



E-Aarogya Dhamni

A DISTRICT-LEVEL DIGITAL GOVERNANCE

MODEL FOR TRIBAL HEALTH

CONVERGENCE





NANDURBAR

**PRESENTED BY : Dr. MITTALI SETHI
DISTRICT COLLECTOR, NANDURBAR**



The Challenge

Why Nandurbar Needed Intervention?

-  **70% Tribal Population**
Remote, scattered hamlets making access to healthcare facilities difficult.
-  **High Health Burden**
Elevated rates of IMR, MMR, chronic malnutrition, and sickle cell anemia.
-  **Fragmented Systems**
Reliance on paper records, multiple MIS, and poor coordination between departments.
-  **Last-mile Gaps**
Language barriers, cultural disconnect, and severe follow-up failures.



“Traditional systems were failing to reach the last mile.”

50 hours per month per CHWs on registers /record keeping tasks

What is E-Aarogya Dhamni?

One Tribal Health Convergence Platform

A culturally rooted, digitally enabled system integrating health, nutrition and frontline governance.

Designed to address linguistic and geographical barriers by unifying disjointed systems into a single, cohesive workflow for all frontline workers.



📱 1. Digital Health Census

📱 2. Health App for Frontline

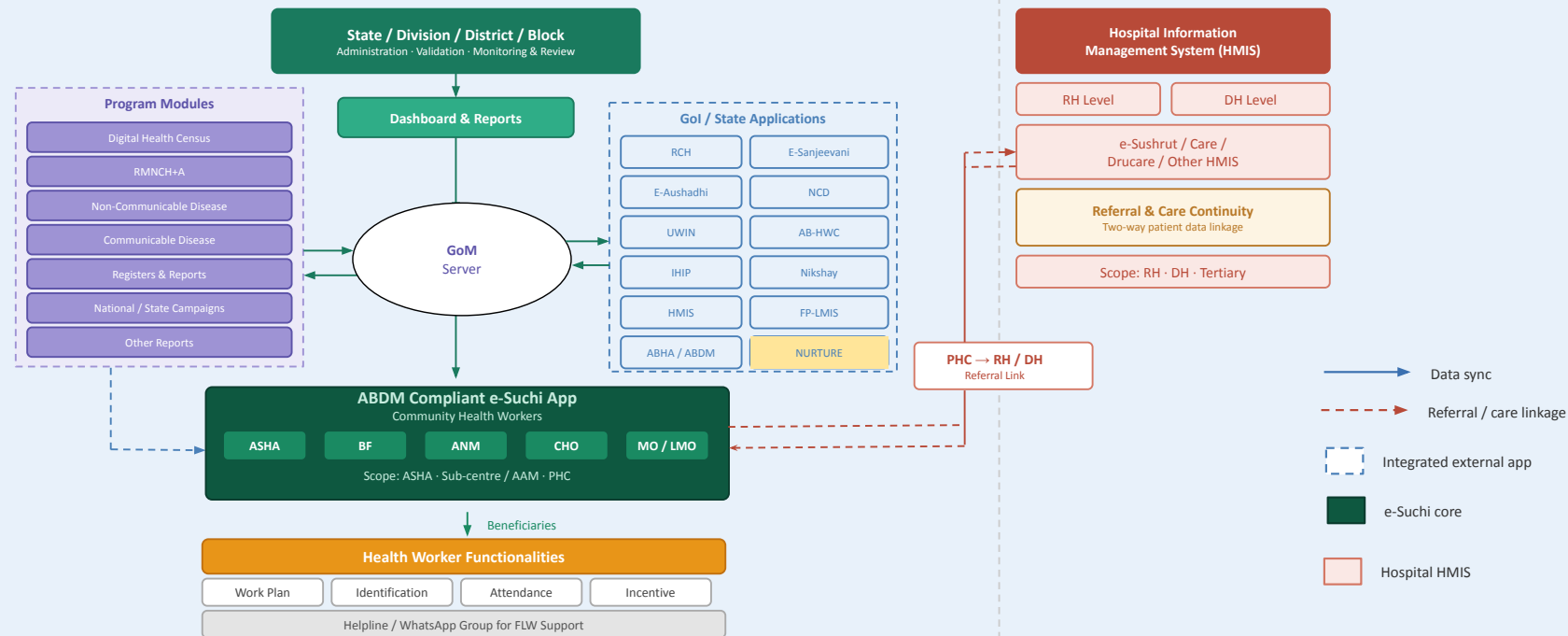
👤 3. Sickle Cell Mission

💧 4. Health Action Centre

📌 5. Integrated Follow-up

How the Model Works

A seamless flow from registration to monitoring



E-Suchi Digital Health Census

THE TECHNOLOGY-DRIVEN SURVEY

e-Suchi utilizes a mobile-based application for ASHAs to conduct systematic door-to-door surveys.

- ✓ Family line listing with unique ID identifiers.
- ✓ Capturing socio-demographics and health behaviors.
- ✓ Standardization as per Government Health protocols.

INTEGRATED HEALTH PROGRAMS

Health Program Category	Integration Status	Outcome Tracking
Maternal Health (ANC/PNC)	● Active	High-Risk Pregnancy Identification
Family Planning	● Active	Eligible Couple / Contraceptive Uptake
Non-Communicable & Communicable Diseases	● Pilot	HTN/Diabetes Screening & Monitoring
Infectious Disease (TB/Lep)	● Pilot	Treatment Compliance Monitoring

E-Suchi Digital Health Census



Redefining Data Collection & Management

🕒 Earlier Process

- ✗ Multiple, uncoordinated registers
- ✗ Duplicate records leading to confusion
- ✗ Delayed reporting and action

⚡ Now with E-Suchi

- ✓ One unified family registry
- ✓ Offline data capture for remote areas
- ✓ Real-time denominator for accurate tracking

SCALE ACHIEVED

15.2 Lakh+ (85%)

Persons Mapped





WORKFORCE

2,696

Health Staff Onboarded

Sickle Cell Elimination Mission

A Decentralized Approach to Care

-  **Screening**
Massive reach with an 11 Lakh+ target population.
-  **Capacity Building**
Comprehensive medical staff training (MOs, CHOs, ASHAs, ANMs).
-  **Testing**
69,378 DBS tests successfully conducted through eSuchi Digitally.
-  **Support Systems**
Hydroxyurea treatment, ID cards, disability and pension support, dedicated helpline and local language IEC youtube series.

3340

Patients Identified

2184

Patients taking hydroxyurea



Sickle Cell Elimination Mission

Technical Intervention in tracking Sickle Cell Anemia

Test Tracking

Patient Status

Treatment Monitoring

Family Digital Health Census

Sickle Cell Screening

Sickle Cell Anemia

Sickle Cell Anemia is a hereditary blood disorder in which red blood cells become sickle-shaped instead of round. Early detection through DBS (Dried Blood Spot) test can help in management and prevention.

Undergone Sickle Cell test within last 2 years?

Yes No Don't Know

Have you received the lab reports?

Yes No

Test Outcome

Sickle Cell Disease Sickle Cell Trait

No Sickle Cell Disease / Trait

Type of card received from health department

White Card

Card Not Available

Save

Sickle Cell Screening

Dried Blood Spot (DBS) sample collected?

Yes No

DBS Number

Scan the Barcode for DBS Number

DBS Number 89231578913

Re-scan

Sample Collection Date: 12/12/2024

Please ensure that above DBS Number belongs to "Payal Tanwar".

Save

9:30

Sickle Cell Screening

Sickle Cell Anemia

Sickle Cell Anemia is a hereditary blood disorder in which red blood cells become sickle-shaped instead of round. Early detection through DBS (Dried Blood Spot) test can help in management and prevention.

Undergone Sickle Cell test within last 2 years?

Yes No Don't Know

Please follow the instructions for collecting DBS Sample

- Make sure to have DBS Sample kit.
- Always ensure to wash hands and wear gloves before taking sample
- Make beneficiary sit in a comfortable and relaxed position
- Ensure proper drying of sample to prevent bacterial contamination.
- Avoid excessive squeezing of the finger, to avoid dilution of sample.

Next

Sickle Cell Screening

Dried Blood Spot (DBS) sample collected?

Yes No

Reason for not taking sample

Beneficiary denied

Beneficiary not present

Don't have DBS Kit

Didn't got training to collect sample

Motivate for DBS Screening

Motivate beneficiary for DBS screening, it is a quick and simple procedure, with a small drop of blood as early detection will help in timely management.

Save

Sickle Cell Screening 360 x 36

Sickle Cell Anemia

Sickle Cell Anemia is a hereditary blood disorder in which red blood cells become sickle-shaped instead of round. Early detection through DBS (Dried Blood Spot) test can help in management and prevention.

Undergone Sickle Cell test within last 2 years?

Yes No Don't Know

Have you received the lab reports?

Yes No

Test Outcome

Sickle Cell Disease Sickle Cell Trait

No Sickle Cell Disease / Trait

Type of card received from health department

Red Card

White Card

Card Not Available




Save

Health Action Centre

A Centralized Platform for Strengthening Last-Mile Health Delivery and Saving High-Risk Lives



HAC OPERATIONAL WORKFLOW

 Listing	 Counselling	 Facilitation	 Tracking	 Escalation
Line-listing from RCH Portal & Field Inputs	Structured Telephonic Follow-ups	Coordination with ASHAs for Mobility	Verification of Referral Completion	Reporting to Block/District Teams

TELEPHONIC CONVERSATION

Standardized Scripts: Evidence-based counseling on danger signs and nutrition.

Behavioral Change: Engaging families in decision-making for institutional care.




System Navigation: Helping families overcome documentation and transport barriers.

Multi-tier Follow-up: Persistent calling for initially non-compliant cases.





Health Action Centre

Centralized monitoring for decentralized care

The Baseline (Before)

-  Frequent missed follow-ups for high-risk patients.
-  Poor referral compliance due to distance and tracking loss.
-  Lack of visibility for district administration into ground realities.

The Solution (After)

-  District-level dedicated call centre.
-  Daily tracking of high-risk pregnancies and children.
-  Closed-loop referrals ensuring treatment completion.
-  24-hour escalation system for critical cases.

Integrated Monitoring Flow

RCH → SNCU → NRC

Measuring What Matters

Quantitative and qualitative improvements across the district

Key Area	Operational Improvement & Scale
Digital Health Coverage	Successfully transitioned to unified, real-time family mapping with 85% coverage
High-Risk Tracking	Proactive identification replaced reactive crisis management.
Staff Onboarding	2,696 personnel trained and actively utilizing the platform.
Sickle Cell Diagnostics	69,378 DBS tests conducted, targeted saturation by Republic Day 2027
Referral Compliance	Drastic improvement through closed-loop tracking and alerts.
Follow-up Efficiency	Enforced 24-hour escalation SLAs at the Health Action Centre.

Measuring What Matters



A high-risk pregnant woman Ms Mogi Bhill from Shelti village, Shahada block, identified with severe anemia and Sickle Cell positive in her 8th month of pregnancy, was initially non-compliant with referral advice, placing her at high risk of maternal complications.

Through persistent follow-up (four counselling calls) by the Collector office HAC team, the HRPW was successfully mobilized.

Referral compliance was ensured on 22/11/2025, and she received life-saving blood transfusion at Civil Hospital, Nandurbar.

This case highlights how proactive administration, strong system coordination, and sustained follow-up can effectively prevent maternal deaths and safeguard high-risk mothers in vulnerable settings.

Measuring What Matters

Example 1-HPV Vaccination: Denominator of 14-15 year girl wasn't existing in the system

What e-SUCHI Did

Age-wise line list data of girls aged 14-15 years was generated from e-Suchi and shared with the District Immunization Division.

This data was used for planning and execution of the HPV vaccination drive – enabling targeted mobilization at the village level.

1,099

Additional girls identified & mobilized who might otherwise have been missed

Example 2- Sickle Cell Screening: Denominator of 0-40 year wasn't existing in the system and who all tested versus not tested

What e-SUCHI Did

Line list data of aged 0-40 years was generated from e-Suchi and shared with the District and Taluka

This data was used for planning and execution of the Sickle Cell Testing Drive- to identify the tested versus not tested cases both

11,39,446

0-40 Year population line list for sickle cell testing

2,01,678

duplicate screening avoided





Partnerships & Replication

A Scalable Model Built for Expansion

Strategic Partners

-  IIT Bombay
-  AIIMS Nagpur
-  Khushi Baby
-  ARMAAN
-  CSIR - CCMB Hyderabad

Expanding To

-  Maternal & Child Health
-  Family Planning
-  Immunization
-  CD & NCD



Replicable for tribal and aspirational districts nationwide.



*When the system speaks the
mother's language, the mother
listens — and the child lives.*

"E-Aarogya Dhamni is not just a platform; it is a people-centred tribal health governance model.