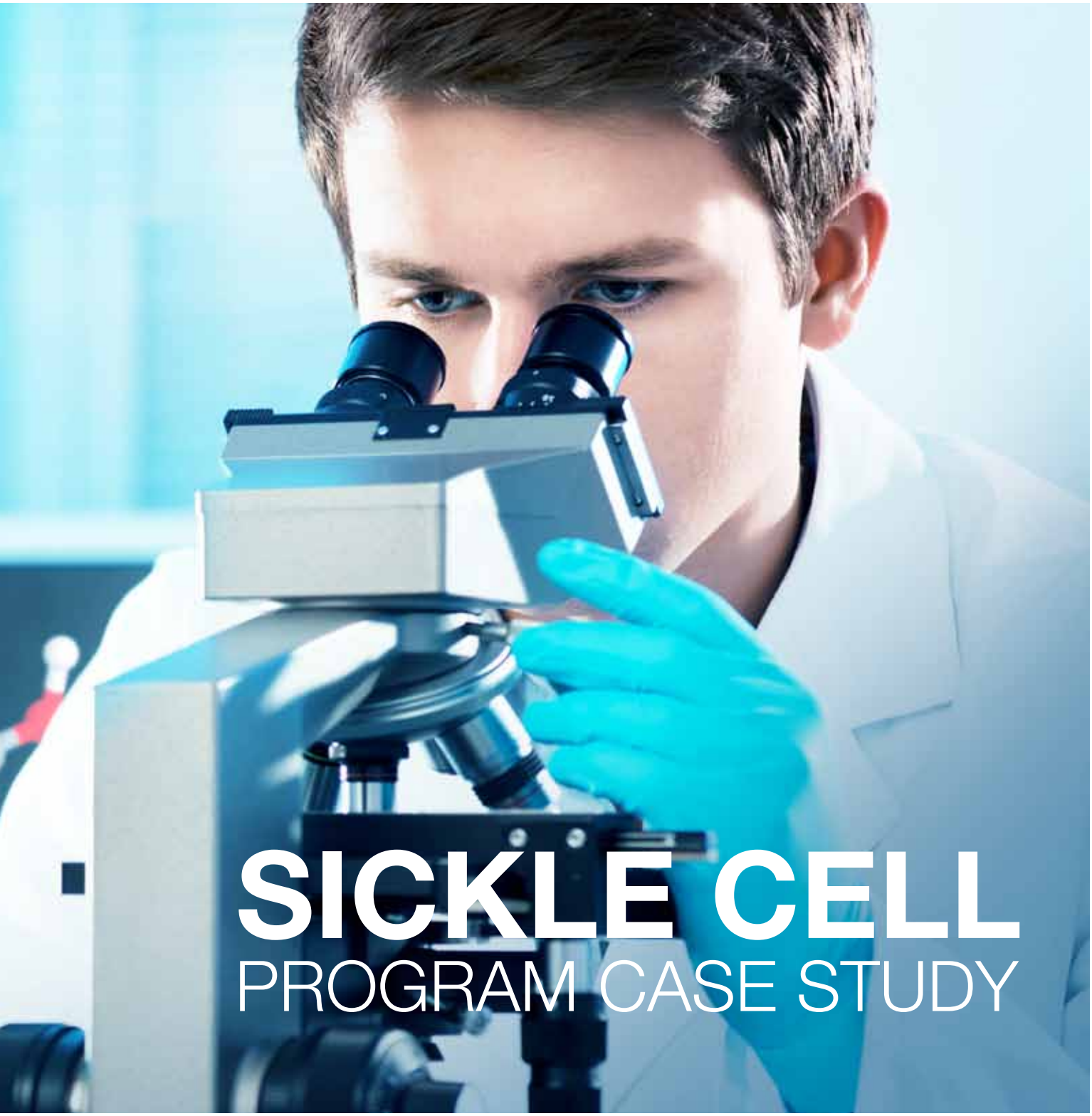

SICKLE CELL
PROGRAM CASE STUDY

HEALTHFORE
Transforming Healthcare

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Prestige Blue Chip,# 9, 4th Floor,
3rd Block, Hosur Road,
Near Dairy Circle, Bangalore - 560029

GYS Universal
Plot No. - A 3,4,5, Sec. 125
Noida, UP - 201301

P O Box 73030, ED 22,
Building 16, Dubai Internet City
Dubai, UAE

4th Floor, GYS Infinity, Paranjape Sche B,
Subhash Road, Vile Parle East,
Mumbai - 400057

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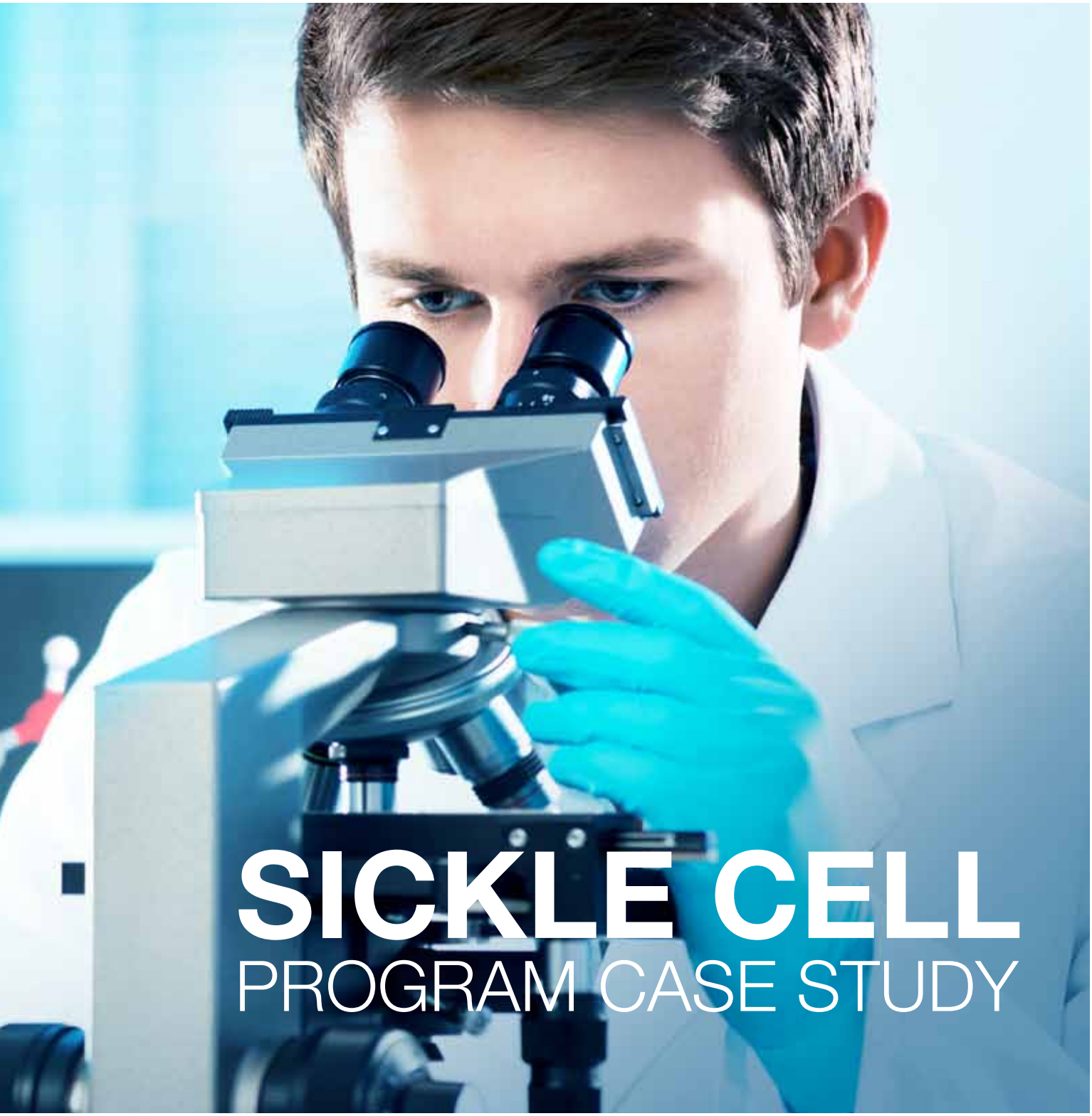

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NEXT
REVOLUTION
IN HEALTHCARE INFORMATION TECHNOLOGY

CONTENT

IT Makes

HEALTHCARE FUTURE-PROOF

HealthFore screens tribal communities for sickle cell anemia

The State Government of Gujarat partnered with HealthFore for disease surveillance. We screened the tribal population of two districts for sickle cell anemia. HealthFore used web-enabled technology to reduce the project cost by 80% and complete the project in half the estimated time. Our team issued color-coded identification cards with a unique number to each person screened for the disease.

A health disorder for generations

Tribal communities in Gujarat have a high incidence of sickle cell anemia, a genetic blood disorder. According to a survey conducted by the Indian Council of Medical Research (ICMR), 20% of children born with sickle hemoglobin (HbS) die before the age of two. Almost 30% of children with the disease die before adulthood. Adults suffering from the disease need medical attention. Early diagnosis and disease management can save lives. However, India does not have a concerted healthcare program to address sickle cell disorder.

Reaching out

The World Health Organization (WHO) recommends guidelines to manage sickle cell anemia. The Department of Health and Family Welfare of the Gujarat State Government initiated a sickle cell anemia control program based on WHO guidelines, the first of its kind in India. A Sickle Cell Anemia Control Society was instituted by the health ministry of the state government to implement the program. The State Government of Gujarat involved Non-Government Organizations (NGOs) to achieve program goals:

- Ensure disease-free childbirth by 2020
- Prevent deaths due to the disease
- Improve the quality of life of sickle cell anemia patients

The sickle cell screening outreach program was launched across five districts of Gujarat in 2006. However, out of the 89+ lakh tribals, less than 14 lakh residents were screened until March 2011. The challenges included:

- Dispersed tribal population
- Non-reliability of existing patient data
- Non-availability of skilled laboratory resources
- Lack of infrastructure for High Performance Liquid Chromatography (HPLC) testing
- Lack of awareness about the disease
- Resistance to undergo medical tests

ADDRESSING THE LEGACY

The Commissionerate of Health, Medical Services & Medical Education, Government of Gujarat, partnered with HealthFore to screen the tribal population of two districts - Narmada and Tapi. We prepared a micro-plan in which each district was divided into tallukas and each talluka into Primary Health Centres (PHCs). A pre-launch meeting was held at the talluka level to bring together stakeholders, including government officials such as the Chief District Health Officer (CDHO), District Epidemiology Medical Officer (EMO), Block Health Officer (BHO), and PHC-Medical Officer.

A professional team was deployed to execute the screening program. Our team included one lab technician, two paramedics and one data entry operator in each talluka. We recruited team members and trained them for field activities, clinical processes and quality control methods.

HealthFore sought the cooperation of Accredited Social Health Activist (ASHA) volunteers for the program. Our project coordinator informed ASHA workers of visits 48 hours in advance. An awareness drive about the disease and benefits of screening was undertaken. ASHA teams mobilized the tribal population in each village for testing.

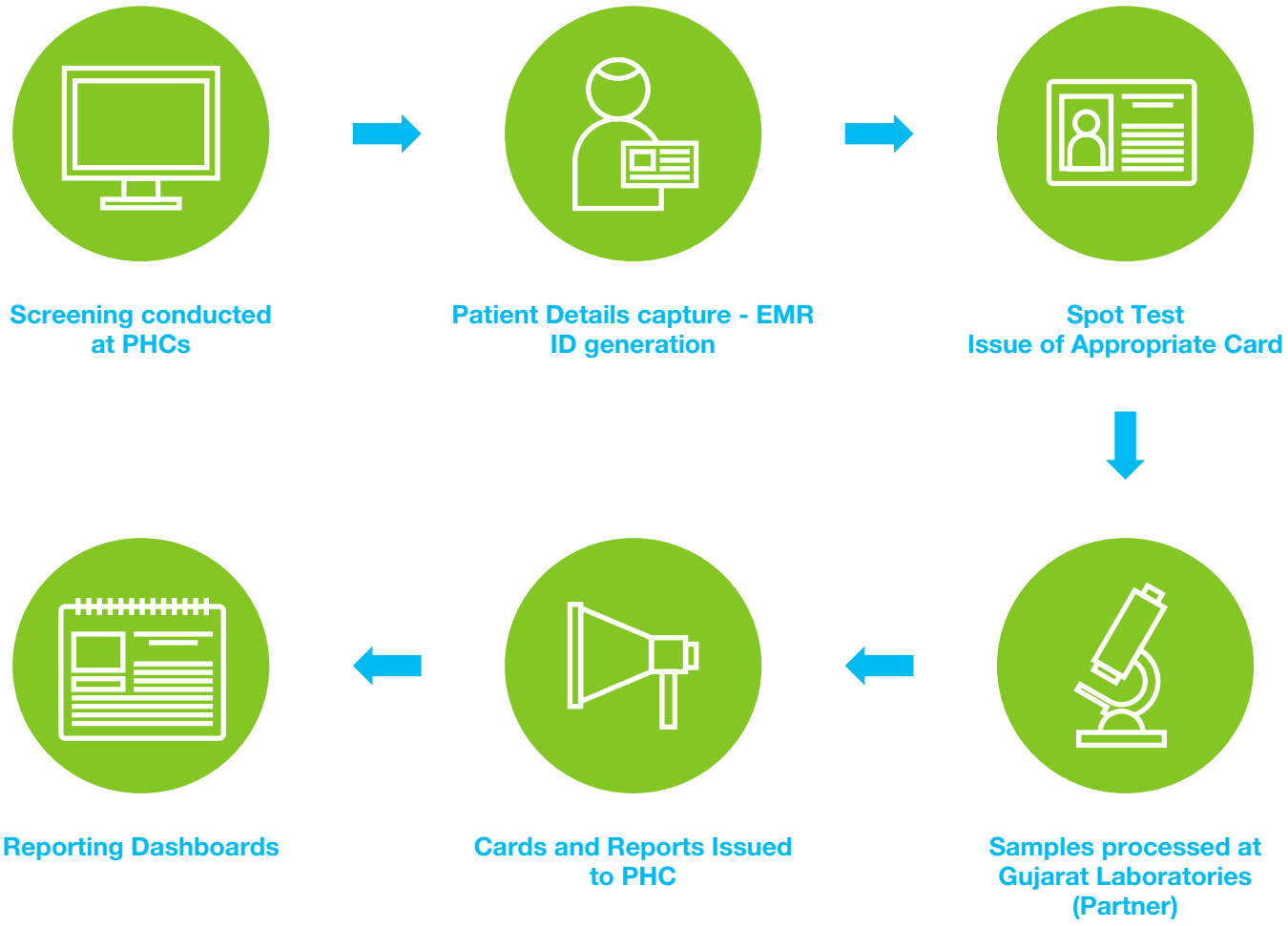
We conducted blood tests and issued laminated cards to persons who tested negative. An additional blood sample was collected from patients who tested positive. A temperature-controlled transport chain was maintained to send samples for HPLC testing at laboratories. The samples were tested to assess the disease and identify characteristic traits of the disease. Laminated yellow cards were issued to disease carriers, while laminated yellow-white cards were issued to patients with disease traits.

Incorporating IT INTO THE SOLUTION

HealthFore leveraged IT for executing the project. We used a web-based application to store data collected from the field and generate a unique identity number for each screening. Three layers of data validation ensured accuracy of patient records. Our comprehensive database enabled timely reporting to the government.

Our IT solution and program management methods -

- Decreased the cost of screening by 81%
- Reduced the project duration by 50%
- Optimized inventory management
- Enabled total coverage of the target population
- Ensured compliance with government guidelines
- Eliminated duplication of patient records
- Created a reliable database of patients



The HealthFore process flow

ABOUT HEALTHFORE

HealthFore provides end-to-end healthcare IT solutions and services. We partner with state governments in India to upgrade the public healthcare infrastructure, create awareness about healthcare schemes, and deliver reliable patient care to under-served communities.