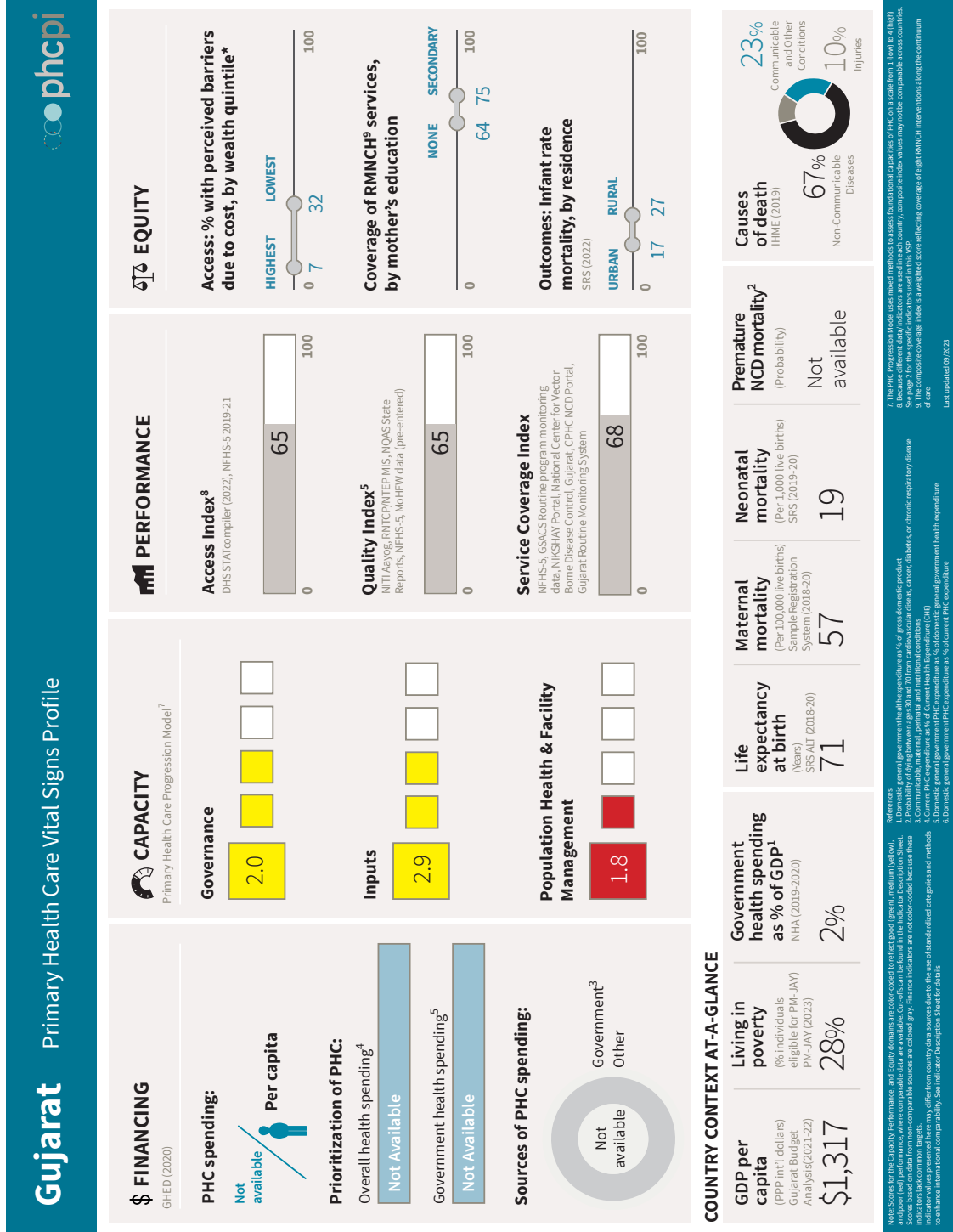
The findings from the primary health care assessment of Gujarat provide critical insights into the performance of CPHC system. Figure 4 presents in summary the results of the primary health care assessment across the four domains: financing, capacity, performance, and equity. The proceeding sections present the findings from each domain, with additional analysis of key indicators to further identify the strengths and gaps of Gujarat primary health care system. A detailed overview of the indicators selected for the assessment can be found in annex B.

ACCESS

The PHCPI framework assesses access to care by including patients' perspectives on receiving care, including whether individuals receive appropriate primary health care services when they need them and without financial or geographic barriers. A primary health care system cannot be deemed 'high performing' if patients are unable to access care regardless of how comprehensive, continuous, or person-centered the primary health care services are considered. Identifying real and perceived barriers are important priorities for policy makers seeking to improve CPHC performance. PHCPI uses two indicators for access: the percentage of the population that faces perceived barriers due to treatment costs and due to distance. Gujarat agreed to include an additional access indicator examining the percentage of women and men with health insurance coverage, as indicated in the National Family Health Survey round 5 (NFHS-5) (2019-21).

Gujarat performs well compared to other states in terms of perceived financial access to primary health care services. According to NFHS-5 data, 15 percent of women in Gujarat face barriers due to costs of services when in need of care, below the national average of 21 percent. Compared to states with similar demographic, social and economic profiles, Gujarat outperforms Andhra Pradesh (22 percent) in terms of financial access to

Figure 4. Vital Signs Profile, Gujarat



COUNTRY CONTEXT AT-A-GLANCE

| | | | | | |
|---|----------------|--|------------|--|-----------|
| GDP per capita (PPP int'l dollars) Gujarat Budget Analysis (2021-22) | \$1,317 | Living in poverty (% individuals eligible for PM-JAY) PM-JAY (2023) | 28% | Government health spending as % of GDP¹ NHA (2019-2020) | 2% |
| Life expectancy at birth (years) SIS-ALT (2018-20) | 71 | Maternal mortality (Per 100,000 live births) Sample Registration System (2018-20) | 57 | Neonatal mortality (Per 1,000 live births) SRS (2019-20) | 19 |
| Premature NCD mortality² (Probability) | Not available | | | | |
| Causes of death IHME (2019) | 67% | 23% | | 10% | |

Notes: Scores of 0 to 100 indicate the extent of performance relative to the best performing country in the world (with 100 being the best performance). Where comparable data are available, Gujarat can be found in the indicator description sheet. Scores based on data from non-comparable sources are colored gray. Finance indicators are not color-coded because these indicators are common targets. Indicators may differ from country data sources due to the use of standardized categories and methods to enhance international comparability. See indicator description sheet for details.

References:
 1. Domestic general government health expenditure as % of gross domestic product
 2. Probability of dying between ages 15 and 70 from cardiovascular disease, cancer, diabetes, or chronic respiratory disease
 3. Domestic general government PHC expenditure as % of domestic general government health expenditure
 4. Current PHC expenditure as % of Current Health Expenditure (CHE)
 5. Domestic general government PHC expenditure as % of domestic general government health expenditure
 6. Domestic general government PHC expenditure as % of current PHC expenditure
 7. The PHC Progression Model uses a set of methods to assess the likelihood of achieving targets of PHC on a scale from 1 (best) to 10 (worst).
 8. Because different data indicators are used in each country, composite index values may not be comparable across countries.
 9. See page 2 for the specific indicators used in this SRS.
 * The composite coverage index is a weighted score reflecting coverage of eight RMNCH interventions along the continuum of care.

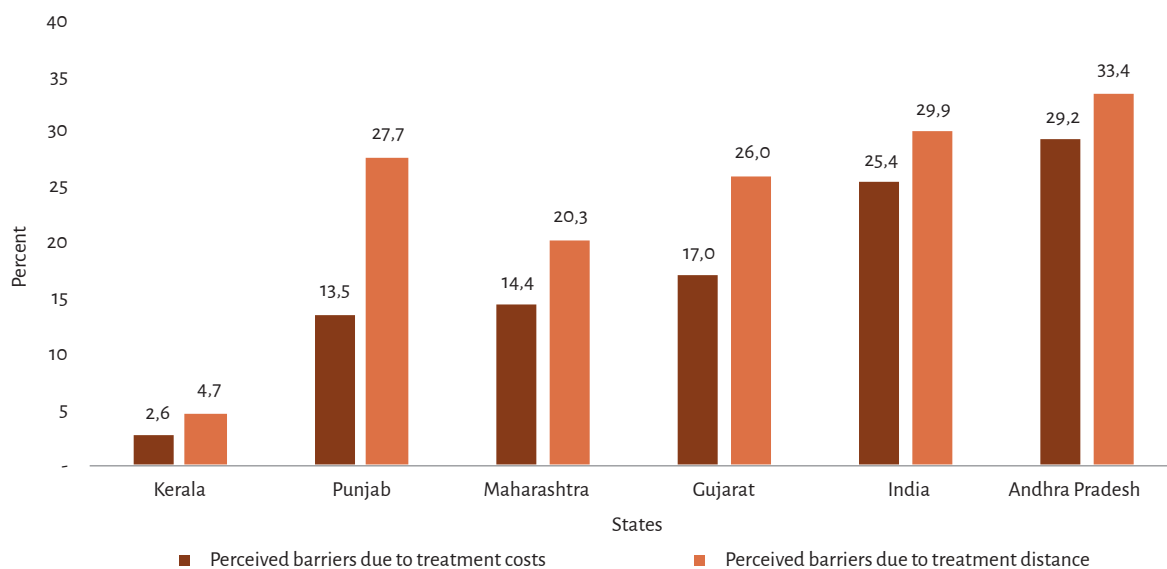
Last updated: 09/2023

Source: World Bank.

healthcare. However, both Maharashtra (12 percent) and Kerala (2 percent) have lower levels of financial barriers among women seeking care.²³

Despite strong performance in financial access to primary health care, opportunities exist to reduce geographic barriers to care. Nearly twice as many women in Gujarat reported geographic barriers to care (27 percent) compared to financial barriers (15 percent). The estimate for geographic barriers to care is also well above the national average of 23 percent, and much higher compared to Punjab (15 percent), Maharashtra (16 percent), and Kerala (2 percent). Figure 5 compares financial and geographic access to healthcare in Gujarat to other frontrunner states in India.

Figure 5. Perceived Problems in Accessing Health Care Due to Treatment Costs and Distance, Frontrunner states.



Source: NFHS-5 2019-2021.

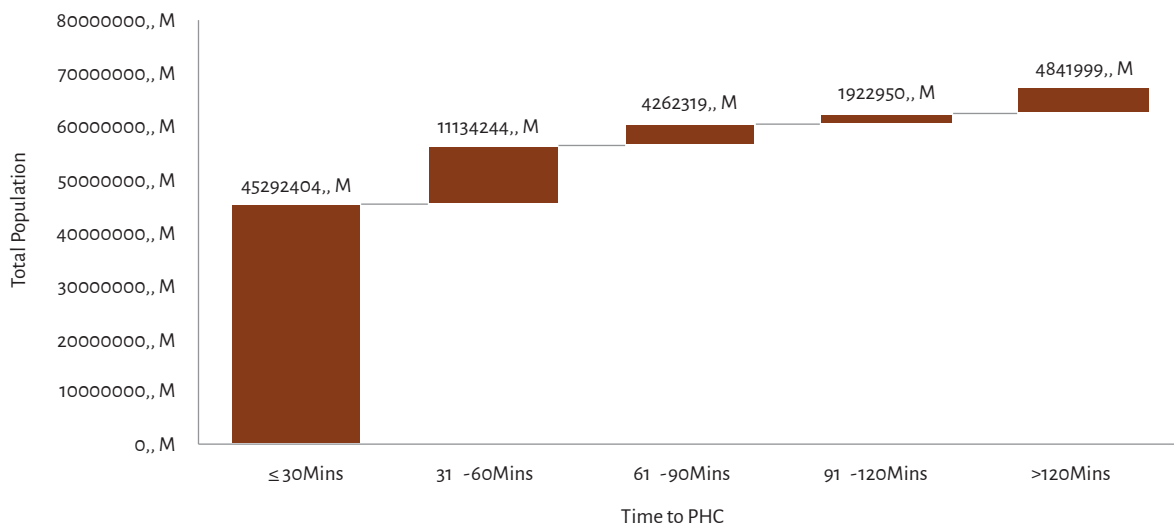
Perceived geographic and financial barriers to accessing care are greater in rural areas. In rural Gujarat, 19 percent of women in rural Gujarat reported financial barriers to care, compared to 9 percent of women in urban settings. The disparity between rural and urban women's geographic access

²³ Frontrunner states are defined by NITI. Front-runner states have higher performing health and social development, as determined by NITI measurements.

to care was greater, with 32 percent of women in rural Gujarat reporting geographic barriers to care compared to 18 percent of women living in urban settings.

Geospatial analysis illustrates geographic challenges in accessing healthcare in Gujarat. Geospatial analysis of access to PHCs in Gujarat reveals that approximately 67 percent of the state's population lives less than 30 minutes away from a PHC, while 17 percent live between 31 and 60 minutes away, and the remaining 17 percent live over an hour away (figure 6). Long travel times appear throughout the state but are most prominent in Kutch, where the desert makes accessing health services particularly challenging.

Figure 6. Time to PHCs by Village and Population, Gujarat



Source: Geospatial analysis for improved quality of care and health outcomes in Gujarat, India.

In addition to enhancing geographic accessibility, health insurance coverage in Gujarat has potential for further improvement given large coverage gaps between populations living in urban and rural settings. According to NFHS-5 data, 37 percent of Gujarat's population has health insurance coverage (40 percent of men and 34 percent of women). Both men and women in rural settings (44 percent and 36 percent, respectively) had a greater level of health insurance coverage compared to those living in

urban settings (34 percent and 31 percent respectively). Among households with one member covered by a health insurance/financing scheme, the state health insurance scheme was the most common (58 percent), followed by Rashtriya Swasthya Bima Yojana (15 percent)²⁴, and the Central Government Health Scheme (13 percent). All three of these schemes had higher coverage in rural areas compared to urban areas.²⁵

COVERAGE

This assessment captures the coverage of RMNCAH+N, infectious disease, and NCDs, Gujarat. Table 1 presents the indicators selected to capture the efficacy of coverage across these areas. These indicators were selected through consultations with members of SHSRC to reflect the current packages of CPHC services. Data was collected from the NFHS-5 and the National Institute for Transforming India (NITI) Aayog Round 4; while state and programmatic data was provided by the SHSRC and the Ministry of Health and Family Welfare.

Table 1. Coverage of RMNHC, Infectious Disease, NCD and Nutrition Services

| Indicator | Percentage (2015-16) | Percentage (2019-22) | Percentage Point Change | Source |
|--|----------------------|----------------------|-------------------------|--------|
| Reproductive, Maternal, Child, and Adolescent Health (RMNCAH) | | | | |
| Demand for family planning satisfied with modern methods | 67% | 71% | ↑ 4 | NFHS-5 |
| Antenatal care coverage (4+ visits) | 71% | 77% | ↑ 6 | NFHS-5 |
| Coverage of DPT3 or Penta Vaccination | 73% | 86% | ↑ 13 | NFHS-5 |
| Zero dose vaccines | | 4% | - | NFHS-5 |

²⁴ The Rashtriya Swasthya Bima Yojana has been superseded by the Progya Yojana-Mukhya-mantri Amrutam (PMJAY+MAA)

²⁵ NHFS-5. "Gujarat." 2019-21. Retrieved: https://dhsprogram.com/pubs/pdf/FR374/FR374_Gujarat.pdf

| Indicator | Percentage (2015-16) | Percentage (2019-22) | Percentage Point Change | Source |
|---|----------------------|----------------------|-------------------------|--|
| Percentage of children under 5 years of age with symptoms of acute respiratory Infection (ARI), for whom advice or treatment was sought | 80% | 62% | ↓ 18 | NFHS-5 |
| Anemia among adolescent women aged 15 to 19 | 57% | 69% | ↑ 12 | NFHS-5 |
| Infectious Disease | | | | |
| TB treatment success rate | 89% | 64% | ↓ 15 | NIKSHAY Portal data for 2022 |
| Number of estimated people living with HIV receiving anti-retroviral treatment | 51% | 72% | ↑ 18 | National AIDS Program 4 (2021-22) |
| Children under 5 years of age with diarrhea receiving ORS | 46% | 67% | ↑ 21 | NFHS-5 |
| Indoor residual spray completed for eligible households | | 91% | - | National Vector Borne Disease Control Programme 2022 |
| Non-communicable diseases (NCDs) | | | | |
| Prevalence of raised blood pressure | 13% | 12% | ↓ 1 | NFHS-5, NFHS-4 |
| Individuals over 30 years assessed for hypertension and diabetes using CBAC tool | 15% | 43% | - | CPHC NCD Portal, April 1, 2022, to March 31, 2023 CPHC baseline 2021-22 |
| Nutrition | | | | |
| Children born who start breastfeeding within one hour of birth | 50% | 38% | ↓ 12 | NFHS-5, NFHS-4 |
| Percentage of children under age 6 months exclusively breastfed | 56% | 65% | ↑ 9 | NFHS-5, NFHS-4 |
| Percentage of children aged 6-9 months breastfed and receiving complementary foods | 52% | 47% | ↓ 5 | NFHS-5, NFHS-4 |
| Percentage of all children 6-23 months fed the minimum dietary diversity | 15% | 16% | ↑ 1 | NFHS-5, NFHS-4 |
| Children aged 9-35 months given vitamin A supplements in the last six months | 72% | 86% | ↑ 14 | NFHS-5, NFHS-4 |
| Percentage of target of children 0-5 years screened for Severe Acute Malnutrition (SAM)‡ | | 72% | - | Gujarat Routine Monitoring System |

RMNCAH

Significant advances have occurred in routine childhood vaccinations coverage, while progress has been more limited for family planning, antenatal care, and percentage of children with acute respiratory infection (ARI) symptoms seeking treatment. According to NFHS-5 data, completion of DPT or Pentavalent immunizations increased to 86 percent from 73 percent in 2015-16. Furthermore, 4 percent of children aged 12 to 23 months did not receive any vaccines (also referred to as a 'zero-dose' vaccination) in 2019-21, down from 9 percent in 2015-2016. Progress in other RMNCAH indicators was less substantial. Women receiving at least four antenatal care (ANC) consultations increased by 6 percent from 71 percent (2015-16) to 77 percent (2019-21). The demand for family planning satisfied with modern methods also increased from 67 percent (2015-16) to 71 percent (2019-21) over the same period. Conversely, the percentage of children aged 5 years and younger with ARI symptoms who were taken to a health care provider declined from 80 percent to 62 percent over the same time. It is important to consider that this decline may be influenced by disruptions to essential services during the COVID-19 pandemic. Another challenge is anemia among adolescent women aged 15 to 19, which increased from 57 percent in 2015-16 to 69 percent in 2019-21.

NFHS-5 data indicates that urban settings perform better than rural settings in effective coverage of RMNCAH services. The number of women who received one ANC visit from a skilled provider, DPT3 vaccination coverage, and the demand for family planning according to modern methods had differences of less than 5 percent between urban and rural settings. However, there are significant differences between urban and rural settings in the number of women receiving four or more ANC visits (82 percent urban, 73 percent rural), and the percentage of women aged 15 to 19 with anemia (63 percent urban, 72 percent rural). The percentage of children

under 5-years-old with ARI symptoms for whom advice or treatment was sought had the most significant difference between urban (76 percent) and rural (46 percent) populations.

There is also significant variation in the effective coverage of RMNCAH services amongst districts in Gujarat. For example, the proportion of women receiving four or more ANC visits ranged from 56 percent (e.g., Banas Kantha) to 95 percent (e.g., Navsari) across regions. Similar levels of variation between district occurred for children aged 12 to 23 months who received DPT3 vaccination (64 percent to > 95 percent) and in the use of modern family planning methods (29 percent to 69 percent).

INFECTIOUS DISEASE

Data on infectious disease in Gujarat suggests strengths in malaria prevention along with opportunities to enhance the effective coverage of human immunodeficiency virus (HIV) and tuberculosis (TB) services. Programmatic data from the National Centre for Vector Borne Disease Control reveals that 91 percent of households in malaria-prone areas received indoor residual spray in 2022. In terms of HIV effectiveness, the Gujarat State AIDS Control Society reported that 72 percent of the estimated number of people living with HIV were receiving anti-retroviral treatment in 2021-22. According to data from NIKSHAY, India's National Tuberculosis Elimination Program, 64 percent of notified TB cases completed treatment or were cured.

There has been notable progress in treating childhood diarrhea with oral rehydration salts (ORS), but disparities persist among groups. NFHS-5 data demonstrates that 67 percent of children aged less than 5-years-old with diarrhea received ORS, a significant increase from 46 percent in 2015-16. Although this marks an improvement, Gujarat trails behind other "frontrunner states" identified by NITI Aayog Health Index, such as

Punjab (73.4 percent), Andhra Pradesh (74.3 percent), Maharashtra (76.8 percent), and Kerala (87.1 percent).²⁶ Notably, substantial variation exists among vulnerable groups; children from Scheduled Tribes (STs) exhibit a notably higher proportion (79 percent) of ORS usage among those under five, compared to Scheduled Castes (67 percent) and Backward Classes (62 percent).

NON-COMMUNICABLE DISEASE

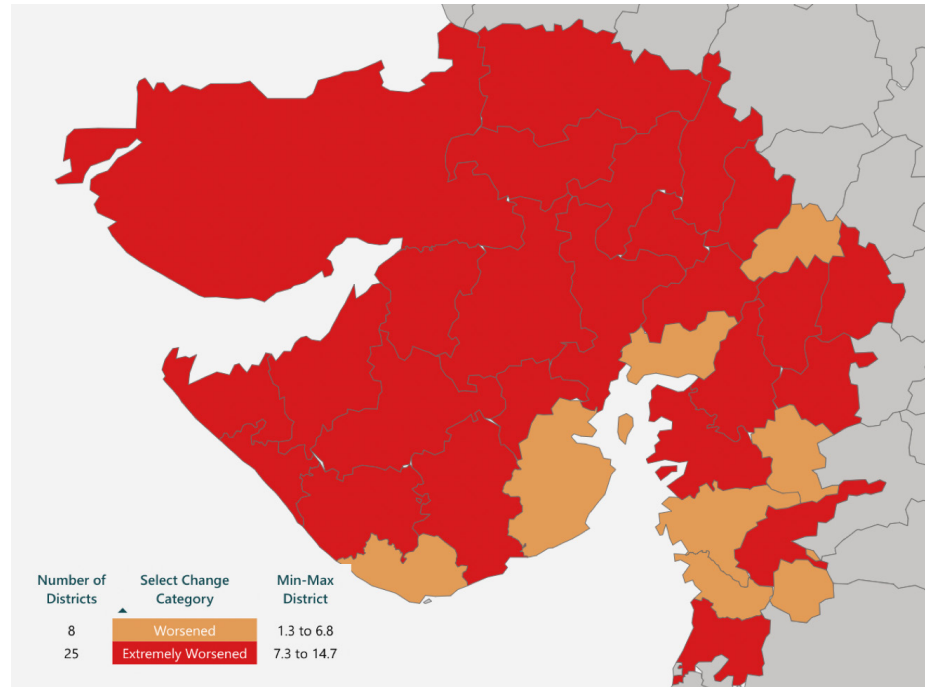
The increasing prevalence of NCDs underscores the need to address NCD coverage, encompassing screening, diagnosis, and treatment. From 2014-2015 to 2019-2021, the prevalence of high or very high blood sugar among adults increased in all districts, with three districts experiencing increases in prevalence by more than 14 percentage points, including Ahmedabad (5.4 to 20.1 percent), Surendranagar (4.6 to 19.3 percent), and Bharuch (6.3 to 20.5 percent) (see figure 7). NFHS-5 data reveals that 12 percent of the population aged 15 to 49 have raised blood pressure, similar to 2014-2015 levels (13 percent).

High blood pressure and hypertension are conditions that can be effectively targeted through outreach, prevention, treatment, and follow-up in primary care.²⁷ Data for NCD assessment, screening, treatment and follow-up were obtained using CPHC NCD portal, a national government platform. The population-based NCD screening program gained momentum when the Honorable Chief Minister of Gujarat launched the Niramay Gujarat initiative. This initiative aims to intensify assessment, screening, and treatment of NCDs in the state with the community-based assessment checklist (CBAC) tool. To ensure the program's success, intensive training was provided to the CPHC team, including frontline health

²⁶ NITI Aayog Health Index can be retrieved from: <https://social.niti.gov.in/hlt-ranking>

²⁷ The NFHS-5 classified a person as having hypertension if she/he has SBP levels ≥ 140 mmHg or DBP ≥ 90 mmHg at time of survey, or if she/he is currently taking antihypertension medication to control blood pressure.

Figure 7. Change in Population with High or Very High Blood Sugar Levels or Taking Medication to Lower Their Blood Sugar Levels, Gujarat, 2016 to 2021



Source: Geographic Insights Lab, Harvard Center for Population and Development Studies and Center for Geographic Analysis, 2021.

volunteers. Regular monitoring and program review helped streamline the CBAC assessment and screening processes, while efforts to improve treatment, follow-up, and control activities are progressing. However, data-entry of treatment and follow-up using the CPHC-NCD portal is weak, which may lead to underreporting of actual service delivery. The HFWD is actively working to strengthen the continuum of care and encourage the PHC team to accurately enter treatment and follow-up data. With these limitations, from April 1, 2022, to March 31, 2023, Gujarat's CPHC NCD program enrolled a total of 36,304,743 participants aged 30 years and above. Among those enrolled, 15,604,711 individuals (43 percent) underwent assessments for hypertension and diabetes through the CBAC screening tool, with a subsequent 32 percent undergoing screening for hypertension and diabetes.

Among the initial enrolled population, 0.5 percent were diagnosed with hypertension, and 0.3 percent were diagnosed with diabetes.²⁸

In alignment with the government's identified healthcare priorities, urgent attention is required for increased coverage of cancer screening, as supported by the latest NFHS-5. The CPHC NCD program is expanding to include cancer screening to adults. Although the program is in progress, it is crucial to acknowledge that recent NFHS-5 data highlights low rates of cancer screening among adults aged 30 to 49. Specifically, less than 1 percent of women in this age group have undergone screening tests for cervical, breast, or oral cancer.

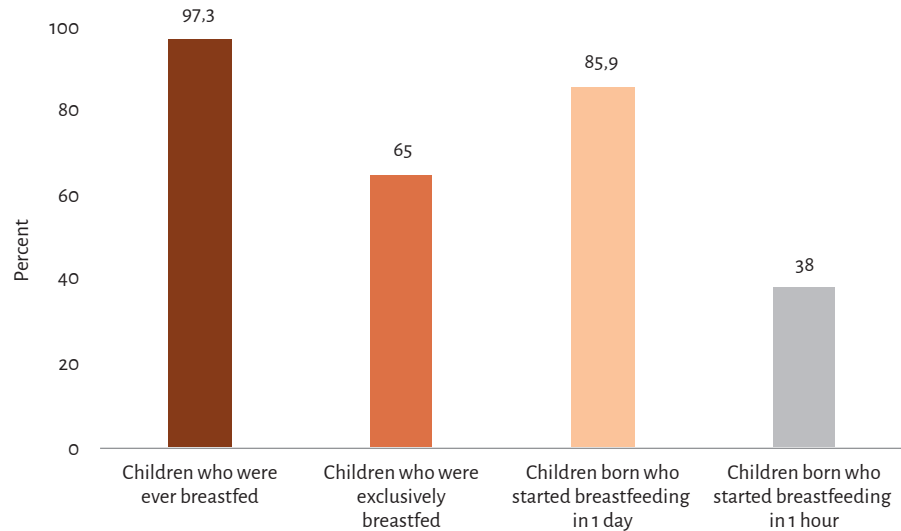
NUTRITION

Significant disparities in childhood nutrition are evident throughout Gujarat, as revealed by NFHS data. Regarding breastfeeding, although 97 percent of children were breastfed, just 38 percent start breastfeeding within one hour of birth, and 65 percent of children under the age of 6 months are exclusively breastfed in line with WHO recommendations (figure 8). Furthermore, less than half of children (47 percent) aged 6 to 9 months are both breastfed and receive complementary foods. Dietary diversity is also a challenge, with 16 percent of children aged 6 to 23 months having achieved the minimum dietary diversity.²⁹

Despite these challenges in childhood nutrition, signs of progress are emerging. Data from the 2019-21 NFHS highlights that 86 percent of children aged 9 to 35 months were given vitamin A supplementation in the past 6 months, an improvement from 72 percent in 2015-16. Moreover,

²⁸ CPHC NCD Portal- Routine program monitoring data April 1, 2022-March 31, 2023.

²⁹ Defined as receiving foods from five or more of eight food groups, including: a. breast milk b. infant formula, milk other than breast milk, cheese or yogurt or other milk products; c. foods made from grains or roots, including porridge or gruel, fortified baby food made from grains; d. vitamin A-rich fruits and vegetables; e. other fruits and vegetables; f. eggs; g. meat, poultry, fish, shellfish, or organ meats; h. beans, peas, lentils, or nut).

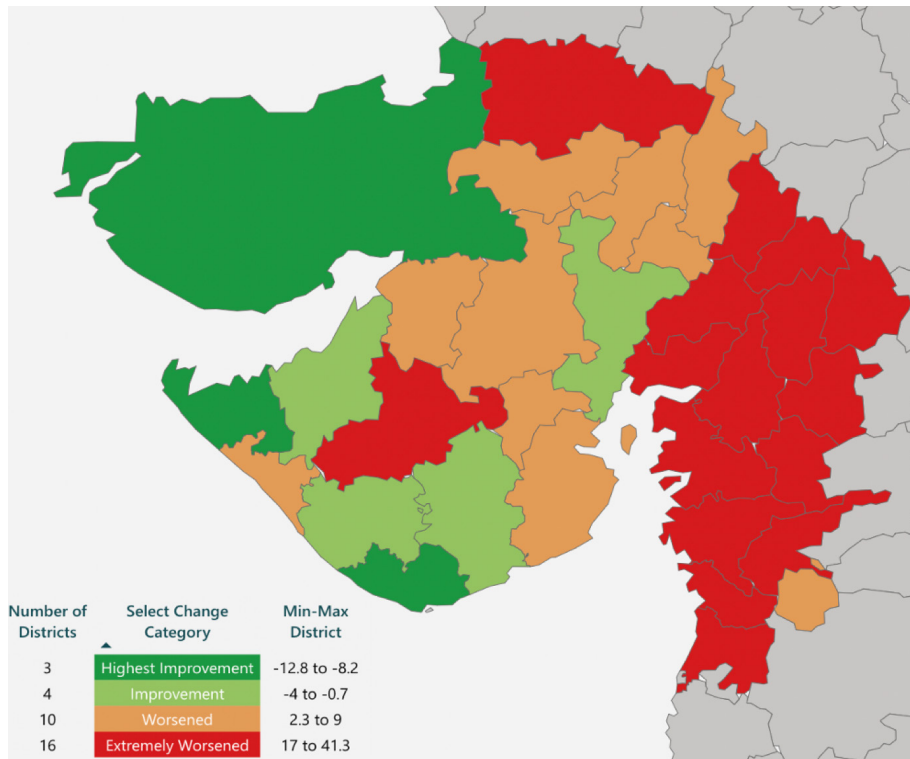
Figure 8. Breastfeeding indicators, Gujarat, NFHS-5

Source: NFHS-5 2019-21.

data from the Gujarat Routine Monitoring System from 2022-23 indicates that 72 percent of children aged 0- to 5-years-old in targeted areas received screening for severe acute malnutrition (SAM).

When looking at anemia among children, only one district has a lower prevalence than India as a whole, and the prevalence is increasing. An average of 80 percent of children in Gujarat have any anemia (<11.0 g/dl), an increase from 62.6 percent in 2014-2015. All districts except Devbhumi Dwarka (66.6 percent) have a higher prevalence of anemia among children compared to the average for India of 67.1 percent. Compared to anemia prevalence in 2014-2015, trends are worsening in all but seven districts (figure 9). Four districts experienced increases of over 35 percentage points from 2014-2015 to 2019-2021, including Valsad (50.4 to 87.6 percent), Narmada (53.6 to 93.2 percent), Pach Mahals (50.2 to 91.0 percent), and Surat (42.3 to 83.6 percent).

Figure 9. Change in Prevalence of Childhood Anaemia, Gujarat, 2016 to 2021



Source: Geographic Insights Lab, Harvard Center for Population and Development Studies and Center for Geographic Analysis, 2021.

QUALITY

The quality assessment addresses core factors proven to impact the quality of primary health care service delivery at the point of care.

These include the comprehensiveness, continuity, person-centeredness, provider availability, provider competence, and safety of primary care. Comprehensiveness refers to the provision of holistic and appropriate care across a broad spectrum of health problems, age ranges, and treatment modalities, including a range of preventative, promotive, chronic, behavioral, and rehabilitative services. Continuity indicators measure the degree to which a patient experiences health care events as coherent and consistent with their medical need and context. Person-centeredness

refers to how a health system is organized around the comprehensive needs of people rather than around individual diseases, for example by engaging with individuals, their families, and their communities as equal partners in delivering care. Provider availability indicators are designed to capture whether the primary health care system is the first point of contact in the health care system and whether providers are motivated and available to provide timely, high-quality care. Provider competence measures providers' abilities to correctly provide elements of care based on WHO guidelines. Safety indicators measure the implementation and adherence of safety practices in primary health care facilities. The VSP assessment includes measures of primary health care quality from several data sources, including household surveys, state health information systems, and programmatic data.

CONTINUITY

Gujarat's primary health care system exhibits strength in care continuity, which is evident from childhood vaccination and tuberculosis treatment indicators. The primary health care assessment includes two indicators for measuring the continuity of care: the routine vaccination dropout rate and the success rate of TB treatment. The routine vaccination dropout rate measures the percentage of children who receive a first dose of the DPT or Pentavalent vaccination against those who did not receive their third DPT or Pentavalent vaccination dose *and* second dose of the measles vaccine. Overall, 94 percent of children receiving their first DPT vaccine also receive their third dose and complete a second measles dose. Regarding TB, the state achieved an 88 percent success rate in completing the treatment of newly diagnosed TB patients.

The number of children in Gujarat who did not receive a third dose of the DPT vaccine highlights differences in the continuity of care in Gujarat, both internally and relative to other states. A total of 7 percent of children who received their first dose of the DPT vaccination did not receive their

third, which is superior to Andhra Pradesh (8 percent) and Maharashtra (13 percent). However, this figure surpasses the Indian average of 4 percent and lags Kerala (5 percent) and Punjab (2 percent). Notably, there is considerable variation within Gujarat, exemplified by Tapi's absence of DPT3 dropout versus Banas Kantha's 20 percent dropout rate.³⁰

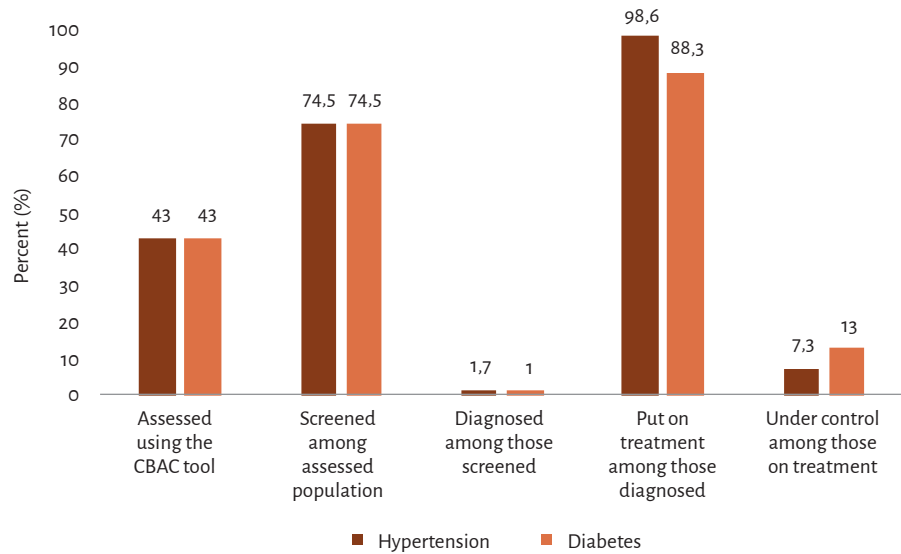
CPHC NCD Portal's additional data highlights a disparity in care continuity between diagnosis and treatment of key NCDs. Among the 43 percent of the population assessed (15,604,711), 74.5 percent underwent screening for hypertension and diabetes using the CBAC tool. Of those assessed, 1.7 percent (195,269 adults) were diagnosed with hypertension, while 0.9 percent (112,942 adults) were diagnosed with diabetes. Regarding hypertension, 98.6 percent of diagnosed individuals were put on treatment, with 7.3 percent achieving control. For diabetes, 88.2 percent of diagnosed individuals were put on treatment, with 13 percent achieving control. Figure 10 outlines the NCD care continuum in Gujarat. The significant gaps between the percentage of individuals receiving treatment and those achieving control underscores the need for quality NCD management services at the PHC level, particularly for hypertension.

COMPREHENSIVENESS

Comprehensiveness refers to the provision of holistic and appropriate care across a broad spectrum of health needs. Comprehensiveness is typically assessed using three indicators: the proportion of facilities offering diagnosis and treatment of three NCD services; the proportion of facilities offering three primary infectious disease services; and the proportion of facilities offering five primary maternal and child health services. These indicators are typically generated through facility assessments or routine monitoring systems. To assess comprehensiveness in Gujarat, the VSP uses 2022-23 data from HMIS, a national portal. The Indian government has

³⁰ NHFS-5. "Gujarat." 2019-21. Retrieved: https://dhsprogram.com/pubs/pdf/FR374/FR374_Gujarat.pdf

Figure 10. Diabetes and Hypertension Care Cascade Based on CPHC NCD Portal Data, Gujarat, April 2022 to March 2023.



Source: CPHC NCD Portal — Routine program monitoring data April 1, 2022-March 31, 2023.

directed program divisions to oversee monitoring of HMIS data quality and to conduct periodic review of the data. Accordingly, Gujarat's Health and Family Welfare Department takes necessary actions to ensure the quality of HMIS data. However, it is important to recognize that HMIS includes an extensive list of indicators and not all of them may not receive equal attention during the monitoring and review processes conducted by respective program divisions. This variation can potentially impact data quality, leading to discrepancies between different indicators. Data quality may also exhibit variations from one health facility to another and one district to another. Additionally, HMIS has recently undergone a revision, with several indicators being modified and new ones introduced. Therefore, the comparability of some indicators over time is limited. It is worth noting that data previously unavailable for several key indicators is expected to become available in the current year. Due to these limitations, the comprehensiveness indicators from 2022-23 HMIS data presented in figure 11 below have not been included in VSP calculations. Quality improvement is an ongoing process, and integrating indicators from HMIS

into the VSP holds the potential to strengthen this process while paving the way for incorporation of these indicators into routine monitoring and evaluation in the future.

Table 2. HMIS Comprehensiveness Indicators, Gujarat 2022-23

| | HMIS Indicator | Percent of facilities reaching threshold in at least 3 quarters | PHC threshold per quarter | Percent of facilities reaching threshold in at least 3 quarters | SC Threshold |
|-------|---|---|-------------------------------------|---|-----------------------------------|
| ID | HIV testing among males, females (non ANC), females (ANC) | 82.6 | 0 | No data | |
| | Number of on-going DOTS Patients registered | 39.8 | 0 | | |
| | New RTI/STI cases identified - male & New RTI/STI cases identified - female | 26.8 | 0 | | |
| | RTI/STI for which treatment initiated - male & female | 24.8 | 0 | | |
| NCDs | Outpatient - COPD | Aspirational | | | |
| | Outpatient - diabetes | 54.2 | 10 (Cases diagnosed and/or treated) | 19.2 | 5 (Cases detected and/or treated) |
| | Outpatient - hypertension | 46.4 | 20 (Cases diagnosed and treated) | 15.9 | 10 (Cases detected and treated) |
| RMNCH | Number of PW tested for haemoglobin (Hb) 4 or more than 4 times for respective ANCs | 40.6 | 0 | 96.9 | 0 |
| | Childhood diseases - diarrhea | 10 | 10 | 21.8 | 5 |
| | Number of Interval IUCD Insertions (excluding PPIUCD and PAIUCD) | 43.5 | 0 | 71.8 | 0 |
| | Number of combined oral pill cycles distributed | 40.4 | 0 | 91.12 | 0 |
| | Number of pregnant women (PW-ANC) screened for HIV by whole blood finger prick/RDT test/POC test | 76.2 | 10 | No data | |
| | Number of women receiving 1st post-partum checkup between 48 hours and 14 days after Institutional delivery | 4 | 5 | 4.1 | 5 |
| | Child immunization - Pentavalent 1 | 44.8 | 0 | 99.7 | 0 |

| | HMIS Indicator | Percent of facilities reaching threshold in at least 3 quarters | PHC threshold per quarter | Percent of facilities reaching threshold in at least 3 quarters | SC Threshold |
|-----------|---|---|---------------------------|---|--------------|
| Nutrition | Number of anaemic in-school children (5-9 years) put on treatment | Aspirational | | | |
| | Number of anaemic out of school adolescent girls (10-19 years) put on treatment | | | | |
| | Number of anaemic lactating mothers (of 0-6 months old child) put on treatment | | | | |

Source: HMIS 2022-2023.

PROVIDER COMPETENCE

NFHS-5 data was used to construct three proxy measures relating to the competence of providers in delivering ANC and family planning services.

Common metrics of provider competence for delivering ANC, family planning, and sick child services, along with indicators capturing adherence to clinical protocols and diagnostic accuracy were not available. Despite these constraints, several proxy indicators were adapted from NFHS-5 data. Notably, 97 percent of ANC components (average of visits with weight taken, blood pressure, blood sample, urine sample, abdomen examined, and advice on where to go in case of complications) were provided during standard ANC visits. The second component of ANC quality focused on the number of visits where all complications were outlined, which occurred in 71 percent of visits. Furthermore, the NFHS-5 was used to determine the competence of providers in delivering family planning services, assessing the percentage of women who were informed about the side effects of family planning method used, what to do if they experienced side effects, and informed by health or family planning workers of other methods that could be used. In total, 60 percent of family planning visits had all three components.

SAFETY

Safety indicators aim to measure the implementation and adherence of safety practices in primary health care facilities. The two standard VSP safety indicators are the adherence to adequate waste disposal practices and the proportion of clinics rooms with all infection control items. Because these indicators were unavailable in Gujarat at the time of the assessment, the SHSRC and the state provided two addition measures as proxies: the proportion of public health facilities with accreditation certificates by the National Quality Assurance Standards (NQAS), and the proportion of public health facilities with Kayakalp scores greater than 70 percent against the total number of public health facilities. The Kayakalp assessments examine the cleanliness and hygiene of facilities, while the NQAS measures quality across eight areas including infection control and quality management.

Additional measures indicate the importance of further investment in generating routine data on safety. According to the NITI Aayog Round 4 (2019-2020), 2.96 percent of public health facilities, which include district hospitals, sub-district hospitals, community health centers, PHCs, and UPHCs, have accreditation certificates by NQAS, a standard quality assurance program. In addition, 55.4 percent of public health facilities (district hospitals, sub-district hospitals, community health centers, PHCs, and UPHCs) had a Kayakalp score greater than 70 percent against may be more systematically managed for better monitoring and review purposes to strengthen service quality. For instance, information collected in the NQAS could be used to construct an infection control index. Components could include the following NQAS components: the facility has infection control program and procedures in place for prevention and measurement of hospital associated infection; the facility has defined and implemented procedures for ensuring hand hygiene practices and antisepsis; the facility ensures availability of material for personal protection, and facility staff follow standard precaution for personal protection; the facility has standard procedures for decontamination, disinfection and sterilization of

equipment and instruments; and physical layout and environmental control of the patient care areas ensures infection prevention. In addition, a waste control indicator could be taken from the NQAS indicator that determines if the facility has defined and established procedures for segregation, collection, treatment, and disposal of biomedical and hazardous waste.

PERSON-CENTEREDNESS

Person-centered care involves engaging with people as equal partners in promoting and maintaining their health and assessing their experiences with the health system, including communication, trust, respect, and preferences. The VSP measures person-centeredness by the number of sick child visits observed where a health care worker informed the child's caretaker of his/her diagnosis. However, this data was not available in Gujarat.

While these indicators were not currently available, potential routine measures have been identified using the NQAS and Mera Aspaatal Assessments. The NQAS includes several indicators that can be used to construct a person-centeredness index: the facility provides the information to care seekers, attendants, and community about available services and their modalities; services are delivered in a manner that is sensitive to gender, religious, and cultural needs, and there are no barriers on account of physical, economic, cultural, or social status; the facility maintains privacy, confidentiality, and dignity of patients and has a system for guarding patient-related information; and the facility has an established system for patient and employee satisfaction. Furthermore, the Mera Aspaatal, which captures patient feedback on services received, has additional measures that can be routinely collected to assess patient satisfaction.

Routine measures of provider availability are not currently available; however, state data suggests significant shortfalls in health care provider availability. Provider availability captures whether the primary health care system is the first point of contact for patients seeking treatment

and whether providers are motivated and available to provide timely, high-quality care. Two indicators that are commonly used to assess the availability of providers, the proportion of patient visits longer than 10 minutes, and the provider absences rate, were both unavailable at the time of the assessment due to limitations in data collection. To address this shortage, the state provided a proxy measure: the shortage of health care providers. This measure captures the shortage of health care providers (regular and contractual) against the required number of health care providers in public health care facilities and is routinely reported in the NITI Aayog.³¹ According to NITI Aayog Round 4 (2019-20), 23 percent of public facilities had documented shortages in health care providers.³² In addition, state data for the year of 2022 indicates that 13 percent of sanctioned health posts were vacant at PHCs, while 70 percent of posts were vacant for UPHCs—suggesting further shortages of health care providers.³³

CAPACITY

The capacity section assesses the functional capability of the primary health care system, including governance, inputs, and management of population health and facilities to deliver high quality services. The governance sub-domain assesses primary health care policies, quality management infrastructure, social accountability, and the ability of the system to adjust to population health care needs. The inputs sub-domain captures the availability, equitable distribution, and quality of essential

31 Defined as: a. Auxiliary Nurse Midwife (ANM) at Sub-Centers (SCs), including SC-HWCs; b. Staff nurse at Primary Health Centers (Primary Health Care Centers /UPHCs, including PHCHWCs and UPHC-HWCs) and Community Health Centers (CHCs/UCHCs); c. Medical Officer (MOs) at Primary Health Care Centers /UPHCs; d. Specialists at District Hospitals (Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Anesthesia, Ophthalmology, Orthopedics, Radiology, Pathology, ENT, Dental, Psychiatry)

32 NITI AAYOG. "Health Ranking." 2023. Retrieved: <https://social.niti.gov.in/hlt-ranking>

33 The data provided is for 2022, and there are expected changes for 2023 due to recruitment. Furthermore, the state has indicated that the data provided is not a complete sample of all primary health care cadres..

service delivery inputs such as drugs, supplies, workforce, human resources, information systems, and funds at the facility level. The population health and facility management sub-domain includes an assessment of how well population health is managed, including activities such as community outreach and local priority setting. This section also examines facility organization and management, for example by assessing management capabilities and leadership, information system and use, performance measurement, and team-based care. The final progression model scores for each measure are presented in annex C.

The capacity domain was completed using the progression model methodology, which includes a combination of key informant interviews and an extensive document review. The progression model data collection process was carried out from June 2022 to December 2022. Data was collected from a representative sample of five contexts in Gujarat (rural, urban, tribal, coastal, and desert), including Chhota Udepur, Surat, Amreli, Kutch, and Surat Municipal Corporation, and involved interviews with 52 key informants from the state, district, NGO, and development partners.³⁴ The study adapted a total of 33 measures to the context of Gujarat based on a set of definitions established by the PHCPI assessment steering committee, consisting of SHSRC and World Bank actors (see annex F for the complete list participants, and annex G for the list of documents reviewed). The questions were adjusted to gather measures for both private and public sectors, although the data revealed inconsistencies between the public and private sectors in most cases (>95 percent), therefore the information for the private sector was not collected. The scores for the 33 measures were validated on May 8 and 9, 2023. The external validation exercises involved primary health care stakeholders and actors from the government, international organizations, NGOs, and civil society organizations (see annex F). The assessment also included a set of questions related to NCDs to provide a more comprehensive evaluation aligned with state priorities

³⁴ Key informants' identities are anonymous.

and interest. The data collected on NCDs were used to provide an additional analysis of Gujarat's health system's ability to provide NCD-related services in the primary health care settings and did not modify the standard rubrics used to assess the 33 measures in the progression model methodology. Thus, the measurement resembles countries that have previously implemented a PHCPI assessment.

GOVERNANCE

The AB-HWC program serves as the main primary health care policy in Gujarat, although there is the need to consolidate primary health care policies and programs to reduce fragmentation. The AB-HWC program serves as the main strategy for implementing CPHC, however, it is not specific to the state. There is not a single policy or strategic plan for PHC within Gujarat. Instead, PHC is delivered through pre-existing multiple integrated programs and policies, which results in instances of either isolated or duplicated care. The activities specified within AB-HWC program were developed based on evidence, however, the strategies for implementing the activities within the span may not be. Policies related to CPHC, including the AB-HWC, are embedded into a programmatic framework. Funding for CPHC through from a variety of national and state government sources, although, the NHM provides funding for the establishment of HWCs. Most funding to implement the CPHC comes from vertical programs leading to further fragmentation throughout the primary health care system. Fragmentation among programmatic initiatives was especially challenging when integrating NCDs in CPHC, as noted in box 2. Most public sector and government stakeholders noted that the AB-HWC program and other primary health care-related programs and policies are commonly developed using a participatory process. These participatory processes are led by medical officers, who engage community members, the private sector, and NGOs. However, key informants from NGOs said that community members are often excluded from policy and

program development processes. The final progression model scores for each measure are presented in annex C.

Box 2. Fragmentation among NCD Policies and Programs

Delivery of NCD services in Gujarat is fragmented between various programs. The state NCD cell manages four programs, including the National Program for the Prevention and Control of NCDs; National Program for Palliative Care; National Program for Health Care of the Elderly; and National Program for the Prevention and Control of Deafness, while the state Public Health Division [is responsible for implementing the National Tobacco Control Program. The introduction of AB-HWC included an expanded range of services for NCDs at HWCs, including screening, prevention, control, and management of common NCDs, such as hypertension, diabetes, and common cancers. However, key informants consistently noted challenges between the integration of the national NCD programs and the expanded range of services specified in the AB-HWC. While the AB-HWC program aims to provide an integrated package of care, programmatic services have not been consolidated, and delivery of services continue to follow previous programmatic initiatives rather than the AB-HWC.

Gujarat has a well-defined leadership structure for coordinating primary health care policies and programs. The AB-HWC program is implemented at all levels through a program implementation plan (PIP) overseen by the Additional Director of Public Health. In addition to the AB-HWC program, the Additional Director of Family Welfare has authority for coordinating, monitoring, and implementing all primary health care strategies related to RMNCAH+N in Gujarat. Operational capacity for the implementation of primary health care policies is sufficient, as there is a system in place that allocates implementation responsibilities from the state to the districts/municipal corporations' and subsequently to talukas/wards and HWCs levels. For example, the 12 service delivery packages have designated program officers who oversee implementation and monitoring at the state level. Programmatic officers at the district level support

monitoring at local levels. There is a clear hierarchical structure of reporting from the taluka, district, region, and state levels. Informants agreed that there was sufficient authority to monitor and implement initiatives at all levels.

Further financial resources and initiatives are needed to establish a quality management infrastructure at state and district levels to implement and sustain quality improvement activities. In May 2023, Gujarat published a state-specific *Quality of Care Strategy*. This plan includes several “prioritized interventions” to improve the quality of care via governance, service delivery redesign, health workforce transformation, and demand generation. Prior to the development of the strategy, Gujarat had implemented some quality-specific activities, such as producing operation guidelines for improving quality of care in public health facilities and establishing quality assurance medical officers and a state quality assurance committee (SQAC) that meets annually. It was noted, however, that the SQAC focuses on programmatic initiatives and does not have a long-term vision for quality. Similar challenges were noted at the district level, where district quality management committees are established but are limited by a lack of specific technical knowledge and oversight on how to improve quality of care for specific services.

Several national initiatives have been developed to promote high quality primary health care and engage patients, families, and communities; however, they are less focused on clinical effectiveness. Informants mentioned the registration and regulation of health facilities through the National Accreditation Board for Hospitals and Healthcare Provider (NABH), and the National Quality Accreditation Standards (NQAS) in use at district hospitals, CHCs, PHCs, and UPHCs. The NQAS intends for providers to self-assess their quality and to bring facilities up to certification. Additionally, facilities are required to complete the Kayakalp assessment annually to gauge cleanliness, hygiene, and adherence to infection prevention and control. Despite these initiatives, it was noted that

the collection, publishing, and use of data on quality health systems are not systematized. Specifically, there is no routine system for collecting and publishing quality-related data at the state level, and a culture of learning and institutionalizing quality of care is lacking. Results showed that the NQAS could serve as an important starting point for institutionalizing quality in alignment with national government standards, however it is insufficient in its current state as it does not routinely monitor quality across all government primary health care facilities.

There are opportunities to improve social accountability through better engagement with private sector, civil society, NGOs, and sectors outside of health. There is little engagement among the public sector, private sector, and nongovernmental organizations on primary health care. The most frequent engagement occurs between NGOs and the public sector at the district level, where there are committees and meetings in place to discuss the implementation of the PIP. At the state level, the HFWD has established committees to discuss programmatic areas, but not primary health care or CPHC holistically. An example of a recent initiative includes engaging ‘Self-Help Groups’, which leverages social and behavior communication to improve outcomes. Specifically, ‘Self-Help Groups’ of 10 to 25 women aged 18 to 40 years that meet to discuss ways to improve maternal, child, and adolescent health and nutrition outcomes.³⁵ The private sector, NGOs, and civil society groups are not involved in primary health care or CPHC planning, policy formulation, and monitoring and evaluation. However, there is potential to strengthen their involvement. The National Tuberculosis Elimination Program has well-established mechanisms to support the private sector with diagnosis, notification and supply of TB drugs. Engagement does occur between NGOs and government at the

³⁵ Self-Help-Groups are comprised of 10 to 25 women aged 18 to 40 years old sharing similar socio-economic background. This initiative under the Ministry of Rural Development, Government of India, aims at building capacity of women from marginalized sections of society in the domain of employment and income-generating activities, including through offering financial support to undertake these activities.

district level, where committees and meetings take place to discuss the implementation of the PIP. Informants also noted that data related to the status of the implementation of primary health care related policies and programs is not publicly available. There is also limited public disclosure of data at the local and district levels, and no available report of primary health care performance in the state.

In terms of multi-sectoral action, there are several state and district level initiatives to encourage engagement between health and other sectors, however, interaction across sectors rarely occurs. Most multi-sectoral action related to primary health care programs occurs at the district levels and below, although they also tend to discuss programmatic areas related to community health needs (e.g., polio). For example, all villages have established Village Health, Sanitation, and Nutrition (VHSN) committees, which are intended to represent village level interests. However VHSN committees meet infrequently. It is important to further strengthen the engagement and effectiveness of this initiative. One informant also noted the establishment of a high-level governance committee called the State Health Mission, which includes representatives from different state departments, secretariates, civil societies and the private sector. Although meetings were initially frequent, only two to three meetings have occurred since 2016. Informants also mentioned that information is lacking on private provision of primary health care services in the state, despite accounting for most primary health care delivery.

Gujarat has robust surveillance systems for tracking births and deaths, as well as for disease detection and investigation. One hundred percent of births and deaths that occur at public and private facilities are recorded through the E-Olakh system³⁶. Hospitals upload them directly into the E-Olakh system, while rural areas are uploaded through a registry-based system. Births and deaths occurring outside of the public system,

³⁶ Gujarat has developed a system titled E-Olakh for registering births and deaths.

including those at home or in the private sector, must also be recorded in the E-OLAKH system. Regarding disease surveillance, the public system has a strong system for detecting, reporting, and investigating notifiable diseases. The system is comprised of a paper-based component and subsequent entry on the portal known as Integrated Disease Surveillance Program (IDSP). IDSP was recently replaced with a more comprehensive portal called the Integrated Health Information Platform (IHIP). Health care workers complete the paper-based IDSP component and submit reports at the community level. These (S Forms) reports are received by SCs and subsequently (P and L Forms) at the PHC level, which collates the information into the IHIP. The IHIP provides real-time surveillance via an online platform that enables analyses of disease distribution, populations, symptoms, and outbreak alerts when necessary. If an outbreak occurs, epidemiologists communicate via WhatsApp. The private sector is not integrated in the IHIP or NHA, but 208 private labs have their own WhatsApp for communicating potential outbreaks. Despite a comprehensive surveillance system, this data is not used to inform priority setting.

Gujarat does not systematize the use of data related to the primary health care system to set priorities or to learn and innovate. Data related to disease burden, surveillance, and health services is infrequently used for setting service delivery priorities at the state and district levels. Informants described the priority setting process and stakeholder engagement as bottom-up: district and local level stakeholders engage in priority-setting discussions whose results are collated and sent to the state. However, the extent to which these views are included in the priority-setting exercises is unknown. Furthermore, priorities set at the state level are guaranteed to be attached additional funding. In addition, Gujarat does not currently have formal mechanism to recognize, evaluate, and scale successful innovations related to primary health care, although it is working on establishing a mechanism. Results indicate that some innovations that have occurred at district and block levels have been scaled up, such as the use of mobile phones for ASHAs. Another example of scaling an innovation is the India

Hypertension Control Initiative, which is being implemented in several urban districts (box 3).

Box 3. India Hypertensive Initiative

The India Hypertensive Control Initiative (IHCI) is a widely adopted pilot to scale NCD treatment and management in Gujarat. The IHCI program includes treatment protocols, medication supply, task-sharing and team-based care, information systems, and patient-centered care. A notable feature is the use of a mobile phone application for patient recall, which allows health care workers to manage blood pressure and blood sugar measurements, record medication, and schedule follow visits. The application also aggregates patient data for providers, allowing managers to understand patients' status and adherence. For participating facilities, the IHCI permits providers to prescribe a 30-day supply for drugs to all patients. In terms of quality of care, the IHCI has developed standard guidance for managing hypertension, which was noted to help maintain consistency amongst providers, regulate the supply of drugs, and ensure doctors adhere to protocols. Informants indicated that providers widely use the decision support protocols to manage hypertension, noting that they were very specific and widely accessible.

INPUTS

Stakeholders perceived essential medicines and commodities to be generally accessible in PHC facilities, although they noted regional disparities. Gujarat previously established a standardized list of essential medicines, ensuring their widespread availability across both urban and rural primary health care facilities. This comprehensive list comprises 190 essential drugs for PHCs and 91 essential drugs for SCs. Informants indicated that the that the essential medicine list includes NCD-related drugs, but these were more frequently unavailable. This issue was linked to challenges in the procurement process for NCD-related drugs, which differs from that of non-NCD drugs. The current system does not enable

effective tracking of NCD-related drug consumption. The availability of essential medicines and commodities at PHC facilities could not be reliably assessed due to insufficient quantitative data. Most informants indicated that facilities had essential medicines available, although the availability of consumable commodities was comparatively lower. Significant variations in the accessibility of essential medicines and commodities were observed between regions, particularly among rural areas.

Stakeholders perceive a crucial need to ensure that all primary health care facilities are equipped with the necessary basic equipment to deliver high-quality services. The list of basic equipment for primary health care facilities is determined by the Indian Public Health Standard, which mandates compliance for all primary health care facilities. Responsibility for providing essential supplies to each PHC lies with the respective districts. The availability of basic devices, such as scales, meters, thermometers, blood pressure monitors, and stethoscopes for CHCs, PHCs, and SCs is reported through the Kayakalp portal. However, as with the availability of essential medicines, the availability of basic equipment could not be verified using reliable quantitative data. Consequently, the study assessed availability based on perceptions of key informants, who indicated that approximately one- to two-thirds of all primary health care facilities have functional basic equipment, with minimal variation observed between districts.

The availability of diagnostic tests, particularly for NCDs, is perceived as a significant challenge in Gujarat. Diagnostic supplies encompass the necessary materials for conducting hemoglobin tests, blood glucose tests, urine dipstick tests for protein and glucose, urine pregnancy tests, and other tests relevant to local health needs. While diagnostic tests are recorded in the Healthcare Worker Portal (HWP), there is insufficient quantitative data to evaluate the availability statewide. As a result, the assessment relied on the perceptions of key informants, who concluded that approximately one- to two-thirds of facilities had all the required supplies for conducting diagnostic tests. Key informants noted that there was particularly low

availability of urine and glucose analysis materials, as well as blood glucose chemistry analyzers.

Previous internal assessments have led to investments in facility infrastructure and there are clear targets in place for achieving optimal facility density and distribution. Various efforts have been made to identify facility density and distribution and key targets for optimal health facility density and distribution have been documented. These targets have been successfully met in the past, and a newly formed committee is currently working to determine a revised number of PHCs and SCs due to an increased need in urban settings. A previous assessment considered the median and projected populations in each area. This assessment informed the establishment of a three-tiered primary health care system, supported by a dedicated budget. According to the targets, village levels should have one SC per 5,000 people in rural areas, or one per 3,000 people in tribal areas. Additionally, there should be one PHC per 30,000 people in rural areas, or one per 20,000 people in tribal or hard-to-reach areas. As for CHCs, the targets are set at one per 120,000 population and one per 180,000 population for tribal areas, exclusively serving rural populations.

There is a discrepancy between the perception of high availability of facility amenities across Gujarat and the findings from key informant interviews. Key informants reported wide availability of primary health care facility amenities, including electricity, safe water, exam rooms with auditory and visual privacy, light sources, sanitation facilities, communication equipment, and computers with internet connection. However, informants also agreed that there is a 20 percent variation in availability across regions. Contrary to the perceived high availability, interviews with key informants indicate that amenities are not widely accessible within primary health care facilities. For instance, 40 percent of informants noted gaps in the availability of all amenities, primarily among urban PHCs where many facilities do not own their buildings. While few districts reported 100 percent availability of amenities, the rest of districts highlighted substantial variation. In Chotta

Udepur, for example, it was noted that 25 to 20 percent of PHCs and HWCs lacked Internet access, less than 10 percent had safe drinking water, and less than 5 percent were reachable with emergency services. Similar challenges were noted in the Kutch, where 50 percent of HWCs had all amenities available.

There is variation in the availability of standard safety precautions and equipment. Standard safety precautions and equipment include sterilization equipment, safe final disposal of sharp objects, medical waste, sharp objects box in exam room; waste bin and container in exam room, surface disinfectant, single use disposable or auto-disposable syringes, soap and running water, latex gloves, and guidelines for standard precautions. Key informants agreed that there was a low perceived availability of standard safety precaution and equipment available (less than one-third), with limited variation between districts. It was emphasized that there are guidelines for waste disposal within PHCs, but not for SCs. Furthermore, informants identified several gaps in operating procedures, especially regarding the safe disposal of waste and sharps. For example, results showed that all facility waste is collected and brought to SCs; the process of transporting waste from lower-level facilities to SCs is often unsafe and exposes individuals to many risks.

Gujarat has an extensive number of separate information systems for tracking births, deaths and vital events and monitoring the delivery of health services. Key informants agreed there is a complete record of both public and private births in the state. Specifically, all births and deaths occurring at public facilities are registered, while deaths and births at private facilities are recorded and sent to the government. All births and deaths in the public and private sector get entered and certificates are also issued through E-Olakh portal.

Gujarat has developed an extensive network of health information systems (HMIS); however, the overall effectiveness of these systems is limited due to a lack of interoperability and interconnectedness. The

HMIS in Gujarat comprises approximately 45 portals, including HMIS portals, WhatsApp groups, and Google links. Key informants frequently mentioned TECHO and various national government portals as the primary HMIS systems used in the state. TECHO is utilized by reproductive and child health officers (RCHOs) to record health information related to RMNCAH+N and family planning. While NCDs are tracked through the CPHC NCD portal. For example, a key informant estimated that 370 indicators are recording via the national government and TECHO portals. These indicators are tracked at various levels of the primary health care system, including SCs, PHCs, CHCs, and district facilities.

The fragmented HMIS system in Gujarat significantly hampers the availability of comprehensive personal care records. Due to the absence of a unified HMIS system, key informants unanimously agreed that comprehensive personal health care records are lacking. Disease registration is limited to tuberculosis and NCDs. For NCDs, the national government has recently introduced the NCD portal (see box 4 below), which captures information on hypertension and diabetes care. Among the HMIS systems, TECHO+ was identified as the most comprehensive HMIS system. TECHO+ assigns each patient a unique identification number and tracks a few diagnostic values. However, it does not capture clinical notes or longitudinal care records, treatments, medications, and registration for specific programs. Outside of TECHO+, patients are responsible for maintaining their own medical records and must bring them to health facilities.

Box 4. NCD Portal

The NCD Portal tracks patients along the care continuum, which can be further improved by information collected. Gujarat recently adopted the national NCD portal, which collects information on diabetes and hypertension screening, follow-up adherence, adherence to protocols, and disease control. The NCD portal collects information on patients screened using the CBAC

tool. The portal tracks the aggregate number of patients who have received screening, diagnosis, follow-up, and treatment, and control. Furthermore, the NCD portal also allows district managers to disaggregate NCD performance by geography, age, and gender. The portal provides critical information on continuity and effectiveness of diabetes and hypertension care across Gujarat. It has the potential to be built upon, including linking individual patients through a unique patient identifier that would support the development of longitudinal patient care records. Furthermore, tracking individuals through the NCD Portal has the potential to be integrated into the system across both public and private facilities, which would enable more consistent, high-quality care.

The National Health Profile provides data on workforce density and distribution in Gujarat. The Indian government releases a National Health Profile annually, outlining core health related indicators at the state level. The most recent version demonstrates that Gujarat has a workforce density of 42 per 10,000 population (including public and private health sectors). Key informants agreed that these figures were used to identify which sub-districts were below the median national density of health care workers.

There are several quality assurance mechanisms in place to ensure competency of the primary health care workforce. The state requires nurses to have a General Nursing and Midwifery course or a BSc and license to practice; doctors must have a Bachelor of Medicine and Bachelor of Surgery (MBBS) degree and Medical Council of India registration; pharmacists must be registered with the pharmacy council; ASHAs must have successfully completed a grade 8 level education; FHWs and MPHWs must completed a specific required certification course; and community health officers (CHO) candidates must have completed a bachelor's degree in science from a recognized university, board, or Institution that is registered under the Indian Nursing Council. To practice in Gujarat, candidates must be registered under the Gujarat Nursing Council. Key informants noted that the system investigates complaints against staff through an annual appraisal.

However, there is not a system in place for periodic revalidation of diplomas, registration, and licenses. In addition, specific competencies of primary health care providers are typically established through programmatic interventions and are provided through programmatic training.

Gujarat has trained a strong cadre of CHWs who are responsible for proactive population outreach and who can provide a range of preventative, promotive, and curative health services. The cadre of CHWs consists of ASHAs, FHWs/FHS, ANMs, MPHWs/MPHS and CHOs. Gujarat provides formal programs for training CHWs on preventive, promotive, and curative health services tailored to population needs. ASHAs are volunteers and are selected through the Gram Panchayat (local self-government body) based on select criteria. CHWs receive robust training depending on their specified role. For example, FHWs and MPHWs receive formal pre-service training and accreditation, while ASHAs are selected and then receive formal pre-service and in-service training. In addition, ASHAs also receives a five-day refresher training annually. CHWs are also supported with frequent, regular supervisory visits, depending on the cadre. For example, there is one ASHA facilitator for every 10 ASHAs; there is also one FHS or MPHS for every four to seven FHW/MPWs. All CHWs are supervised by a medical officer and a CHO for field activities. CHWs are responsible for reporting to the MO at the PHC once per week. One noted challenge was that CHWs often lack access to a computer or internet, which is a barrier for health data reporting.

Primary health care facilities have a budgeting system in place that enables efficient distribution of funds and forecasting exercises. For funding from the NHM, there is a financial management system in place and funds are transferred through the Single Nodal Agency (SNA) from the state to districts and regional units, and subsequent fund limits are allocated to lower-level facilities up to PHCs. Furthermore, an annual budget is maintained for public facilities, with a guaranteed level of funding for each district, block, PHC and SCs. Typically, PHCs receive and allocate

80 percent of the budget allocated to it and the remaining 20 percent is managed by the taluka health officer (THO) or district. The total budget is provided through funds by the government that include budget line-items for regular expenditures such as staff and supplies. Billing, service fees, expenses, and budget spending are tracked through line-item budgets. Most informants indicated that primary health care facilities use an annual budget in a systematic forecasting exercise, including setting aside funds for vacant posts, funds for improvements for facilities, computing requirements indenting of all logistics depending on estimation of use for next year. In addition, the assessment found that a smaller proportion of PHCs conduct planning for funds, but it is not standard across all facilities across state, and not done very frequently.

The Financial Management Information System (FMIS) was already implemented for NHM funding through the public financial management system (PFMS) portal and remuneration is stable and predictable, although fragmentation persists. Recently, the PFMS has been coupled with the system of SNA at state level that can track expenditure, salaries, line-item budgets, and reimbursement for services. The SNA also identifies facilities when funds are low and can be used to track expenditures bookings. The SNA is primarily digital and was noted to have greatly improved the speed of accounting and budget related processes. Integration of SNA with State Treasury or State Integrated Financial Management System (IFMS) captures scheme-wise and component-wise expenditure along with unique PFMS codes. It is important to note the SNA only includes budgets from the NHM, while other funding sources (e.g., programmatic) are tracked manually.

Gujarat's primary health care system also exhibits a strong remuneration system, with staff reporting few challenges in receiving stable and predictable payments in a timely manner. Staff receive the amount specified in their contracts. ASHAs, being an 'Accredited Social Health Activists', are community volunteers who receive incentives

instead of formally established payments. The incentive structure is well-established with specific incentives based on the activities undertaken by ASHAs. Although infrequent, delays in payments do occur for contractual employees. Delays in payment were also noted to occur more frequently for ASHAs because their payments require additional approvals. Renumeration is largely predictable since it is outsourced. There was no variation in remuneration reliability across state areas and primary health care facility types.

POPULATION HEALTH MANAGEMENT

There are standardized processes for translating local priorities into state level policies, although the level of stakeholder participation is unclear. Talukas/wards and districts/corporations in both rural and urban settings collect information on local population health needs and deliver it to the NHM annually. The NHM is responsible for integrating qualitative information with additional quantitative data from the stat. This information is then used to translate evidence into priorities for the state. The state sets priorities for talukas, district PHCs and HWCs. However, it is unclear what percentage of talukas and district submit information, although it is assumed that all do because it is a mandatory budget reporting process. Communities and local leaders are also somewhat involved in the priority setting process. Informants indicated that local leaders do not engage with data or analyses, but rather advocate on behalf of the community in certain contexts. Community engagement in the priority setting process is more standardized in rural areas, specifically in “Gram Sanjeev Samiti” (Village Health Sanitation Nutrition Committees), which meet monthly to discuss community needs such as disease outbreaks or staffing limitations. It was noted that urban committees are much less active than those in rural settings.

While a redressal system does exist, district and municipal corporations do not regularly solicit input on the primary health care policy process from communities. Specifically, communities are not regularly involved in providing input on the implementation of services. However, informal input on the design, financing, and governance of primary health care occurs across the state with a limited impact on the way services are structured and delivered. There is also little engagement of district and municipal corporations in the primary health care policy process. Specific regions noted unorganized efforts to engage municipal and district stakeholders, for example, using teachers and religious leaders to gather information on community needs. There is a community feedback and governance redressal system online, but community members are largely unaware of its existence. PHCs and UPHCs also have suggestion boxes for individual complaints and suggestions that are reviewed by the medical officer monthly. There is little information on whether these systems are effective at catalyzing improvements.

Gujarat has a robust empanelment system, especially in rural settings. Key informants noted that a significant, yet incomplete proportion of the population is empaneled to a primary health care provider, care team, or facility. It was noted that rural areas have higher levels empanelment than urban areas. Empanelment of patients to public health care providers is a streamlined activity called family health survey, which is undertaken annually. The database for empanelment is maintained digitally in the state-level TeCHO+. For NCD assessment and screening, the database of the population aged 30 years and older, is also updated under CPHC NCD portal which is a GoI portal. However, this results in duplicative data management efforts, as NCD patients' data is input into TeCHO+ and the NCD portals. Results showed that continuously updating panels in urban areas is more challenging due to rapid urbanization, migration, lower community ties, and greater ambiguity over where to access services. Patients can choose the providers and/or facilities they visit. Challenges occur due to the lack

of integrated and interoperable information systems, as clinical records and history may not be transferred from one provider or facility to the next. There is no system to maintain integrated digital health records of patients.

Proactive population outreach is robust, although it typically occurs through a combination of programmatic initiatives and not via a CPHC approach. A significant proportion of urban and all rural facilities conduct proactive population outreach, with active registries maintained for measles, polio, TB, and NCD outreach. Key informants indicated that majority of districts maintain registries consisting of lists of patients based on their geography. ASHAs also play an important role in mobilizing the patients for outreach at the PHCs and SCs. Informants indicated that the programmatic approach to conducting proactive population outreach limits the ability of districts and communities to tailor services to better meet the local populations health needs. It also takes away from providing holistic outreach services focused on prevention and demand generation. Like the issues related to empanelment, the challenges in proactive population outreach were more pronounced in urban areas due to lower levels of community connection as well as ambiguity over where to access services.

The adoption of team-based care practices, along with limited management capability, further hinder Gujarat's ability to provide high-quality primary health care services. Informants noted that providers within primary health care facilities rarely share a common identity or work as a team, and often lack defined roles and responsibilities for delivering clinical services. Informants suggested that the fragmented structure of service delivery within primary health care facilities further complicates team-based care, as providers are required to follow multiple sets of clinical guidelines and receive supervision across several programmatic initiatives. There is some level of coordination and team-based care in HWCs between ASHAs, FHWs and medical officers, where weekly meetings occur. Low management capacity is another impediment to primary health car'

facilities' ability to provide high-quality services. For example, facility managers are not required to have any formal management training certifications or training. As a result, most managers at primary health care facilities have not received any form of management training or certification. Medical officers and CHO receive a basic 10-day management training, although it was noted to be insufficient. Results indicate that facility managers receive performance reports with feedback on their management capabilities over the previous year. However, reporting is primarily performed as a formality and there is no corrective action based on management feedback.

Information systems are widely used in facilities as well as by health workers, but the capacity to capture, report, and use data to improve service provision is limited. Key informants agreed that a significant proportion of facilities have staff with the capacity to use information systems. Information system use is most frequent occurs at PHCs, where staff c to input data on various platforms as well as interpret basic analyses and reports produced by the different information system platforms. More generally across primary health care facilities, the capacity to input data varies by region, as some key informants noted that primary health care facilities have a data operator who is responsible for input and analysis. A lower proportion of primary health care facilities (between one- and two-thirds) routinely use the information for capturing patient and facility data. Most primary health care facilities use the data collected from the TECHO+ and NICKSHAY portals, which capture RMNACH and TB services respectively. However, the CPHC NCD portal was used far less extensively across primary health care facilities. There are additional challenges to information system use in urban areas, where there are multiple municipal corporation-specific reporting systems associated with vertical programs. Informants also mentioned that information systems data is not being used to identify or conduct quality improvement activities across primary health care facilities.

Performance measurement and management has been adopted across primary health care facilities mainly for RMNCAH services, and less so for NCDs. Results showed that the majority of primary health care facilities use established performance indicators, although mostly for RMNCAH services. A similar level of facilities conduct routine monitoring of these performance measures, as facilities are required to submit annual performance reports to the state. HWC-SC, HWC-PHCs, and taluka report performance indicators monthly, while district level reporting happens monthly and/or quarterly depend on the need of the National Health Program. There are weekly meetings at PHCs to discuss the performance indicators. Medical officers review achievements against the set targets and indicators monthly. Additional measures are captured through multiple HMIS tools (e.g., home deliveries, anemia, and high-risk behaviors during pregnancy). Despite the wide use of performance measurement across the primary health care system, few primary health care facilities document quality improvement as there is no systematic approach to do so.

Supportive supervision is not widely implemented across primary health care facilities. Results showed that between one- and two-thirds of primary health care facilities have implemented or received supportive supervision on an annual basis. There are national program-specific guidelines for supportive supervision; however, resources and support for implementation are often insufficient. There is a supervision structure in place for ASHAs, which receive mentoring support from ANMs or ASHA facilitators; ANMs or ASHA facilitators are supervised by a medical officer and a female health supervisor. Moreover, a (male) multipurpose health worker is supervised by a multipurpose health supervisor. A noted gap was the lack of supportive supervision for facility managers.

EQUITY

Equitable primary health care coverage and access aims to reduce disparities in health outcomes across populations. This primary health care assessment measures equity across primary care access, coverage, and outcomes. Each aspect of equity is comprised of indicators disaggregated by socioeconomic status, including wealth, mother's education, and place of residence. Equity in access looks at the difference in perceived financial barriers to care between the highest and lowest levels of wealth. Equity in coverage examines the difference in effective coverage of maternal and child health care services based on the mother's level of education, while equity in outcomes examines the differences in mortality of children residing in urban and rural areas.

There are significant inequities in access to care between wealth quintiles and vulnerable groups. According to the 2019-21 NFHS-5, 7 percent of women in the highest wealth quintile report perceived barriers to accessing health care due to cost, compared to 31 percent in the lowest wealth quintile. Additionally, there are significant gaps in the coverage of women and men aged 15 to 49 years who are covered by health insurance across vulnerable groups. For example, 41 percent of men and women in scheduled tribe and scheduled caste have health insurance coverage, followed by 36 percent of women and men in backward castes, other (33 percent) and don't know (19 percent).

There are significant disparities in the coverage of RMNCAH+N services for mothers and children of mothers who completed secondary or higher levels of education and those that received no education. According to 2019-21 data, 75 percent of mothers and children of households where the mother completed secondary or more education received a complete basic package of RMNCAH+N services, compared to 64 percent of mothers and children of families where the mother did not complete primary education receive such care. The differences in the coverage of specific RMNCAH+N

services included in the index were most substantial among births attended by skilled health personnel, measles immunization coverage, and children under-5 with diarrhea who received ORS.³⁷

Despite large improvements, there remain substantial differences in under-5 mortality between urban and rural settings. In 1992-93, the under-5 mortality rate in urban areas was 65 deaths per 1,000 live births, while in rural areas it was 70 deaths per 1,000 live births—a difference of five deaths per 1,000 live births. More recent data from the Sample Registration Systems (2022) suggest that the difference in the under-5 mortality rate has declined, although it remains significant. Specifically, the under-5 mortality rate in urban settings was 17 deaths per 1,000 live births, compared to 27 deaths per 1,000 live births in rural settings.

FINANCING

The financing domain assesses a country's commitment to primary health care by evaluating the allocation of funds to primary health care and sources of expenditure. The assessment uses five indicators to evaluate the total spending on and prioritization of primary health care. The first indicator, current primary health care expenditure per capita, examines financial commitment to primary health care by capturing the absolute amount of spending on primary health care per person. The subsequent two indicators focus on spending prioritization in primary health care. The first indicator is current primary health care expenditure as a percentage of the current health expenditure (CHE), which captures primary health care spending in relation to total health spending. The second indicator

³⁷ Index includes: The demand for family planning satisfied with modern methods; ANC care coverage (four or more visits); births attended by a skilled health professional; BCG immunization coverage among 1-year-olds; measles immunization coverage among 1-year-olds; DPT3 immunization coverage among 1-year-olds; children aged less than 5 years with diarrhea receiving ORT and continued feeding; and children aged less than 5 years with ARI symptoms taken to a health facility.

is the domestic general government primary health care expenditure as a percentage of the CHE, which compares primary health care spending in relation to total government health spending. The last set of primary health care financing indicators examine the sources of primary health care spending. These indicators include government spending as a percentage of total primary health care spending, and other spending (domestic private and external) as a percentage of total primary health care expenditure.

The indicators specified above are calculated using a standardized methodology across countries. However, they are currently unavailable for Gujarat. The indicators are typically calculated by the WHO Health Finance team using the Systems of Health Accounts 2011 (SHA 2011) and published on the Global Health Expenditure Database.³⁸ This process involves defining primary health care expenditure at the global level, which would require adaptation to Gujarat's context. It is critical that the state aspires towards defining and measuring the selected primary health care financing indicators, which will provide a robust understanding of total level, prioritization, and sources of health spending allocated to primary health care within the state.

Gujarat agreed to include an additional access indicator examining the percentage of women and men with health insurance coverage, as indicated in the NFHS-5 (2019-21).³⁹ Health insurance coverage in Gujarat has the potential for further improvements, with large coverage gaps between populations living in urban and rural settings. According to NFHS-5 data, 37 percent of the population has health insurance coverage (40 percent of men and 34 percent of women). Both men and women in

³⁸ World Health Organization. "System of Health Accounts." 2011. Retrieved: <https://www.who.int/publications/i/item/9789240042551>

³⁹ Health insurance includes: Employees' state insurance scheme (ESIS), central government health scheme (CGHS), State health insurance scheme, Swasthya Bima Yojana (RSBY), community health insurance program, other health insurance through employer, medical reimbursement from employer, other privately purchased commercial health insurance, and other.

rural settings (44 percent and 36 percent, respectively) had a greater level of health insurance coverage compared to those living in urban settings (34 percent and 31 percent respectively). Among households with one member covered by a health insurance/financing scheme, the state health insurance scheme was the most common (58 percent), followed by Rashtriya Swasthya Bima Yojana (15 percent), and the central government health scheme (13 percent). All three schemes had higher coverage in rural areas compared to urban areas.⁴⁰

40 NHFS-5. "Gujarat." 2019-21. Retrieved: https://dhsprogram.com/pubs/pdf/FR374/FR374_Gujarat.pdf



RECOMMENDATIONS

This primary health care assessment has identified both strengths and ongoing challenges in Gujarat's journey to the achievement of CPHC.

Gujarat would benefit from targeted actions and investment to further strengthen its primary health care system. These recommendations, designed to support AB-HWC's package of 12 essential services, require substantial investment in health system capacity, including investments in facility infrastructure, hardware, equipment, pharmaceuticals, supplies, and human resources.

The actions for improvement aim to cultivate a primary health care system that not only provides comprehensive services, but also ensures continuity, coordination, person-centeredness, and integration. Strengthening the quality management infrastructure, investing in information systems, enhancing facility management, and fostering community and non-health stakeholder engagement are critical. These areas will play a pivotal role in transforming primary health care, shifting public perceptions, and building a resilient health care system. For each recommendation, annex D contains an overview of the resources required, ease of implementation, potential impact, time horizon and main dimensions of primary health care affected. Annex E outlines the involvement of primary health care stakeholders in the implementation of the recommendations.

RECOMMENDATION 1: ENHANCE THE QUALITY MANAGEMENT INFRASTRUCTURE TO FOSTER GREATER SYSTEM INTEGRATION AND ENHANCE THE EFFECTIVENESS OF CPHC SERVICES.

Improving quality management infrastructure emerged as a key priority for strengthening primary health care in Gujarat. Quality management infrastructure encompasses three components to ensure timely access to high-quality services: quality planning, quality control, and quality

improvement. Quality planning includes the aims, processes, and goals needed to create an environment for continuous improvement in primary health care. Quality control refers to monitoring processes to ensure their functionality. Quality improvement is the action of individuals working on the system to ensure measurable change. Gujarat has made significant improvements related to the quality of care with accreditation process such as a Kayakalp and the NQAS. These assessments have helped to ensure that the necessary structural inputs for high-quality service delivery are available at primary health care facilities across the state. Opportunities to further reinforce quality of care processes exist through the implementation of the Quality of Care Strategy at the primary health care level, harmonizing state and vertical programs, developing routine monitoring and evaluation mechanisms, and facilitating the formulation of a monitoring framework at the state, district, and block levels.

- 1. Support the implementation of the State Quality Plan by ensuring activities are implemented primary health care facilities.** Gujarat recently approved the State Quality Plan to serve as provides the strategic foundation for improving quality of care across four priority areas: governance, redesigned services, health workforce, and demand generation. PHC facilities would benefit from direct and continuous support for implementing and sustaining the quality improvement activities specified in the plan. These activities include developing complementary communication materials, training exercises, and accessing technical support for the four priority areas. Standard procedures for integrating the specified quality activities will be most effective if complemented with clearly communicated operational procedures and plans. A specific example could include training technical officers on the quality improvement activities and sending them on rotations to PHC facilities to support the implementation of various activities. The State Quality Plan would also benefit by establishing measurable objectives and benchmarks for monitoring the implementation of specific activities, and continuous evaluations

to measure the impacts of the plan's activities on care processes and outcomes.

The Malaysian experience demonstrates how the effective implementation of a national quality plan can significantly enhance the primary care system. Since the introduction of the Strategic Plan for Quality in Health in 1998, Malaysia has successfully institutionalized quality in its health care systems with measures such as accreditation of both public and private sector facilities, active involvement of the private sector in the patient safety council, and the incorporation of benchmarking as a crucial monitoring tool. One notable outcome of these initiatives is the establishment of a strong culture of quality. Local health facilities in Malaysia are expected to proactively identify, analyze, and address issues before they escalate to the national level.⁴¹

- 2. Consolidate and harmonize vertical programs through CPHC:** The Indian government's AB-HWC Operational Guidelines provide a framework to support states in delivering the AB-HWC program. However, the progression model exercise demonstrated that CPHC services are implemented and receive funding through parallel vertical programs, which has resulted in fragmented and inconsistent service delivery and a lack of coordination. Gujarat's primary health care system would benefit from further consolidating and harmonizing the AB-HWC operational guidelines and ongoing vertical programs under a framework and funding mechanism. This action would include consolidating funding sources and vertical program objectives. Linking operational objectives and funding sources has the potential to reduce fragmentation in service delivery and enable primary health care facilities and providers to deliver patient-centered services. The consolidation of funding sources would be most beneficial if complemented with consolidated clinical guidelines and

⁴¹ PHCPI Improvement Strategies. "Malaysia." Retrieved: <https://www.improvingphc.org/malaysia-policy-leadership>

supportive supervision programs (e.g., integrating clinical guidelines and supervision programs). Providing supportive supervision across a range of diseases and modalities, rather than a single disease, has the potential to greatly improve care integration and coordination, leading to better patient outcomes. Another potential avenue for consolidation is through the annual budgeting process. During the budgeting formulation process, primary health care stakeholders at the state, district, and block levels could align budget priorities and objectives to ensure consistency across CPHC delivery.

Solomon Islands provides a compelling example of consolidated health services and programs using the role delineation program. The role delineation policy defines the range of services (provided through the essential service package) to be delivered at different levels of care. This includes guidelines for staffing, infrastructure, essential registers, manuals, guidelines, and medicines. Both the role delineation policy and essential service package are embedded in the national health strategic plan to guide national, regionals, and local level resource allocation, thereby helping to maintain integration and coordination among primary health care providers and ensure consistency in the delivery of health services.⁴²

- 3. Develop a mechanism for routine monitoring and evaluation of primary health care services and quality.** At present, the information systems are unable to routinely track key metrics of high-quality primary health care service delivery. Inadequate service delivery monitoring results in limited accountability and identifying opportunities for improvement. Gujarat would benefit from leveraging two established mechanisms for monitoring quality, the NQAS and Mera Aspaatal assessment. Both the NQAS and Mera Aspaatal are used to assess quality at the facility level, however, only

⁴² PHCPI Improvement Strategies. "Solomon Islands." <https://www.improvingphc.org/solomon-islands-organisation-services>

the NQAS is routinely used to assess quality. The state has recently started putting in efforts towards NQAS accreditation of sub-centers HWC, however, there is a lot of scope to streamline this process, use the data for quality improvement, and ensure service qualities post-certification. More specifically, the data collected in both assessments could be expanded to include all CPHC facilities and could be routinely aggregated to provide an overview of quality of care at the primary health care level within states, districts, and blocks. Using the already established indicators within the assessments would provide standardized indicators and benchmarks for measuring and improving primary health care quality across Gujarat, thus providing critical insights into strengths and bottlenecks in primary health care service delivery.

Colombia provides an example of prioritizing measurement as means to routinely monitor primary health care services for improvement. Colombia has embedded quality standards for infrastructure and clinical practice, provider licensing, inspection, and specified targets into routine practice. Health care organizations and districts are also required to submit periodic information on 55 quality indicators covering patient safety, timeliness, effectiveness, and patient satisfaction. The information is collated and disseminated via a public reporting website and through national reports, which promotes accountability among providers. Furthermore, high-cost service providers are required to submit quality indicators to insurance providers as a form of accountability. For the high-cost services monitored, there is a system of random monthly audits of patient care which are conducted by an auditor. Auditors receive training and certification from the ministry. Information is also published on data quality from each insurance company for transparency. Since adopting these processes, key health outcomes, such as reductions

as healthcare-acquired infections, patient satisfaction, and reduced waiting times, have improved.⁴³

- 4. Support the development of a CPHC monitoring framework at the state, district, and block levels.** This primary health care assessment has established a clear framework for measuring CPHC within the state in addition to identifying data that is routinely available, in the process of being generated, and unavailable at the state, district, and block levels. Prior to the primary health care assessment, Gujarat had not established a framework for measuring the performance of CPHC. Establishing a CPHC performance monitoring framework requires identifying the key priorities and availability of data at each level: block, district, and state. For example, metrics established at the block level would be aggregated at the district level. Metrics at the district level would include services monitored at the block level as well as additional metrics. Both the data from the block and district levels would be aggregated at the state level, along with additional relevant metrics. Implementing a routine monitoring framework that builds on PHCPI tools used in this assessment and continuing to identify data availability will enable Gujarat to make more effective use of its health information. Furthermore, establishing a CPHC monitoring framework will further consolidate vertical programs under a single framework and identify actions for improvement that will strengthen the entirety of the system rather than specific interventions or programs.

Costa Rica is an example of a country that has introduced a standardized national targets and indicators measuring access, continuity, effectiveness, efficiency, and user satisfaction to promote

⁴³ World Bank. "External Assessment of Quality of Care in the Health Sector in Colombia." 2019. Retrieved: <https://www.worldbank.org/en/topic/health/publication/external-assessment-of-quality-of-care-in-the-health-sector-in-colombia#:~:text=The%20assessment%20is%20based%20on,coming%20out%20of%20the%20report.>

quality improvement. The targets focus on key processes and outcomes, and providers are not penalized for not achieving them. Instead, each health area is assigned incremental targets over a five-year period. Areas that perform in the bottom 20 percent are required to create a remediation plan to improve their performance.⁴⁴

RECOMMENDATION 2: STREAMLINE INFORMATION SYSTEMS TO ENHANCE CARE COORDINATION AND INTEGRATION, THEREBY STRENGTHENING THE SYSTEM'S CAPACITY FOR ONGOING MONITORING OF SERVICES, QUALITY, AND RESOURCE ALLOCATION.

Information systems are used to collect, process, store, and transfer data and information for planning, managing, and delivering high-quality health services. Gujarat' extensive number of information systems present a challenge effectively track inputs and monitor services. Specifically, strengthening the information systems to track essential inputs including drugs, tests, diagnostics, and equipment has the potential to be deliver reliable and timely information. It is also essential to address the lack of interoperability among the 40 information systems and to establish links between public and private sectors. Developing longitudinal patient records could also greatly improve the coordination and quality of care. There is an opportunity to track and monitoring primary health care expenditure using the Systems of National Health Accounts, which would provide critical insights on the prioritization and allocation of primary health care expenditures.

- 1. Consolidate programmatic information systems and develop interoperable health monitoring information systems between**

⁴⁴ PHCPI Improvement Strategies. "Costa Rica." Retrieved: <https://www.improvingphc.org/costa-rica-management-services-0>

public and private sectors to enhance data management and coordination. The use of over 40 health information systems in Gujarat results in inefficient data management and coordination between facilities, both in the public and private sectors. Consolidating health information systems and portals has the potential to greatly reduce fragmentation and improve coordination between the 12 service delivery packages. Gujarat would benefit from consolidating programmatic and service monitoring under one portal. This would enable better monitoring and measurement at all levels, including monitoring of performance at the facility and provider level rather than of specific diseases or programs. Furthermore, consolidating health information systems could improve communication and coordination among public and private facilities by making service and patient data easier to aggregate and share. It is critical that the state is properly supported as it continues to adopt the AB-Digital Mission. The AB-Digital Mission includes a unique health identifier that allows all citizens to access and share their health records digitally. The AB-Digital Mission extends to both public and private health facilities at the PHC level and beyond, including hospitals, clinics, diagnostic laboratories and imaging centers, and pharmacies. It is especially important that the state enables and incentivizes patients, providers, and health facilities to adopt the AB-Digital Mission infrastructure to enhance coordination and ultimately lead to higher levels of coverage and quality of care.

- 2. Develop longitudinal, comprehensive patient care records for better continuity of care and patient management.** While there are several information systems for tracking services and programs, the absence of patient care records hinders the effective management of patients within the CPHC system. Establishing longitudinal patient care would build on the unique patient IDs established through the AB-DM. Specifically, longitudinal patient care records would link unique patient identifiers across multiple information systems and

portals, providing patients with a longitudinal and holistic view of the patient's health and care needs. Longitudinal patient care records would consolidate health data from multiple information from both public and private facilities offering a comprehensive record of a patient's medical history.⁴⁵ In Gujarat, the process would involve harmonizing patient data from vertical programs, state programs, and the private sector to create an individual health record accessible across all facility types. Beyond enabling more person-centered care, harmonized patient records could improve the state's understanding of the population's health status and the quality of care being delivered.⁴⁶

As an example, Ireland has taken steps to modernize its health information systems in response to similar challenges facing Gujarat, including a rising burden of NCDs and limited digital infrastructure. In 2013, Ireland launched a national eHealth Strategy, which includes the development of National Individual Health Identifier that linked patient data across the care continuum to ensure the coordination of patient information.⁴⁷

- 3. Establish a mechanism aligned with global best practices to standardize and track primary health care expenditures.** Gujarat currently measure general health expenditure measures, however recent figures on total health expenditure and allocation towards primary health care are unavailable. To produce figures on primary health care spending, Gujarat would need to establish clear definitions for capturing primary health care related inputs and

⁴⁵ Broyles, D., Crichton, R., Jolliffe, B., Sæbø, J. I., and Dixon, B. E. 2023. Shared longitudinal health records for clinical and population health. In *Health Information Exchange* (pp. 257-273). Academic Press.

⁴⁶ Ibid.

⁴⁷ PHCPI Deep Dive. "Information Systems." Retrieved: <https://www.improvingphc.org/sites/default/files/Information%20Systems%20-%20v1.0%20-%20last%20updated%203.13.2020.pdf>

spending compared to the rest of the health system. Upon doing so, Gujarat could use health expenditure data to produce metrics on primary health care financing using the National Health Account data to produce metrics that align with those in the Global Health Expenditure Database (GHED). Gujarat would benefit from adopting the GHED methodology using the Systems of Health Accounts 2011, which is used to globally to generate routine and reliable metrics on primary health care. The GHED methodology involves categorizing expenditure data into health care functions (goods and services) and/or providers.⁴⁸ The ability to generate routine, reliable indicators on primary health care expenditure would provide critical insights into the state's prioritization and commitment to primary health care.

RECOMMENDATION 3: ENHANCE FACILITY ORGANIZATION AND MANAGEMENT CAPACITIES TO FOSTER A COLLABORATIVE, TEAM-BASED APPROACH TO CPHC SERVICE DELIVERY.

Enhance facility organization and management by optimizing operational procedures, fostering interdisciplinary teamwork, utilizing data-driven information systems for performance and progress monitoring, and bolstering managerial capabilities. Gujarat can further strengthen facility organization and management by aligning with CPHC operational guidelines to facilitate team-based care adoption, enhancing managerial skills through training, and providing ongoing education and support to healthcare providers for continuous improvement of their competencies.

⁴⁸ Schneider, M. T., Chang, A. Y., Crosby, S. W., Gloyd, S., Harle, A. C., Lim, S., ... and Dieleman, J. L. 2021. Trends and outcomes in primary health care expenditures in low-income and middle-income countries, 2000–2017. *BMJ global health*, 6(8), e005798.

- 1. Establish accountability mechanisms through a team-based care approach and encouraging shared coordination and collaboration among primary health care teams.** The CPHC operational guidelines establish clear roles and responsibilities of providers in the service delivery process. However, the progression model exercise found that facilities often lack a team-based approach when delivering services to patients. Providers within a facility lack a shared identity and well-defined roles and responsibilities, which limits the provision of high-quality, efficient, service delivery. Primary health care facilities that adopt and foster the team-based care approach specified in CPHC operational guidelines have the potential to improve coordination, collaboration, and communication among team members and enhance the delivery of comprehensive and coordinated care. Such a process would include support to medical officers at HWCs and community health officers at the SCs to define roles, responsibilities, and accountability for health care workers and staff. Establishing defined roles for providers at primary health care facilities would support the institutionalization of shared care teams and processes and develop internal metrics for monitoring their success. Additional support could include leadership training and capacity building to continuously assess the team structure and skills. This process could be complemented with patient feedback to further adopt provider roles and skills to meet local population health needs.

For example, Costa Rica has established the Equipo Básico de Atención Integral de Salud (EBAIS teams) which include a doctor, nurse, CHW, vital registry clerk and pharmacist. Each member has clear roles and responsibilities, resulting in comprehensive, curative and preventative care, along with education and surveillance activities. Furthermore, EBAIS teams manage a panel of patients, for which they are responsible for care coordination and referrals to higher levels of care. Data is collection from the patient panels and continuously

evaluated to ensure that the EBAIS team is meeting the needs of the population they serve.⁴⁹

- 2. Invest in managerial skills and capacity in primary health care facilities.** Results show that managers at primary health care facilities rarely have formal training and may lack the required skills to effectively oversee operations and quality improvement activities. Primary health care facilities would benefit from developing pre-service and ongoing training and capacity-building programs for primary health care managers, with a focus on skills such as leadership, strategic planning, resource management, and quality improvement. These programs could include formal education, such as providing financial support for management certificates and degree. It could also include developing short courses and management training programs.

Ethiopia provides an example of implementing facility management reform. The government partnered with administrators from the United States to complete short courses on facility management within the Master of Public Health program. Participants who completed the course demonstrated to have improved key indicators within their facilities, leading to greater efficiency and more effective service delivery.⁵⁰

- 3. Provide continuous training, supervision, and mentoring to enhance the competencies of the primary health care workforce to ensure consistent, evidence based, and context specific primary health care services are delivered.** The primary health care workforce in Gujarat would benefit from additional training, supervision, and mentoring to deliver high-quality, evidence-based, and context-specific services. Building on the continuous trainings provided through CPHC, there

49 PHCPI Improvement Strategies. "Costa Rica." Retrieved: <https://www.improvingphc.org/costa-rica-service-quality>

50 PHCPI Improvement Strategies. "Ethiopia." Retrieved: <https://www.improvingphc.org/ethiopia-management-services-o>

is a need to establishing robust training programs for primary health care providers, including doctors, nurses, ASHAs, and other health workers, to enhance their clinical knowledge, skills, and competencies. It is also important to implement regular supervision and mentoring mechanisms to support ongoing learning, performance improvement, and adherence to clinical guidelines and protocols. Furthermore, training programs and competencies would be most effective if co-developed at the block and district levels to ensure that services align with the population's health and social needs.

In Rwanda, supportive supervision was used to improve the quality of primary care services. Specifically, supportive supervision introduced nurse mentors into health facilities to provide mentorship, coaching and support. Intensive supervision was provided directly in health facilities, with clinical supervisors also responsible for improving the use of data for performance monitoring. The mentorship component of the program helped to promote a culture of trust and learning over punitive action. The program resulted in significant improvements to disease assessment, classification, and treatment after one year.⁵¹

RECOMMENDATION 4: ENHANCE PATIENT AND COMMUNITY ENGAGEMENT TO IMPROVE PERCEPTIONS, STIMULATE DEMAND FOR PRIMARY HEALTH CARE, AND ELEVATE PATIENT SATISFACTION.

Community engagement is a central component of effective population health management, ensuring services are aligned with community health needs. Establishing strong stakeholder and community engagement

⁵¹ PHCPI Improvement Strategies. "Rwanda." Retrieved: <https://www.improvingphc.org/rwanda-management-services>

in the policy and service delivery process requires a strong organization structure, efficient information systems, and adequate human resources. Additionally, involving communities and stakeholders in shaping perceptions of public primary health care can greatly enhance the primary health care system. Leveraging opportunities such as harnessing the CHW workforce and adopting grassroots approaches to policy formulation can effectively stimulate demand for public primary health care services.

- 1. Develop an addition cadre of CHWs to change perceptions of public primary health care by strategically engaging vulnerable populations and enhancing access.**
2. As the focal point of the health systems within communities, ASHAs often have unique access to patients through outreach services and longstanding relationships. However, there are several challenges in access to care as well as negative perceptions of public primary health care facilities. , ASHAs roles are currently permitted to administer the CBAC survey, which potentially identifies patients for screening. However, their limited role in pre-screening creates a gap in the care continuum. However, ASHA's workloads are currently extremely high. Given these challenges, Gujarat would benefit from expanding the cadre of CHWs to further increase efficiency and reduce barriers to care. For example, developing an additional cadre of CHWs whom focus on empanelment and care continuity for chronic conditions. The development of a specialized cadre has the potential to compliment and support ASHA's in the administration of the CBAC survey, while also taking on additional responsibilities such as identifying patients for screening, conducting follow, and referrals. In addition, these specialized CHWs could conduct basic screening in highly relevant areas – including NCDs, nutrition, and infectious diseases – leading to more efficient and continuous service delivery.

Iran offers a compelling example of adapting its CHW workforce to address complex challenges. Within urban areas, CHWs collaborate

with counterparts from diverse fields such as mental health, nutrition, environmental health, occupational health, and midwifery. This collaborative approach fosters a team-based, integrated delivery of primary health care services. By coupling CHWs with experts from various disciplines, the system guarantees that community members benefit from holistic and continuous health care services.⁵²

3. Promote a grassroots approach to setting priorities by formally instituting process that integrate local needs into the policy process.

While priority setting exercises and community level groups exist, it is unclear how these translate into policy and decision making. There is the need to develop formal mechanism for local community participation in setting priorities. In addition, facilitating and translating the information gathered from community participation and priority setting exercises at all levels needs to be formalized to ensure that local needs, priorities, and perspectives are integrated into primary health care policies and programs to enhance their relevance and effectiveness. Gujarat would specifically benefit from ensuring that there are formal and routine mechanisms for integrating stakeholder information into service delivery planning. This would also include adapting the CPHC operational guidelines to the Gujarat context at the state level, as well as at the block and district levels. As disease burdens and populations health needs vary across the state, it is critical that districts and blocks can adjust services to meet the demands and needs of the populations they serve.

Peru provides an example of embedding communities' perspective into policy making and decision process. This includes the establishment of local committees for health administration (CLAS), which consist of a physician, three community members selected by the physician, and three members of the community selected by the community.

⁵² PHCPI Improvement Strategies. "Iran." Retrieved: <https://www.improvingphc.org/iran-primary-care-functions>

These groups assist in local needs assessments, operational decisions, and financial management. They are also involved in developing key definitions in national health strategies and in local development plans. Outcomes associated with introduction of CLAS include improve patient satisfaction and greater access to services amongst poor populations.^{53,54}

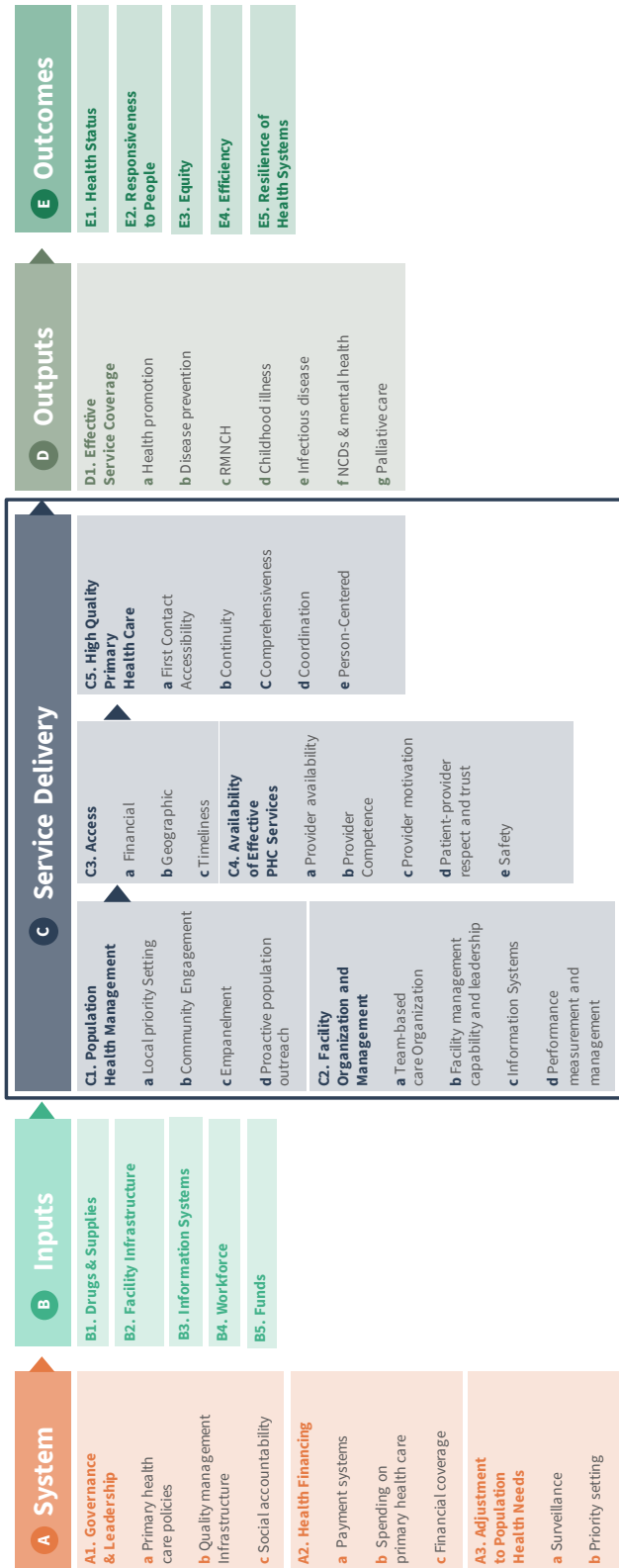
53 PHCPI Improvement Strategies. “Kenya, Peru, Uganda, and Zimbabwe.” Retrieved: <https://www.improvingphc.org/kenya-peru-uganda-zimbabwe-management-services>

54 Iwami, M., and Petchey, R. 2002. A CLAS act? Community-based organizations, health service decentralization and primary care development in Peru. *Journal of Public Health*, 24(4), 246-251.



ANNEX

ANNEX A. PHCPI CONCEPTUAL FRAMEWORK



Social Determinants & Context (Political, Social, Demographic, Socioeconomic)

ANNEX B. PERFORMANCE DOMAIN

| Gujarat | SCORE | PERCENTAGE | SOURCE | YEAR |
|---|-------------------------------|------------|--|---------|
| DRAFT PENDING REVIEW | | | | |
| ACCESS | 65 | | | |
| Financial | | | | |
| Perceived barriers due to treatment costs* | | 15% | DHS STATcompiler | |
| Health insurance coverage‡ | 37% | | NFHS-5 | 2019-21 |
| Geographic | | | | |
| Perceived barriers due to distance* | | 27% | DHS STATcompiler | 2022 |
| QUALITY | 68 | | | |
| Comprehensiveness | | | | |
| Avg. availability of 5 tracer RMNCH services** | See data note on data quality | | | |
| Avg. availability of 2 tracer communicable diseases services** | See data note on data quality | | | |
| Availability of 3 tracer NCD services** | See data note on data quality | | | |
| Continuity | | | | |
| Routine Vaccination Drop out rate (%) † | | 6% | NFHS-5 | 2019-21 |
| Treatment success rate for new TB cases | 82% | | NIKSHAY | 2020 |
| Person-Centeredness | | | | |
| Person-Centeredness Index§ † | No data available | | | |
| Provider availability | | | | |
| Proportion of shortfall of health care providers† | 21% | | NITI Aayog: State Report | 2019-20 |
| Provider Competence | | | | |
| NFHS Quality Score for ANC Part 1 - Actions Taken‡ | 97% | | NFHS-5 | 2019-21 |
| NFHS Quality Score for ANC Part 2 - Complications described‡ | 74% | | NFHS-5 | 2019-21 |
| NFHS Quality Score for FP‡ | 60% | | NFHS-5 | 2019-21 |
| Sick child quality score based on IMCI guidelines§ | No data available | | | |
| Safety | | | | |
| Proportion of public health facilities with accreditation certificates by a standard quality assurance programme (NQAS) | | 3% | NITI Aayog: State Report | 2019-21 |
| Proportion of Public Health facilities with Kayakalp score >70% against total number of Public Health facilities‡ | 55% | | NITI Aayog: MoHFW data (pre-entered) | 2019-20 |
| Infection Control Index§ † | No data available | | | |
| Waste Control§ † | No data available | | | |
| SERVICE COVERAGE | 68 | | | |
| Reproductive, Maternal, Newborn, Child, and Adolescent Health | | | | |
| Demand for family planning satisfied with modern methods (%) | 71% | | NFHS-5 | 2019-21 |
| Antenatal care coverage - at least four visits (%) | 77% | | NFHS-5 | 2019-21 |
| Children aged < 5 years with pneumonia symptoms taken to a health care provider (%) | 62% | | NFHS-5 | 2019-21 |
| Percentage of children age 12-23 months who did not receive any vaccines† | | 4% | NFHS-5 | 2019-21 |
| Coverage of DTP3/Penta immunization‡ | 86% | | NFHS-5 | 2019-21 |
| Infectious diseases | | | | |
| Children aged < 5 years with diarrhea receiving oral rehydration salts | 67% | | NFHS-5 | 2019-21 |
| People living with HIV receiving Anti-Retroviral Treatment (ART) | 72% | | GSACS | 2021-22 |
| Tuberculosis cases detected and treated (%) | 64% | | NIKSHAY Portal, State Reporting | 2021 |
| Indoor Residual Spray (IRS) household coverage, second round‡ | 91% | | National Center for Vector Borne Diseases Control, Gujarat | 2022 |
| Non-Communicable Diseases (NCDs) | | | | |
| Prevalence of raised blood pressure (age 15-49) (%)* | | 12% | NFHS-5 | 2019-21 |
| Percentage of individuals over 30 years assessed for hypertension and diabetes using CBAC tool over the past 12 months‡ | 43% | | CPHC NCD Portal- Routine program monitoring data | 2021-22 |
| Nutrition | | | | |
| Adolescent girls and boys screened for anemia age 10-19§† | No data available | | | |
| Adolescent girls and boys diagnosed with anemia receiving treatment age 10-19§† | No data available | | | |
| Percentage of children born who started breastfeeding within 1 hour of birth among children born in the past 2 years‡ | 38% | | NFHS-5 | 2019-21 |
| Percentage of children under age 6 months exclusively breastfed‡ | 65% | | NFHS-5 | 2019-21 |
| Percentage of children age 6-9 months breastfed and receiving complementary food‡ | 47% | | NFHS-5 | 2019-21 |
| Percentage of all children 6-23 months fed the minimum dietary diversity | | 16% | NFHS-5 | 2019-21 |
| Percentage of children age 9-35 months given vitamin A supplementation in last 6 months‡ | 86% | | NFHS-5 | 2019-21 |
| Percentage of target of children 0-5 years screened for Severe Acute Malnutrition (SAM)‡ | 72% | | Gujarat Routine Monitoring System | 2022-23 |

*Indicators where lower values are preferable were transformed before inclusion in the index. The modified indicator was defined as 100-X, where X is the original percentage shown in this table. †Country-specific (proxy) indicator, used in absence of globally comparable survey data or based on State measurement priorities. ‡Indicators where data is not yet available, but the State has identified as an aspirational indicator for future collection with no specified year. Note: Summary scores for the domains of Access, Quality, and Coverage are calculated by taking the average of indicator values within each subdomain, and then taking the average across subdomain scores. † Note on NQAS data: NQAS data has been omitted from VSP score calculations due to limited availability across PHCs and SCs (20 PHCs and 126 SCs). **Note on HMIS data quality: HMIS data has been omitted from VSP score calculations due to variations in indicator quality/monitoring and potential comparability issues over time.

ANNEX C. CAPACITY DOMAIN

phcpi

CAPACITY DOMAIN: DETAILED VITAL SIGNS PROFILE INDICATORS

| Gujarat | | SCORE |
|---|--|-------|
| DRAFT PENDING REVIEW | | |
| GOVERNANCE | | 2.2 |
| Governance and Leadership | | 2.0 |
| Measure 1: Primary health care policies (1/2) | | |
| Measure 2: Primary health care policies (2/2) | | |
| Measure 3: Quality management infrastructure | | |
| Measure 4: Social accountability (1/2) | | |
| Measure 5: Social accountability (2/2) | | |
| Adjustment to Population Health Needs | | 2.3 |
| Measure 6: Surveillance | | |
| Measure 7: Priority setting | | |
| Measure 8: Innovation and learning | | |
| INPUTS | | 2.9 |
| Drugs and Supplies | | 1.7 |
| Measure 9: Availability of essential medicines and consumable commodities | | |
| Measure 10: Basic equipment availability | | |
| Measure 11: Diagnostic supplies | | |
| Facility Infrastructure | | 3 |
| Measure 12: Facility distribution | | |
| Measure 13: Facility amenities | | |
| Measure 14: Standard safety precautions and equipment | | |
| Information Systems | | 2.7 |
| Measure 15: Civil Registration and Vital Statistics | | |
| Measure 16: Health Management Information Systems | | |
| Measure 17: Personal care records | | |
| Workforce | | 3.7 |
| Measure 18: Workforce density and distribution | | |
| Measure 19: Quality assurance of primary health care workforce | | |
| Measure 20: Primary health care workforce competencies | | |
| Measure 21: Community health workers | | |
| Funds | | 3.3 |
| Measure 22: Facility budgets | | |
| Measure 23: Financial Management Information System | | |
| Measure 24: Salary payment | | |
| POPULATION HEALTH AND FACILITY MANAGEMENT | | 1.8 |
| Population Health Management | | 2 |
| Measure 25: Local priority setting | | |
| Measure 26: Community engagement | | |
| Measure 27: Empanelment | | |
| Measure 28: Proactive population outreach | | |
| Facility Organization and Management | | 1.5 |
| Measure 29: Team-based care organization | | |
| Measure 30: Facility management capability and leadership | | |
| Measure 31: Information system use | | |
| Measure 32: Performance measurement and management (1/2) | | |
| Measure 33: Performance measurement and management (2/2) | | |

ANNEX D. RECOMMENDATIONS IMPACT, FEASIBILITY, AND TIMELINES

| Recommendation | Resources required, from low (+) to high (+++) | Difficulty of execution, from low (+) to high (+++) | Potential impact, from low (+) to high (+++) | Time horizon from impact, (short, medium or long) | Main PHC dimensions affected |
|--|--|---|--|---|------------------------------|
| Enhance the quality management infrastructure to foster greater system integration and enhance the effectiveness of CPHC services | | | | | |
| 1.1 Support the implementation of the State Quality Plan by ensuring activities are implemented across primary health care facilities | ++ | + | +++ | Medium | Quality |
| 1.2 Consolidate and harmonize vertical programs operations through CPHC | + | +++ | +++ | Long | Quality Capacity |
| 1.3 Develop a mechanism for routine monitoring and evaluation of primary health care services and quality through the NQAS and Mera Aspaatal | + | + | ++ | Short | Performance Capacity |
| 1.4 Support the development of a CPHC monitoring framework at the state, district, and block levels. | + | + | ++ | Short | Performance Capacity |
| Streamline information systems to enhance care coordination and integration, strengthening the system's capacity for the ongoing monitoring of services, quality, and resource allocation | | | | | |
| 2.1. Consolidate programmatic information systems and develop interoperable health monitoring information systems between public and private sectors to enhance data management and coordination | +++ | +++ | +++ | Long | Capacity Performance |
| 2.2. Develop longitudinal, comprehensive patient care records for better continuity of care and patient management | +++ | +++ | +++ | Long | Capacity Performance |
| 2.3. Establish mechanism to standardize and track primary health care expenditures in alignment with global standards | + | +++ | +++ | Medium | Financing Capacity |

| Recommendation | Resources required, from low (+) to high (+++) | Difficulty of execution, from low (+) to high (+++) | Potential impact, from low (+) to high (+++) | Time horizon from impact, (short, medium or long) | Main PHC dimensions affected |
|--|--|---|--|---|------------------------------|
| Enhance facility organization and management capacities to foster a collaborative, team-based approach to CPHC service delivery | | | | | |
| 3.1 Establish accountability mechanism through a team-based care approach and encouraging shared coordination and collaboration among primary health care teams | ++ | + | ++ | Short | Performance Capacity |
| 3.2. Invest in the skills and capacities of managers at primary health care facilities | + | + | ++ | Medium | Capacity |
| 3.3 Provide continuous training, supervision, and mentoring to enhance the competencies of the primary health care workforce to ensure consistent, evidence based, and context specific primary health care services are delivered | + | + | ++ | Medium | Capacity |
| Enhance engagement to transform unfavorable perceptions, stimulate demand for primary health care, and elevate patient satisfaction. | | | | | |
| 4.1 Develop an additional cadre of CHWs to change perceptions of public primary health care by strategically engaging vulnerable populations and enhancing access | + | + | + | Short | Capacity |
| 4.2 Promote a grassroots approach to set priorities by formally instituting processes that integrate local needs into the policy process | ++ | + | ++ | Medium | Capacity |

ANNEX E. INVOLVEMENT OF STAKEHOLDERS IN THE IMPLEMENTATION OF RECOMMENDATIONS

| Recommendation | National Government | State level health authorities | Academia | Patients and citizens |
|--|---------------------|--------------------------------|----------|-----------------------|
| Enhance the quality management infrastructure to foster greater system integration and enhance the effectiveness of CPHC services | | | | |
| 1.1 Support the implementation of the State Quality Plan by ensuring activities are implemented across primary health care facilities | D | F, E, M, P | I | I |
| 1.2 Consolidate and harmonize vertical programs operations through CPHC | F, D | F, E, M, P | I | I |
| 1.3 Develop a mechanism for routine monitoring and evaluation of primary health care services and quality through the NQAS and Mera Aspaatal | F, D | F, E, M, P | I | I |
| 1.4 Support the development of a CPHC monitoring framework at the state, district, and block levels. | F, D | F, E, M, P | I, D | I |
| Streamline information systems to enhance care coordination and integration, strengthening the system's capacity for the ongoing monitoring of services, quality, and resource allocation | | | | |
| 2.1. Consolidate programmatic information systems and develop interoperable health monitoring information systems between public and private sectors to enhance data management and coordination | F, D | F, E, M, P | I | I |
| 2.2. Develop longitudinal, comprehensive patient care records for better continuity of care and patient management | F, E, D | F, E, M, P | I | I |
| 2.3. Establish mechanism to standardize and track primary health care expenditures in alignment with global standards | F, E, D | F, E, M, P | D, I | I |
| Enhance facility organization and management capacities to foster a collaborative, team-based approach to CPHC service delivery | | | | |
| 3.1 Establish accountability mechanism through a team-based care approach and encouraging shared coordination and collaboration among primary health care teams | F, E | E, M, P | P, I | I |
| 3.2. Invest in the skills and capacities of managers at primary health care facilities | | | | |
| 3.3 Provide continuous training, supervision, and mentoring to enhance the competencies of the primary health care workforce to ensure consistent, evidence based, and context specific primary health care services are delivered | F, E | E, M, P | P, I | I |

| Recommendation | National Government | State level health authorities | Academia | Patients and citizens |
|--|---------------------|--------------------------------|----------|-----------------------|
| Enhance engagement to transform unfavorable perceptions, stimulate demand for primary health care, and elevate patient satisfaction. | | | | |
| 4.1 Develop an addition cadre of CHWs to change perceptions of public primary health care by strategically engaging vulnerable populations and enhancing access. | F | E,M, P | I | P, I, E |
| 4.2 Promote a grassroots approach to setting priorities by formally instituting process that integrate local needs into the policy process | I | F, E, M, P | P,I,E | P, I, E |

Note: F: Provide financing or financial incentives; E: establish strategic direction; M: manage the program; P: participate in the implementation of the program or support it; I: stay informed on the program activities; D: make informed or strategic decision.

ANNEX F. PROGRESSION MODEL PARTICIPANTS

PHCPI Steering Committee Members

- Dr. Ankita Shah, Consultant, SHSRC
- Dr. Mayur Sayta, Resident Doctor, Community Medicine Department, BJMC, Ahmedabad
- Mr. Ravi Shukla, Assistant Director (IT)
- Dr. Dinesh Barot, SPO, Urban Health
- Dr. Prakash Suthar, SPO, HWC.
- Dr. Yadeepsinh Jadeja, Medical Officer (Rural Health)

Validation workshop participants, May 8-9, 2023

- Dr Minjan Patel, Consultant, World Bank
- Cameron Feil, Consultant, World Bank
- Natalia Rovelo, Consultant, World Bank
- Manuela Villar Uribe, Senior Health Specialist, World Bank
- Dr Kiran Narkhede, Consultant, Consultant, World Bank
- Dr Navneet Manchanda, Economist, World Bank
- Mr Kumar Gaurav, Consultant, World Bank
- Dr Shalu Chaudhary, IVA-IIPH Gandhinagar
- Dr Ankita Shah, Consultant, SHSRC
- Dr Mihir A. Siddhpura, Taluka Health Officer
- Dr Rakesh Kumar Sinha, Taluka Health Officer
- Dr Malak Mehtra, State Maternal, Adolescent, and Nutrition Consultant, ICDS.

- Dr Shrey Desai, Director Research, SEWA Rural NGO
- Dr Nirav Joshi, Tutor, Community Medicines
- Dr Rahul Parmar, AP, PSM, Medical College
- Dr Hinal Baria, AP, PSM Medical College
- Dr Amin A. Arora, District Quality Assurance Medical Officer, Kutch
- Dr R.R. Fulmali, Chief District Health Officer, Kutch
- Dr Aniket Rana, State SMO, WHO
- Dr Bharatbhai Mevada, District Quality Assurance Medical Officer, Chhota Udepur
- Dr J.M Katira, Deputy Director (Epidemic)
- Dr Yadeepsinh Jadeja, Medical Officer, Rural Health
- Dr Nitesh Shah, State Nodal Officer (NPCDCS & NPHCE)
- Dr Prakash Suthar, State Nodal Officer (HWC)
- Dr Chintan Patel, Medical Officer, Urban Health
- Dr C B Patel, SNO, Urban RCHO
- Dr Anil B. Patel, Chief District Health Officer, Surat
- Dr Kaushik Mehta, I/C QAMO, Surat
- Dr Shikha Jain, Associate Professor, Community Medicine Department
- Dr Saurabh Parmar, Consultant, TSU- SRESTHA Gujarat
- Dr Paresh Prajapati, Consultant, TSU- SRESTHA Gujarat
- Dr Ashutosh Parhi, Consultant, Quality Assurance
- Dr Beena Vadalia, Regional Deputy Director, Ahmedabad Region.
- Dr Dhara Jadeja, Technical Officer, SHSRC

Technical Working Group

- Dr. Ankita Shah, Consultant, SHSRC
- Manuela Villar Uribe, Senior Health Specialist, World Bank
- Dr Kiran Narkhede, Consultant, World Bank
- Dr Minjan Patel, Consultant, World Bank
- Natalia Rovelo, Consultant, World Bank

ANNEX G. PROGRESSION MODEL DOCUMENTS REVIEWED

- Operational Guidelines for Comprehensive Primary Care through Health and Wellness Centers. Retrieved: https://www.nhm.gov.in/New_Updates_2018/NHM_Components/Health_System_Strengthening/Comprehensive_primary_health_care/letter/Operational_Guidelines_For_CPHC.pdf
- Gujarat Project Implementation Plan. Documents provided by the state.
- Budget Breakdowns, 2017-2018. Excel documents provided by the state.
- Report on the Task Force of CPHC Rollout. Retrieved: <https://nhsrcindia.org/sites/default/files/2021-03/Report%20of%20Task%20Force%20on%20Comprehensive%20PHC%20Rollout.pdf>
- Action Plan - Health & Wellness Centre (H&WCs) FY 2022-23 & 2023-24. Internal document shared by key informants.
- Framework on implementation of National Health Mission. Retrieved: https://nhm.gov.in/New_Updates_2018/NHM/NHM_Framework_for_Implementation_08-01-2014_.pdf
- Ayushman Bharat Digital Mission (ABDM) Note & Gujarat progress. Retrieved: <https://dashboard.abdm.gov.in/abdm/>
- Gujarat's Interim Review of Noteworthy Actions in Response to COVID-19. An Intra-action Review. Retrieved: https://cdn.who.int/media/docs/default-source/searo/india/publications/girnar_covid-19-intra-action-review-of-gujarat.pdf?sfvrsn=7889cabo_4
- CPHC Portal Indicators provided by the state (Excel).
- Surat Municipal Corporation, Medicine Stock Portal and Maintenance. Retrieved: [//evinonline.in/](http://evinonline.in/)

- Lakhpati UPHC Stock Report. Provided by Lakhpati UPHC.
- Surat Municipal Corporation, Hospital Stock Ledger (Provided by Surat Municipal Corporation)
- E-Olakh Portal. Provided by Chotta Udenpur District.
- TeCHO Data Summary. Provided by state (Excel)
- Enclosure to ECRP-II ROP FY 21-22, Gujarat ECRP II
- JAS Tharay (Provided by Key Informant).
- e-Sanjeevi Web-based telemedicine solution (documents provided by key informants)
- Primary Health Centre Navi Pardi Citizens Charter
- Submission of Gujarat Revised National Health Mission Plan for FY 2021-22 (Internal document, February 2021). Provided by the state
- State presentations, including: AB-HWC, Adolescent Nutrition and Services, CPHC Portal, DoHFW, Drug Procurement Procedure, Environmental Safeguards, TeCHO Orientation, ISDP-IHIP Surveillance, Mental Health, Nutrition, RKSK, Social Safeguard, Social Safeguards Rural Health, Social Safeguards.
- National Polio Surveillance Project Survey
- GIRNAR report: GUJARAT'S INTERIM REVIEW OF NOTEWORTHY ACTIONS IN RESPONSE TO COVID-19. Retrieved: https://cdn.who.int/media/docs/default-source/searo/india/publications/girnar_covid-19-intra-action-review-of-gujarat.pdf?sfvrsn=7889cabo_4
- RNTCP - Revised National Tuberculosis Control Program.
- SNCU MIS - Special Newborn Care Units Management Information System (provided by the state)
- NHM Action Plan and Gap Assessments - All Cadres and System Levels

- Budgetary format of National Health Mission
- Wellness Activity Report
- Service Delivery Report
- EOLAKH Birth Registration
- EOLAKH Death Registration
- Annual Workload
- District PIP
- Example HMIS Analysis
- HMIS Data Portal Screenshot
- EOLAKH Data Entry Process
- EOLAKH Portal Screenshot
- Medicine Stock Portal and Maintenance
- Lakhpati UPHC Stock Report
- Lakhpati UPHC Stock Excel
- SMC Hospital Physical Stock Ledger
- Patient Rights (English) / Patient Rights (Gujarati)
- Patient Responsibilities (English)/ Patient responsibilities (Gujarati)
- List of services offered on HWC Site
- Diagnostic tests offered on site (all year) NATALIA in Gujarati
- Seasonal diagnostic tests including time and operating hours.
- Citizen's Charter



