



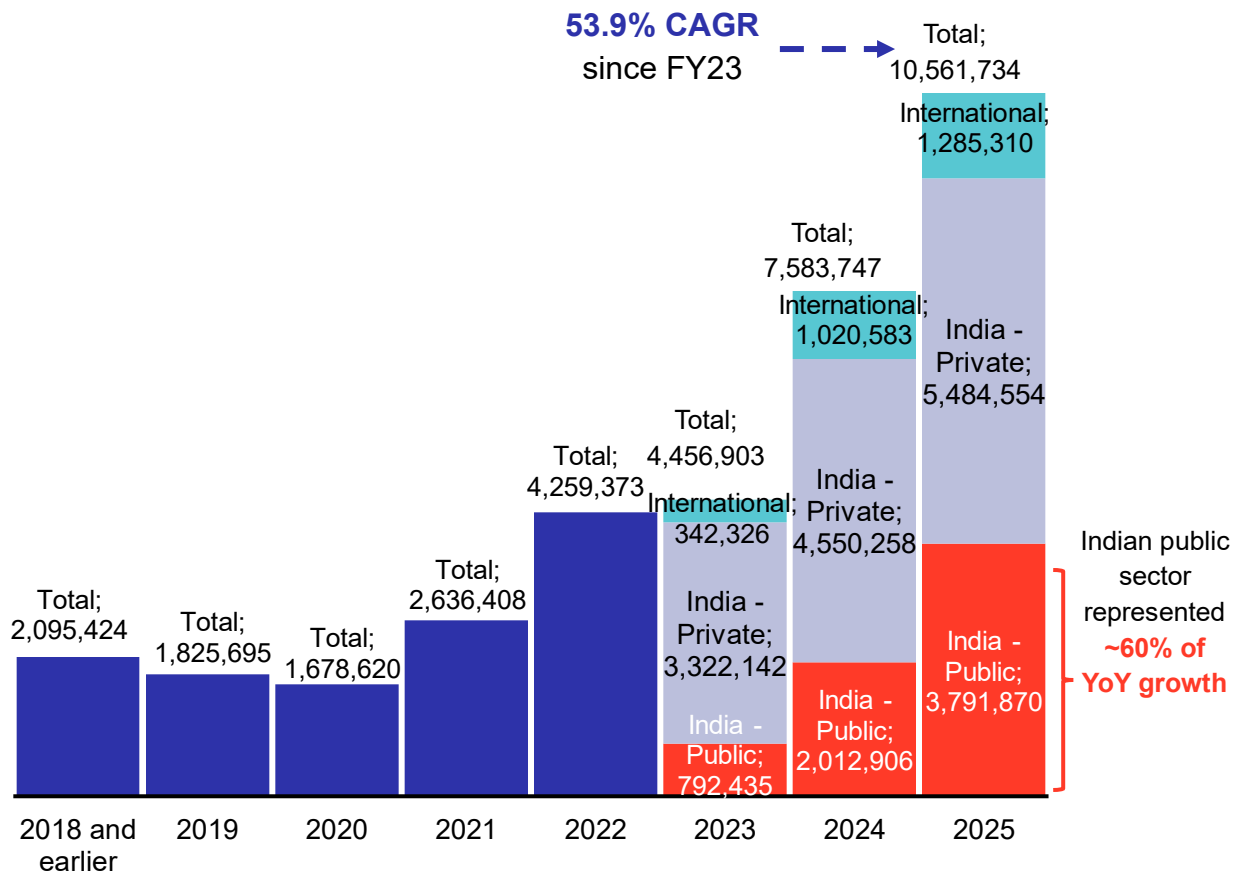
Developer of Rx-supervised point-of-care cardiovascular products, including its flagship InstaECG – a cloud connected device that makes AI-assisted ECG analysis and interpretation easy and returns a cardiac specialist-certified report within 10 minutes. Other offerings include InstaEcho, a service similar to InstaECG, but for echocardiography, and the most economical form of ECG available, VCardia, to help address the ECG needs of underserved populations and settings around the world.

[Visit the Tricog Health website](#)

I. FY 2025 Impact Metrics

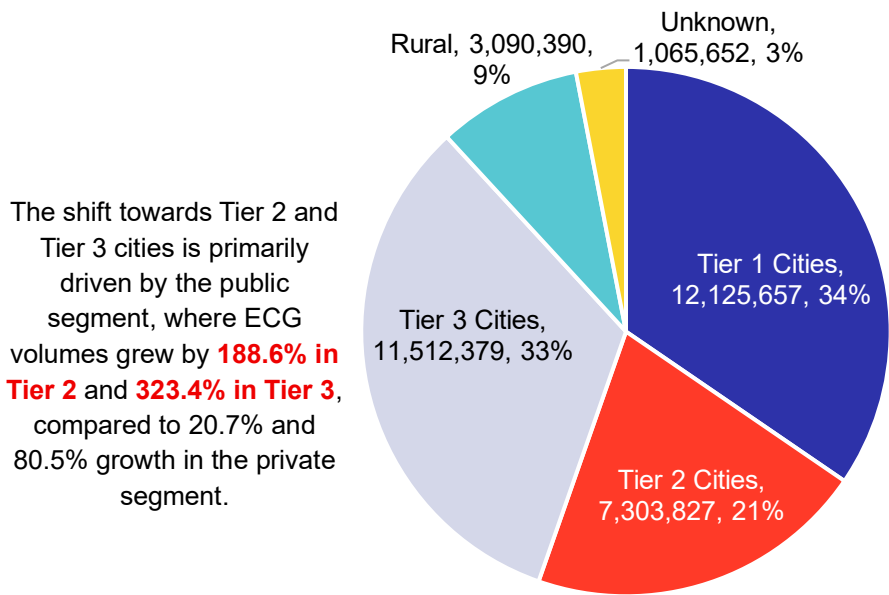
1. Total Patients Served by Year

N = 10,561,734 (2025); 35,097,904 (cumulative)



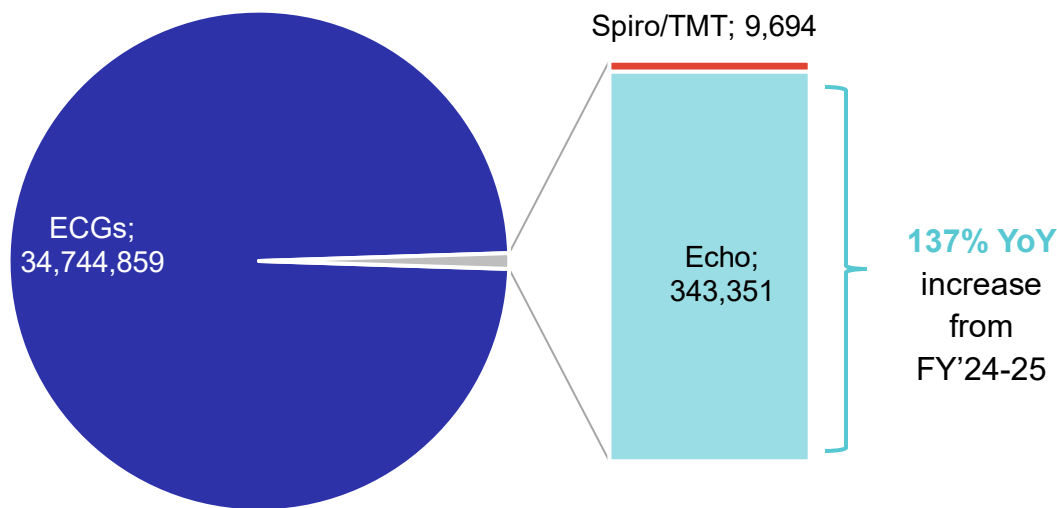
2. Total Patients Served by Underserved Status (Cumulative)¹

N = 35,097,904 (cumulative)



3. Total Patients Served by Product Type (Cumulative)²

N = 35,097,904 (cumulative)

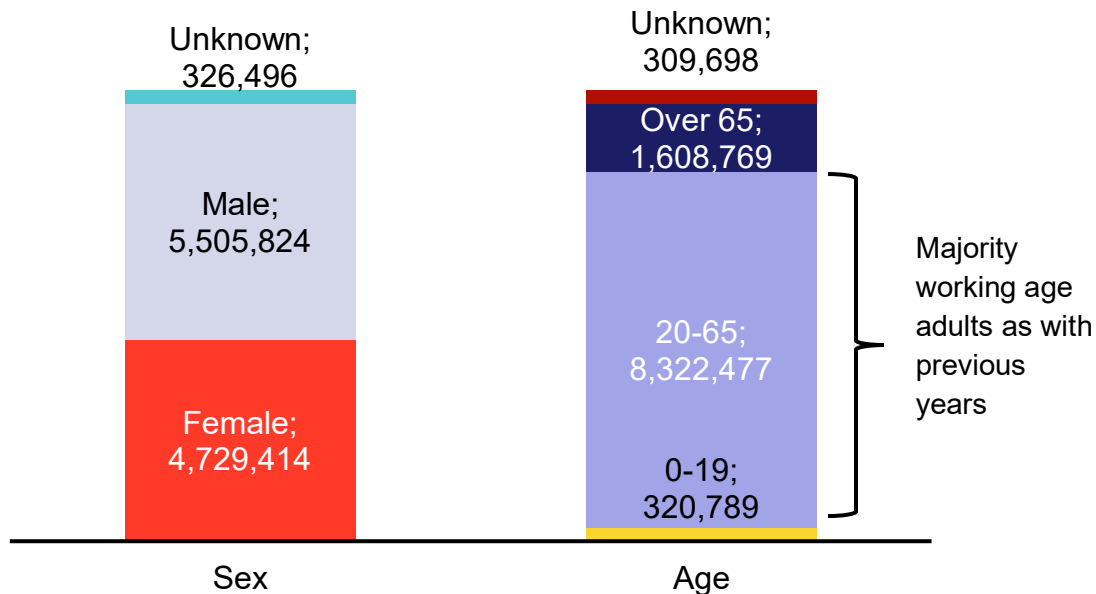


¹ Overall, 63% of served patients reside in underserved locations. Note that Tricog considers Tier 2, Tier 3, and Rural designations as underserved. In 2025 (annual), the breakdown between underserved and other was 7,387,559 and 3,174,175, respectively.

² Spiro refers to lung capacity / pulmonary function tests conducted with a spirometer. TMT refers to an AI-enabled, physician-supervised treadmill test to evaluate cardiac performance under exercise stress.

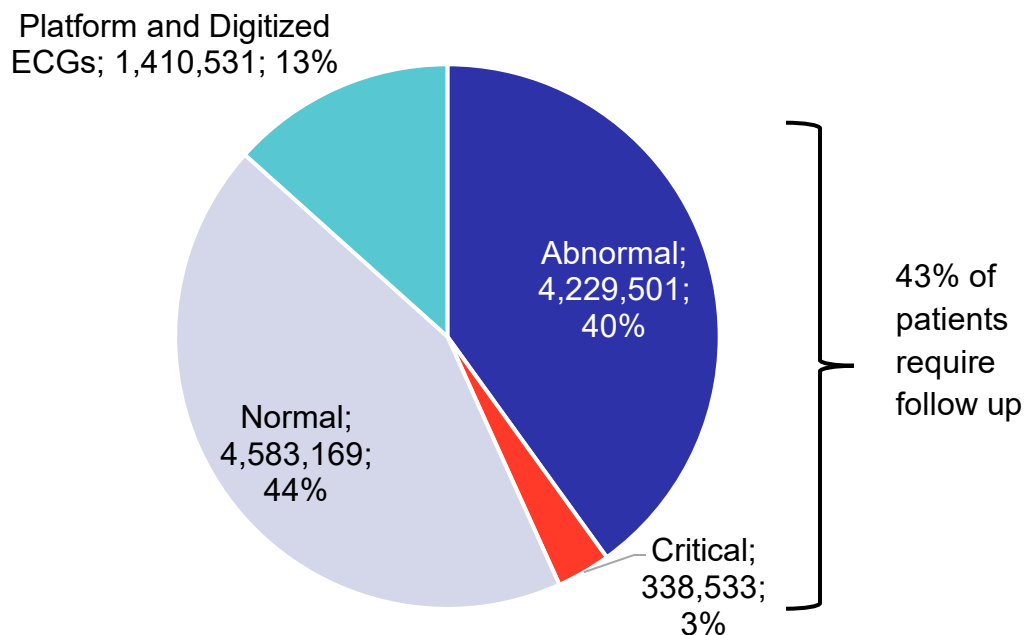
4. Patient Population Demographics (2025)

N = 10,561,734 (2025)



5. ECG Patient Population by Cardiovascular Status (2025)³

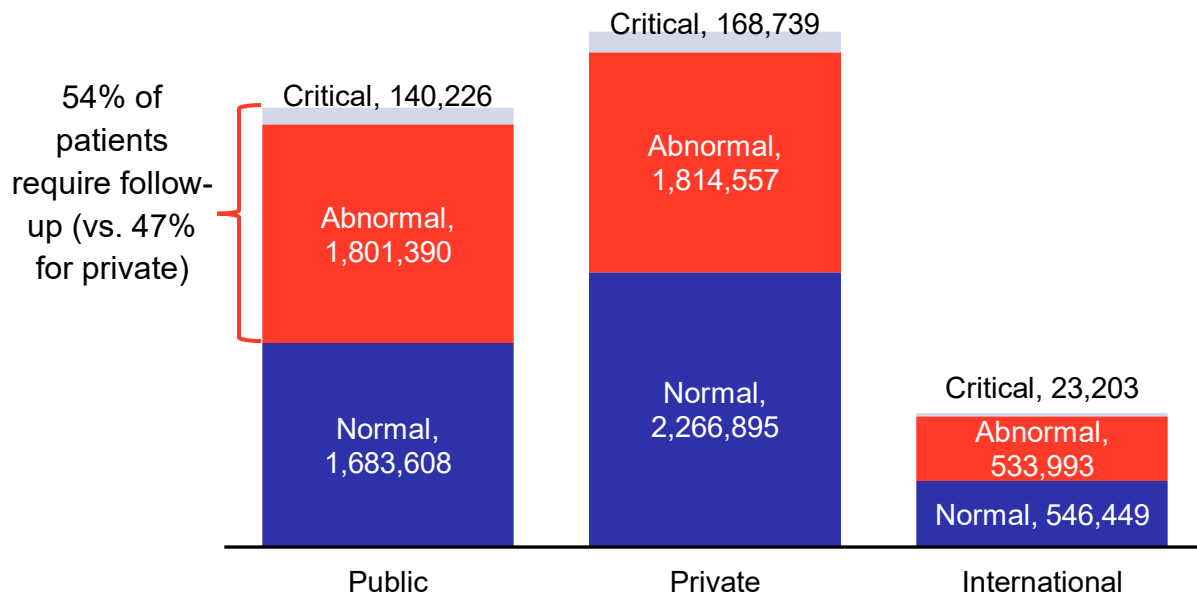
N = 10,561,734 (2025)



³ Some customers have their own in-house doctors or cardiologists who interpret their ECGs but use only the Tricog platform (Tricog Viewer) to access and diagnose their studies. These customers are categorized as Platform customers, and the ECGs performed by them are classified as Platform ECGs, since the interpretation is not carried out by Tricog's medical team. Additionally, some customers opt only for the VCardia ECG machine without subscribing to Tricog's AI-assisted analysis or doctor reporting services. ECGs generated by these customers are classified as Digitized ECGs.

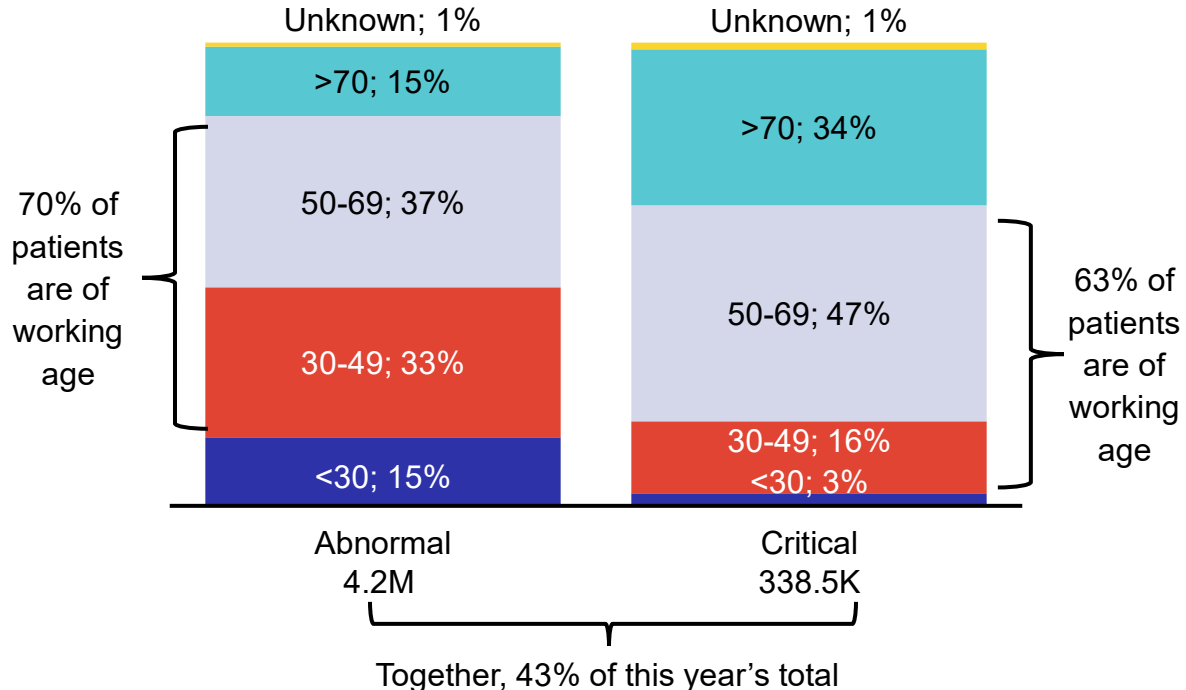
6. ECG patient population by cardiovascular status and payer type (2025)⁴

N = 8,979,060 (2025)



7. ECG patient population by cardiovascular status and age (2025)

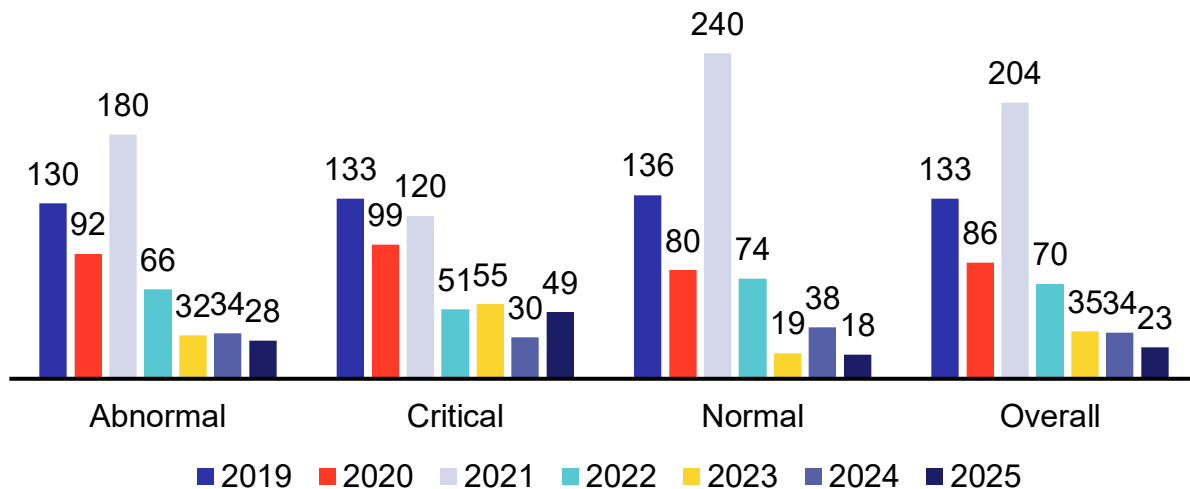
N = 4,568,028 (2025)



⁴ The ECG by Status total includes only diagnosed ECGs, whereas the aggregate ECG figures include all ECGs, including those that are not diagnosed. This is because some private customers purchase only the device and perform the ECG interpretation themselves, without using Tricog's diagnostic service.

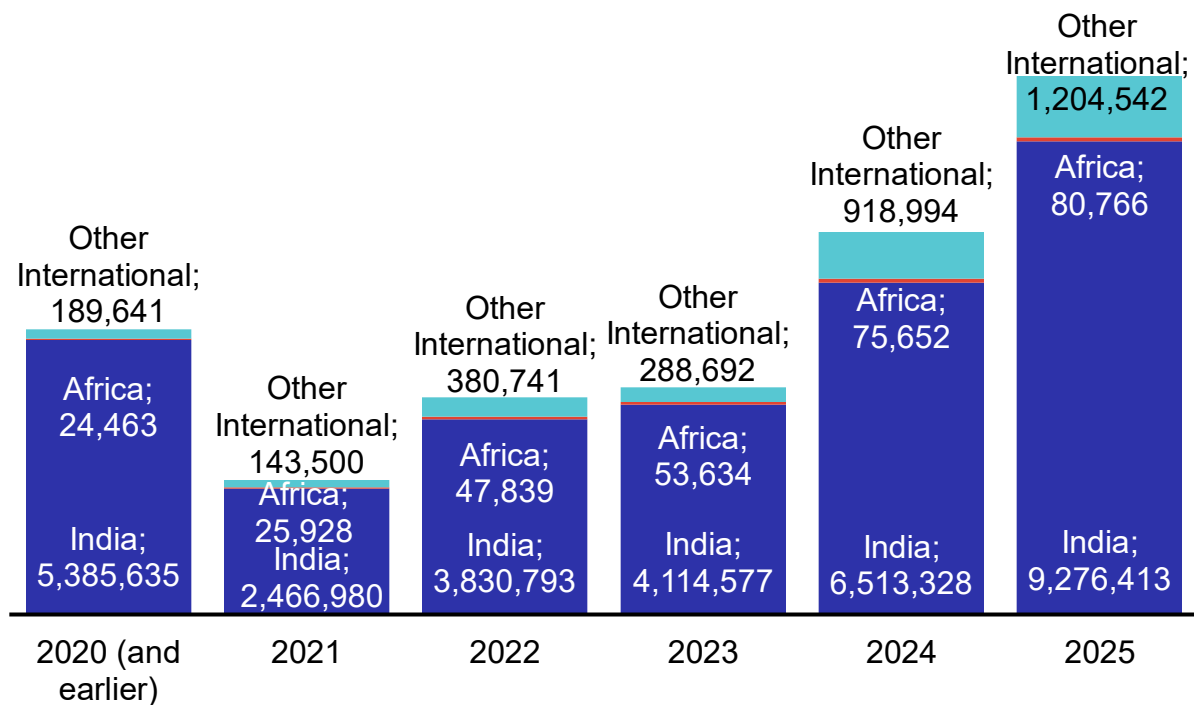
8. ECG reading time by status (2019-2025)^{5,6}

Remote Readings in Seconds: Critical (49 seconds); Abnormal (28 seconds)



9. Patient Tests/Reads (Scan Units) by Geography⁷

N = 10,561,734 (2025); 35,022,118 (cumulative)



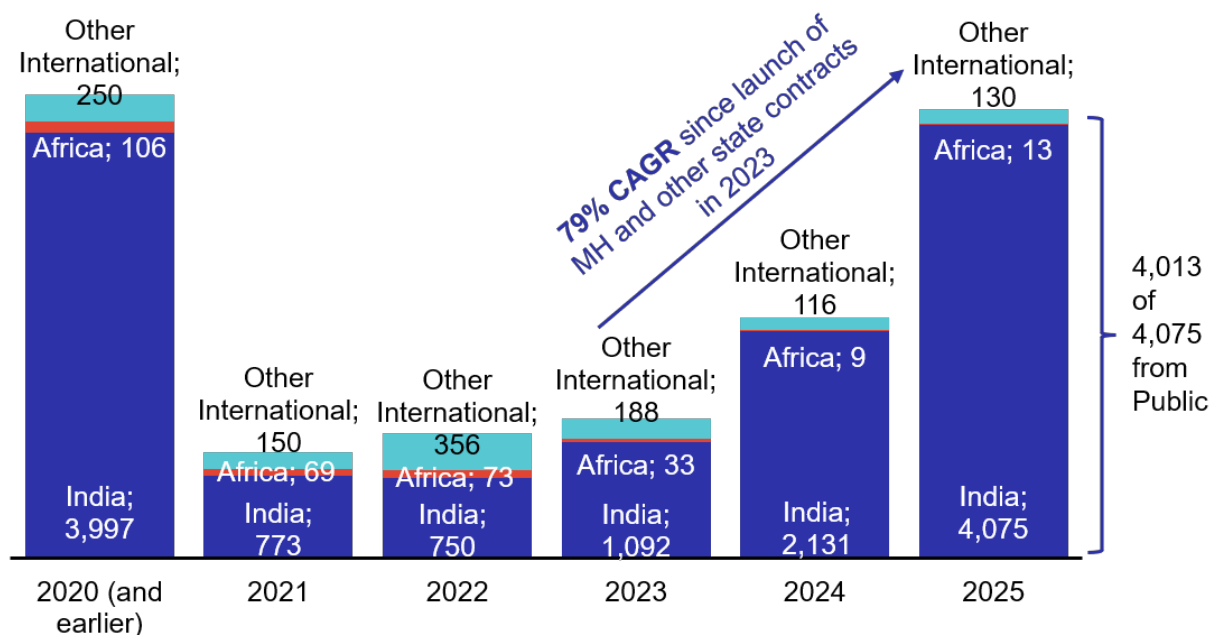
⁵ Read times not broken out by status prior to 2019.

⁶ Extended read-times in 2021 reflective of COVID-19 crisis.

⁷ All 'other international' markets are LMICs, with the Philippines being the largest contributor.

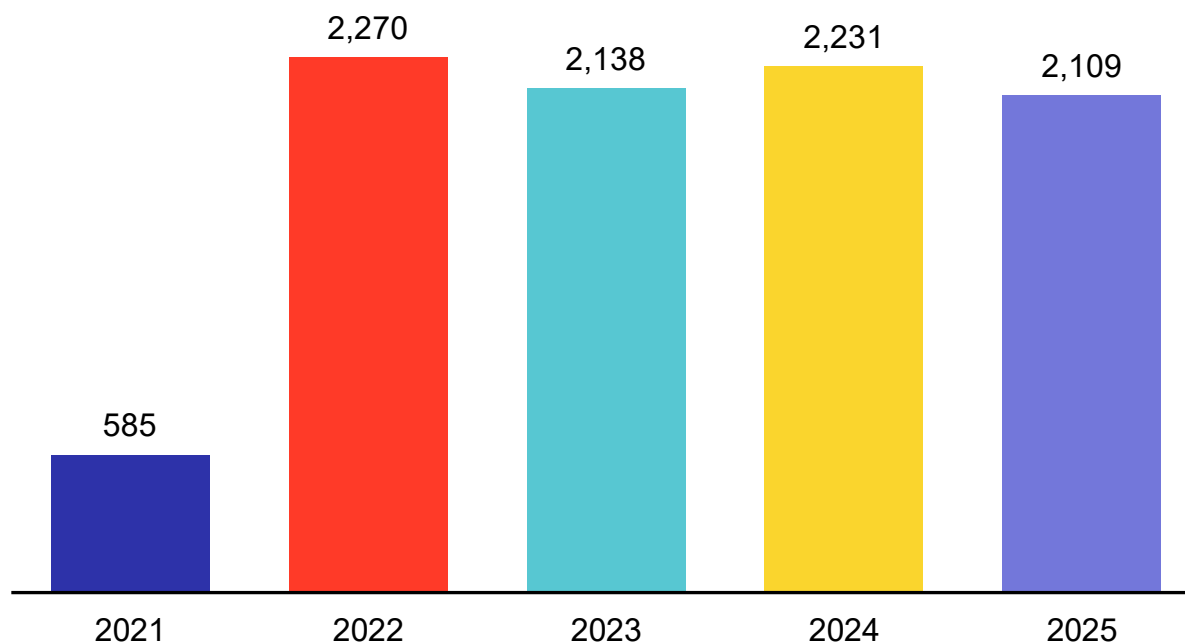
10. ECG Communicator "Units" (i.e. Installed Base) by Geography

N = 4,218 (2025); 14,311 (cumulative)



11. VCardia Units Per Year⁸

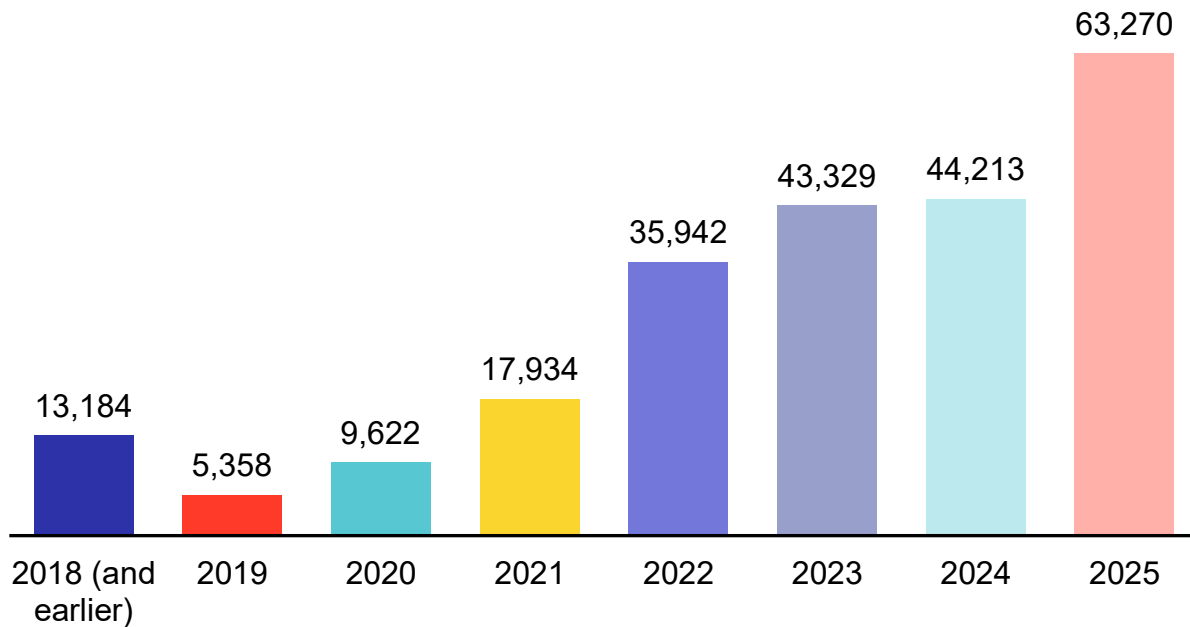
N = 2,109 (2025); 9,333 (cumulative)



⁸ The VCardia platform is a streamlined 12-lead ECG designed to be lightweight and durable. It is frequently used in LMIC settings in hospitals, rural clinics, or homebased care.

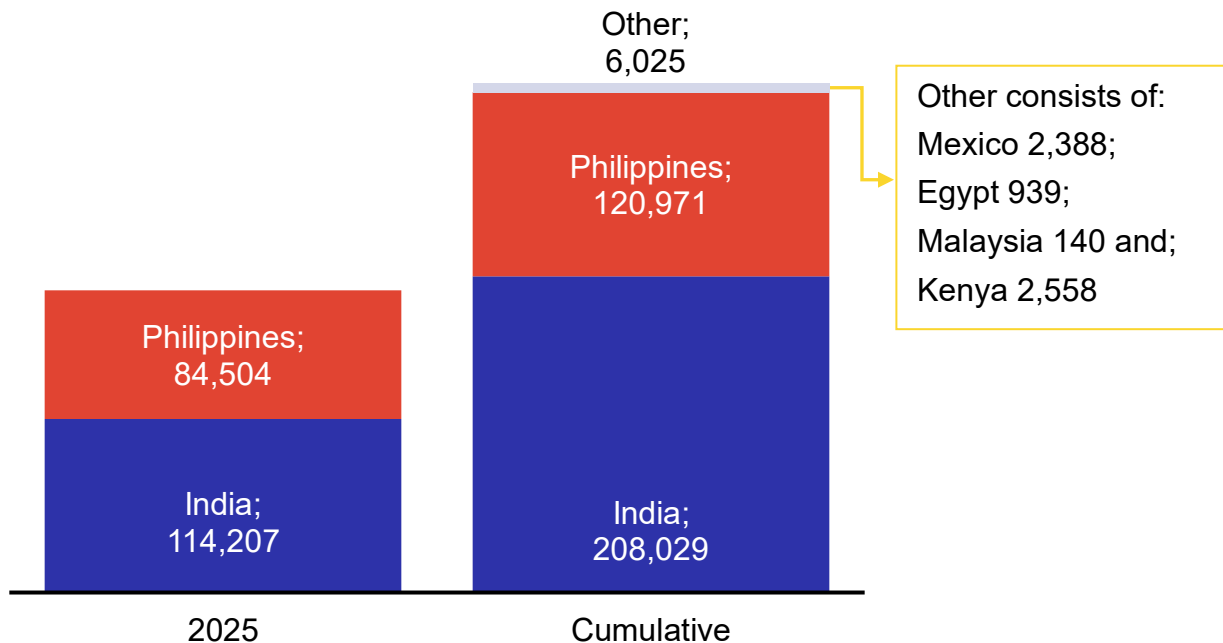
12. Platform/App/Dashboard/Care Coordination⁹

N = 63,270 (2025); 232,852 (cumulative)



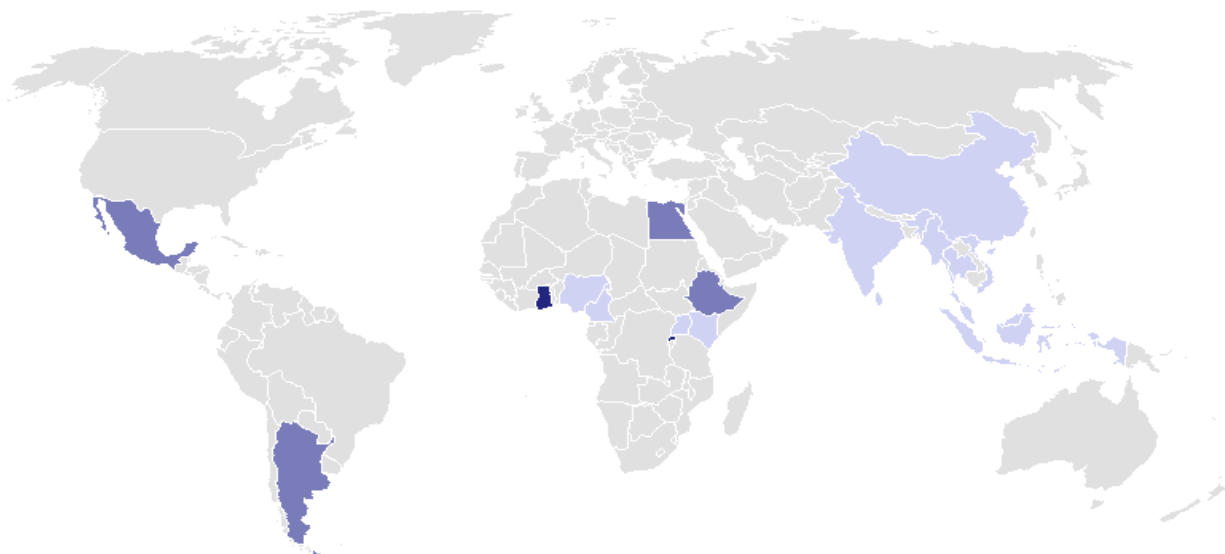
13. Echo Test Units by Year and Geography 2025 and Cumulative results

N = 198,711 (2025); 335,025 (cumulative)

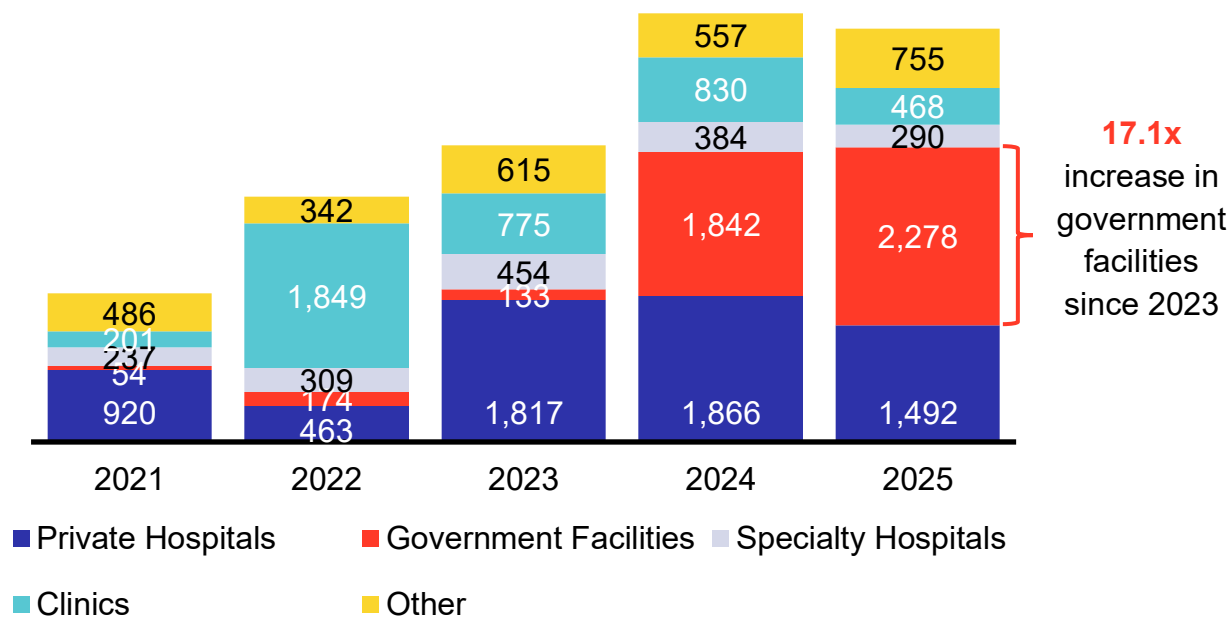


⁹ These are not counted as either test 'units' or communicator 'units' in this report.

14. Commercial and Other Forms of Unit Distribution by Geography (Cumulative)¹⁰ **23 Countries, 4 Continents Cumulatively**



15. Facilities by Type and Year^{11,12} **N = 5,283 (2025); 24,237 (cumulative)**



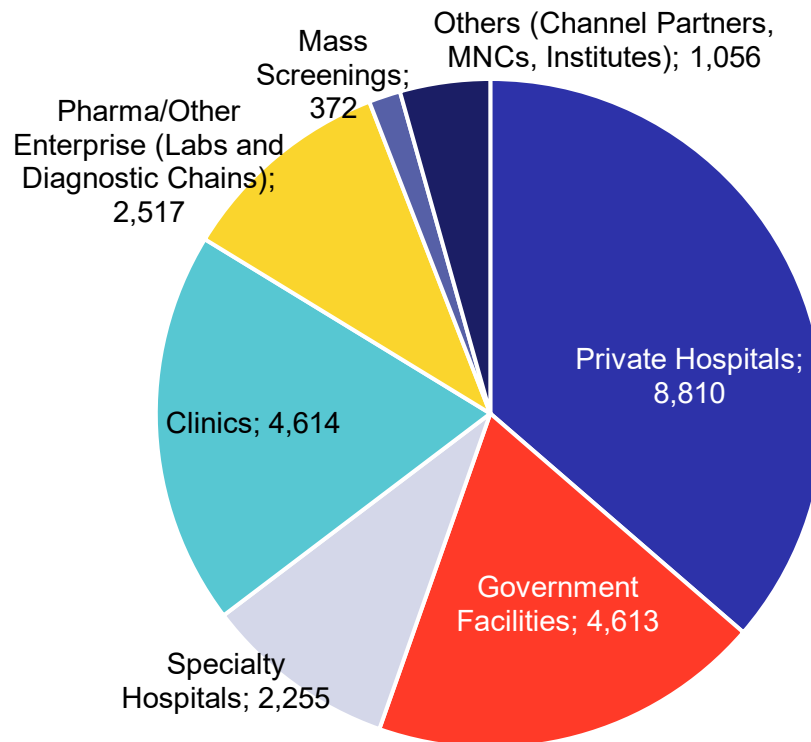
¹⁰ While Tricog added no new geographies in the last year, it has doubled down on several markets, especially public health segments, that are core from both a commercial and an impact perspective.

¹¹ Data prior to 2021 not displayed to preserve readability.

¹² Other includes Pharma/Other Enterprise (Labs and Diagnostic Chains), Mass Screenings, and Others (Channel Partners, MNCs, Institutes)

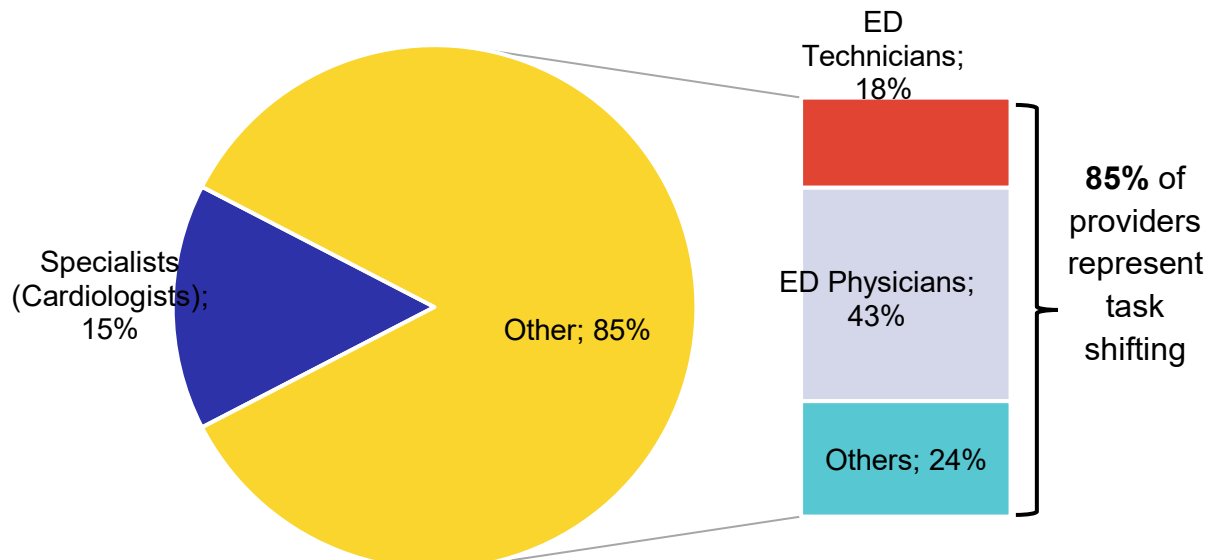
16. Cumulative Facilities by Type

N = 5,283 (2025); 24,237 (cumulative, # below)

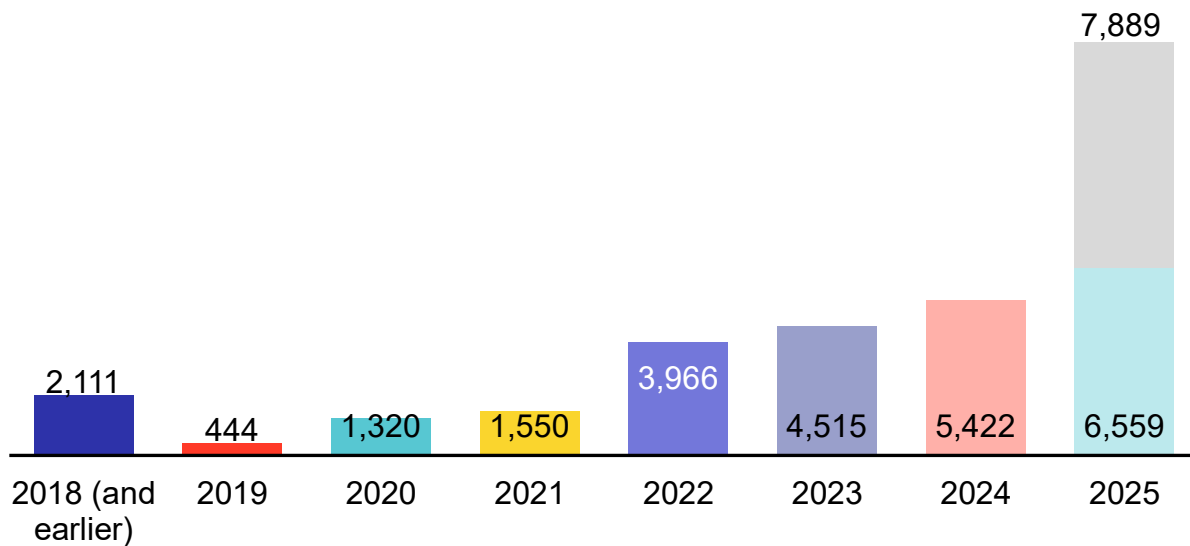


17. Cumulative Providers by Type

N = 33,776 (cumulative)



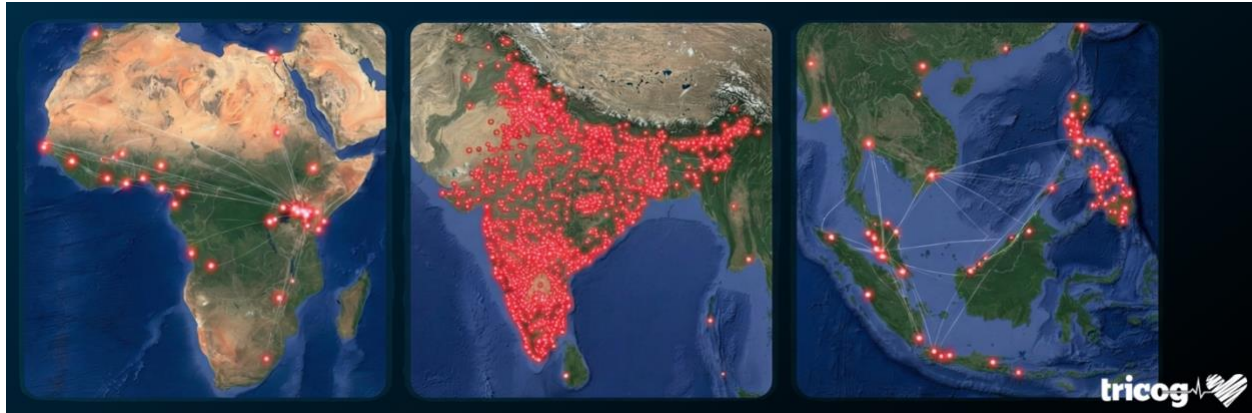
18. Annual Provider Training^{13,14}
N = 14,448 (2025); 33,776 (cumulative)



¹³ In 2025, Tricog updated their reporting to include healthcare workers who have been trained on: i) use of equipment and system, ii) ECG acquisition & transmission (SOP), iii) use of the web-based application, iv) uploading ECGs / downloading reports, v) ECG report viewing through mobile apps, and 6) clinical management of MI (STEMI patient management training). These previously uncounted users were trained as part of government health programs, including some portion of the ~22,000 trained in connection with the statewide scale-up in Maharashtra.

¹⁴ Additional provider allocations subject to final review by Tricog management.

II. IMPACT SPOTLIGHT: Transforming India's Frontline Cardiac Care -- A Global Public-System Model for Scaling AI-Enabled Diagnosis and Management of ST-Elevation Myocardial Infarction ("STEMI")



The largest Cardiac AI Network in the Global South

A. The Challenge -- Background/Context¹

1. Introduction

Although like other countries in the Global South, India's public health infrastructure historically has focused heavily on infectious diseases, in recent years, it has begun to address its rapid epidemiological transition to non-communicable diseases ("NCDs") more aggressively, with cardiovascular disease ("CVDs") leading the way. Two of India's threshold challenges for improving CVD care at the population level, have been:

¹ In the interest of more informal readability, literature references are provided at the end of this Report without sentence-by-sentence attribution. Should readers want specific references pertinent to information provided, they are encouraged to contact TEAMFund.

- (1) finding patients earlier in the disease process, to improve lives and reduce costs; and
- (2) finding affordable, effective, and sustainable solutions, capable of scaling across its many State systems, further layered by diverse geographies, languages, care capacities, and access infrastructure.

In global health, the term “**transformative**” has a more precise and demanding meaning than simply “innovative” or representing incremental improvement(s) within existing systems. Transformation refers to interventions or models that **fundamentally change how health outcomes are achieved at scale**.

This Spotlight profiles Tricog’s **digital, AI-enabled ECG care coordination**, in reliance on **InstaECG** and its **CardioNet platform** of real-time interpretation, now scaling in public systems, State-by-State across India and much of the Global South. The purpose of these system innovations are three-fold:

- (1) to provide **early diagnosis, certified by India-based cardiac specialists**, for patients presenting with STEMI-like symptoms at **first point of medical contact** (primary care facilities);
- (2) thereafter, to create standardized **hub-and-spoke** referrals, to **optimize earliest time to treatment**;

(3) all for the benefit of **improved patient outcomes** for urgent, time-sensitive STEMI-care needs.

The State of **Maharashtra** serves as our case study for this report. Although Tricog is the focus of this Spotlight, our report is different from prior years, insofar as it functions simultaneously as:

- an impact report;
- a global health systems analysis;
- a public-sector AI implementation framework; and
- a policy thesis around scalable AI-enabled NCD infrastructure at the primary care/referral level in LMICs.

For this reason, our report is longer than is typical, but we hope that you spend the time working through it and share your comments with us.

We organize the report as follows:

- in Section A.2, a brief overview of CVD burdens across India;
- in Section A.3, a discussion of STEMI challenges at the primary care level in India (the point of first medical contact);
- in Section A.4, a brief summary of the State of Maharashtra and its challenges and opportunities with

respect to STEMI early detection, triage, and care coordination;

- in Section B.1 and 2, a description of how Tricog has been tackling STEMI in Maharashtra’s public health systems; and finally
- in Section B.3 and our Conclusion, a detailed review of some of the **principal learnings** thus far from this collaboration, and implications more generally around emerging **AI-enabled/NCD-related scaling opportunities throughout India** and **potentially across other LMICs** as well.

Details follow.

2. Brief Overview of CVD Burdens Across India

As with trends globally, CVD is now the leading cause of mortality in India, accounting for approximately **28%** of **total deaths** and a rising share of disability-adjusted life years (“DALYs”). Within the category of CVDs, ischemic heart disease -- the closest proxy for STEMI (heart attack) burden -- is the single largest contributor to both mortality and DALYs. The burdens have increased substantially since 1990, up **over two times** the **prevalence** since that time. The combination of significant ischemic heart disease, sitting alongside large geographies, large rural populations, variable health care, and other access challenges, creates a concerning structural mismatch

between India's disease burden and its care delivery capacity.

India's heavy and growing CVD burden is distinguished from CVDs in high-income countries ("HICs") in several important ways:

- For one, epidemiologic data demonstrate that **ischemic heart disease** and **acute coronary syndromes** frequently occur at least **5-10 years earlier** in Indian populations, than in HIC counterparts. Earlier Indian onset reflects, among other contributors, genetic predisposition; a high prevalence of modifiable risk factors (e.g., diabetes, hypertension, dyslipidemia, and tobacco); and environmental exposures, including air pollution.
- Also in India, there is a substantially higher burden of premature mortality compared to HICs. A significant proportion of **ischemic heart disease deaths** in India occur in individuals **~55-65** (with a sharp rise beginning in years **40-50**), whereas the majority of deaths in HICs is **~70-80** years of age. Excess premature mortality observed in India is not solely a function of disease prevalence, but also of delayed diagnosis and fragmented access to care, highlighting the **critical importance of more holistic systemwide interventions**.

Deaths at younger ages, beyond their heavy health toll, present severe **economic implications** for affected individuals and their families, especially in lower-income settings.

- As another epidemiological trend that stands in contrast to CVD burdens

India's CVD Burdens in Recent Years

- CVD leading cause of death (~28%)
- Rising DALY burden since 1990
- Prevalence more than doubled since 1990
- Earlier onset vs. HICs
- Higher premature mortality vs. HICs
- Maternal/infant structural disease vs. HICs

in HICs, **structural heart disease** in India contributes significantly to CVD burdens among **maternal and infant populations**, where both **rheumatic heart disease (“RHD”)** and **congenital heart disease (“CHD”)** remain prevalent. Although not the topic of this Spotlight, these diseases contribute to the Country’s overall heavy CVD burden and care management needs.

3. STEMI Challenges at the Primary Care Level (First Point of Medical Contact)

CVD-Related Primary Care Constraints

- Routine CVD screening rarely deployed
- ECG availability inconsistent and often inaccessible
- Fragmented referral pathways
- Limited cardiac specialists
- High reliance on generalists
- Diagnostic expertise often inaccessible

The principal constraint with CVD care delivery in India (and all LMICs), arises at the level of **first medical contact --**

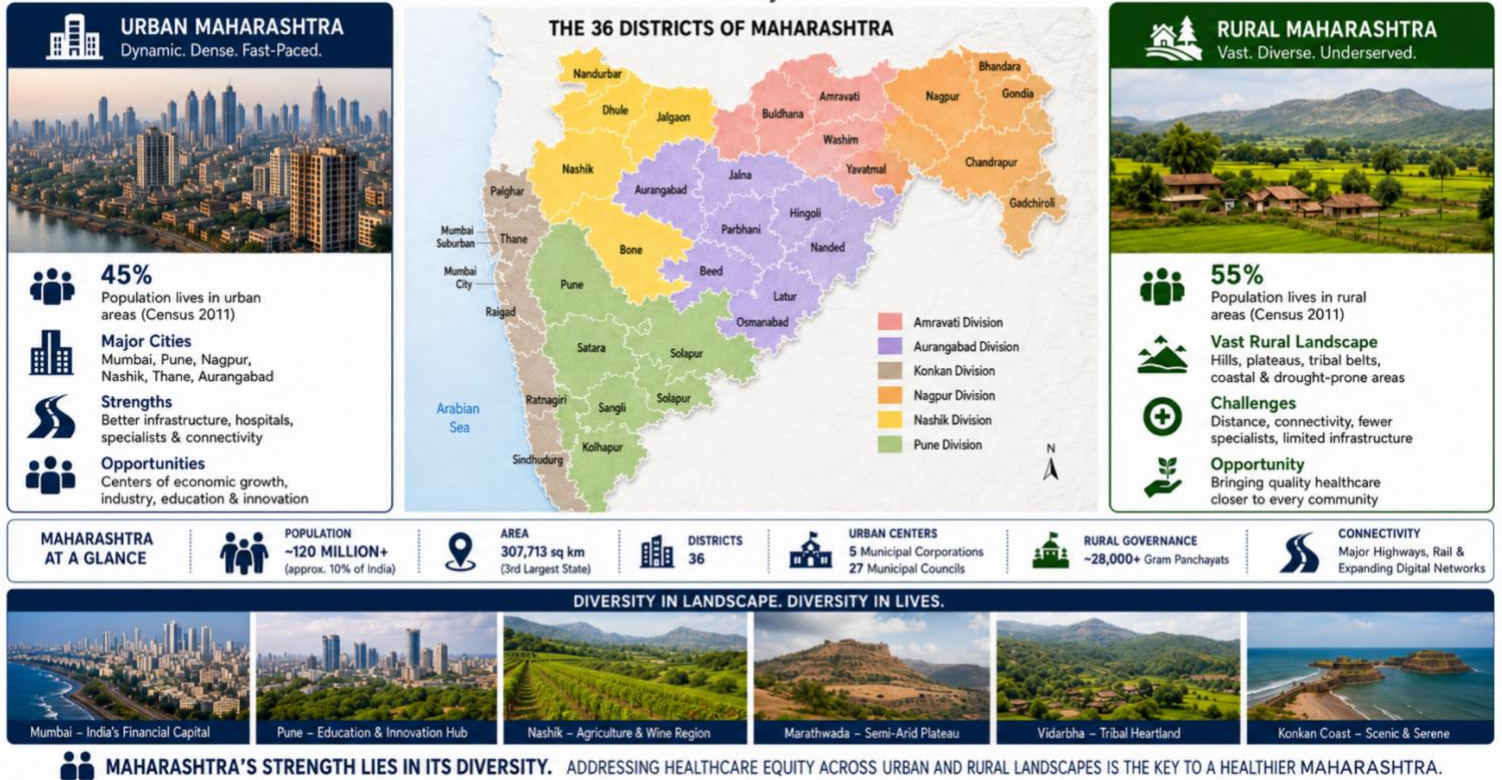
primary care systems. Patients frequently present late, often after prolonged symptom onset, and encounter primary care environments with limited diagnostic capability and fragmented referral pathways. **Trained capacity to interpret ECG**, essential for STEMI and other CVD diagnosis, is an equally critical barrier to access, since workforce shortages at the primary care level, necessitate **task-shifting to non-specialists** in most instances. In short, the frontlines of India's many health systems, are largely unprepared for early ECG testing, leading to late diagnosis and avoidable mortality and morbidity. Addressing these primary care system deficits, has prompted health authorities across India to think more critically about the country's CVD care needs, and how new CVD care strategies should be delivered at scale.

4. STEMI and Early Detection in Maharashtra: Scale, Urgency, and Opportunity

a. Understanding Maharashtra

MAHARASHTRA: DIVERSE GEOGRAPHY, PEOPLE & REALITIES

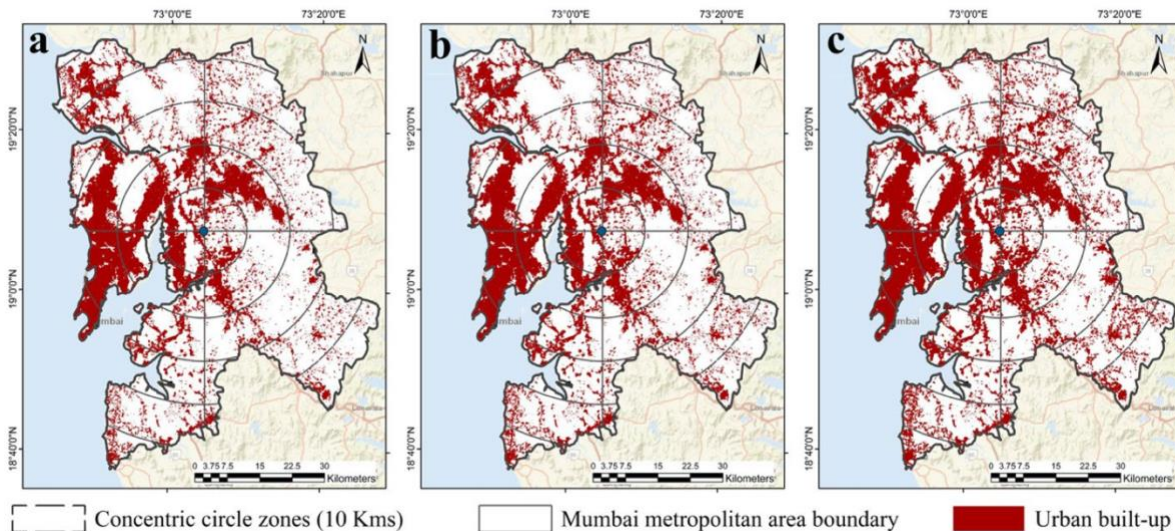
One State. Many Worlds.



Maharashtra, one of India's largest and most economically significant States, provides a compelling case study to understand both the challenges and the opportunities of early detection in STEMI throughout India. With a population exceeding **120 million people**, Maharashtra alone represents a population roughly equivalent to that of a large HIC. For context: (a) it is comparable in **population scale** to nations such as **Japan**, and constitutes more than **one-third** of the population of the

US; and (b) it is comparable in **land mass** to countries like **Italy** and the **Philippines**. The scale and size of the State are further layered by substantial geographic and socioeconomic diversity, spanning dense urban centers such as Mumbai and Pune, as well as vast rural and peri-urban Districts. As of the last Census, a full **55+%** of the State's population resides in **rural geographies** -- geographies historically characterized as having **significantly greater access challenges** than in urban settings. Within this context, the burden of acute coronary syndromes -- and STEMI in particular -- is both clinically significant and systemically challenging, such that access to adequate acute cardiovascular care historically has been out of reach for many Maharashtrians.

- Dark shading = urban-heavy (Mumbai, Pune, Thane)
- Light shading = rural-heavy (Vidarbha, Marathwada)
- Maharashtra is ~45% urban / ~55% rural



b. Overview of STEMI and the central role of early ECG diagnosis

From a clinical perspective, heart attacks (STEMI) represent a time-critical emergency in which outcomes are determined largely by the speed with which coronary blood flow is restored. The principle that **“time is muscle”** reflects a well-established pathophysiologic reality: myocardial necrosis progresses rapidly following coronary occlusion, and **delays in reperfusion** are directly associated with **increased infarct size, reduced left ventricular function, and higher mortality**. International guidelines emphasize that reperfusion therapy should be initiated as rapidly as possible, ideally within **90-120 minutes** of when the patient first presents to a health facility. Achieving these targets requires not only **access to definitive therapy**, but critically, **early and accurate diagnosis** at the point of **first medical contact**.

In Maharashtra, as in other parts of India, the primary barrier to timely STEMI care is not solely the availability of tertiary cardiac centers, but the ability to recognize and diagnose myocardial infarction early in the care pathway. As noted in Section A.3, patients frequently present first to primary health centers, small clinics, or non-specialist providers, where access to ECGs may be inaccessible and, more importantly, real-time interpretation of its results are often unavailable.

ECG is the foundational diagnostic modality for STEMI, where rapid identification directly determines eligibility for time-sensitive reperfusion therapies. In practice, timely ECG serves not merely as a diagnostic tool, but as the **gateway to the entire acute coronary care pathway** -- triggering triage decisions, activating catheterization laboratories, and determining whether reperfusion therapy should be administered. The absence of timely ECG acquisition/interpretation therefore represents not a minor delay, but a fundamental breakdown in the care continuum.

While limited ECG availability is a major barrier, the absence of real-time interpretation represents an equally profound constraint. ECG interpretation -- particularly in the context of acute coronary syndromes -- is inherently complex. Subtle findings such as ST-segment deviations, T-wave inversions, and posterior or right ventricular infarction patterns, may be easily missed without specialized training. In many primary and secondary care settings, ECG reports are interpreted by **non-specialists**, **delayed until a physician is available**, or **referred off-site** for later review. This creates a critical disconnect between data acquisition and clinical decision-making.

The combined effect of delays due to ECG acquisition and interpretation, is a **failure to compress total ischemic time**. Every **delay increases mortality risk**, and most patients in India are diagnosed after the optimal window for reperfusion therapy has closed. The cumulative effect of patient-level, system-level, and infrastructural delays, is

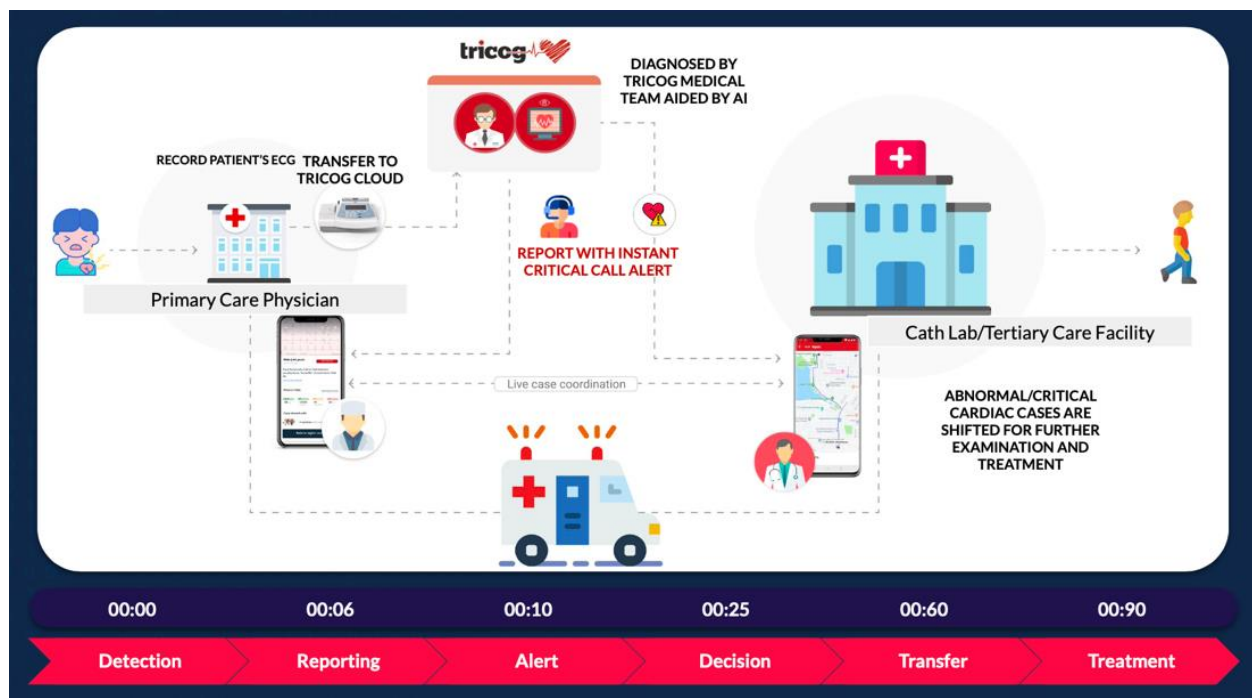
a persistently high burden of avoidable cardiovascular morbidity and mortality.

c. The challenges of care coordination following STEMI diagnosis

In Maharashtra and India more generally, survival depends less on whether advanced therapy exists somewhere in the State, than on whether a patient can be diagnosed rapidly, triaged correctly, and moved into reperfusion within the narrow therapeutic window during which myocardium can still be salvaged. Because, as noted, Maharashtra combines major metropolitan centers with extensive peri-urban and rural districts, there are large differences in travel time, facility capability, and specialist availability across the State. The combination of large geography, highly variable population density, and fragmented first-contact diagnosis, makes not just early ECG interpretation, but **effective care coordination** as well, a defining determinant of STEMI survival.

India's Nationally endorsed **hub-and-spoke** model directly addresses this problem, by linking peripheral “**spoke**” **sites** -- where ECG may be performed (but cardiac care expertise and catheterization capacity are generally absent) -- to designated “**hub**” **hospitals** for protocolized triage and definitive reperfusion therapy. The National framework developed by STEMI India, in collaboration with the Cardiological Society of India, established this standardized approach for protocol-driven triage and coordinated patient transfer across all levels of care. One

of the earliest pilots of this system was in the State of **Goa** as a coordinated, State-wide program supported by real-time telecardiology infrastructure implemented in collaboration with **Tricog**. More recently, other States, including Maharashtra, have begun to operationalize this model through public health programs, integrating it into District hospital networks and emergency pathways. In time-sensitive diseases such as STEMI, this organizational structure is not an administrative refinement; it is the mechanism by which diagnosis is converted into life-saving action.



In effect, the model acknowledges a basic reality of STEMI care in India: because time is of the essence, the goal cannot be to bring every patient first to a tertiary center, but to ensure that every patient enters a coordinated,

State-wide pathway capable of making the right decision quickly enough to preserve myocardium and save lives.

* * *

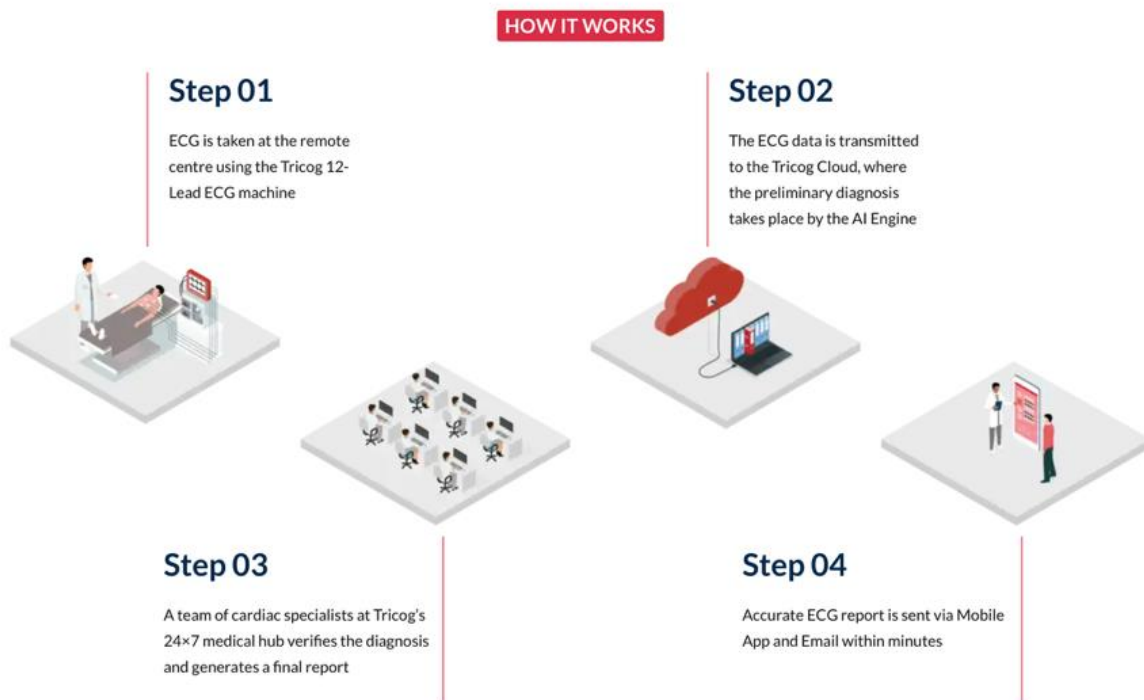
From a systems perspective, Maharashtra illustrates both the challenge and the opportunity inherent in addressing STEMI care in large, heterogeneous populations and variable geographies. The combination of high disease burden, diverse care environments, and the need for time-sensitive acute care, is why India and all LMICs have struggled historically with system bottlenecks that have worsened STEMI mortality and morbidity rates. As described in Section B below, Tricog and Maharashtra are now demonstrating that AI-enabled technology, together with care coordination, can unlock these historical bottlenecks, and improve time to treatment and patient outcomes. Use of such technology and care systems throughout all States in India, has the potential to significantly reduce avoidable mortality and reshape India's continuum of STEMI care -- the very definition of **transformative AI-enabled innovation**.

B. Tackling the Problem

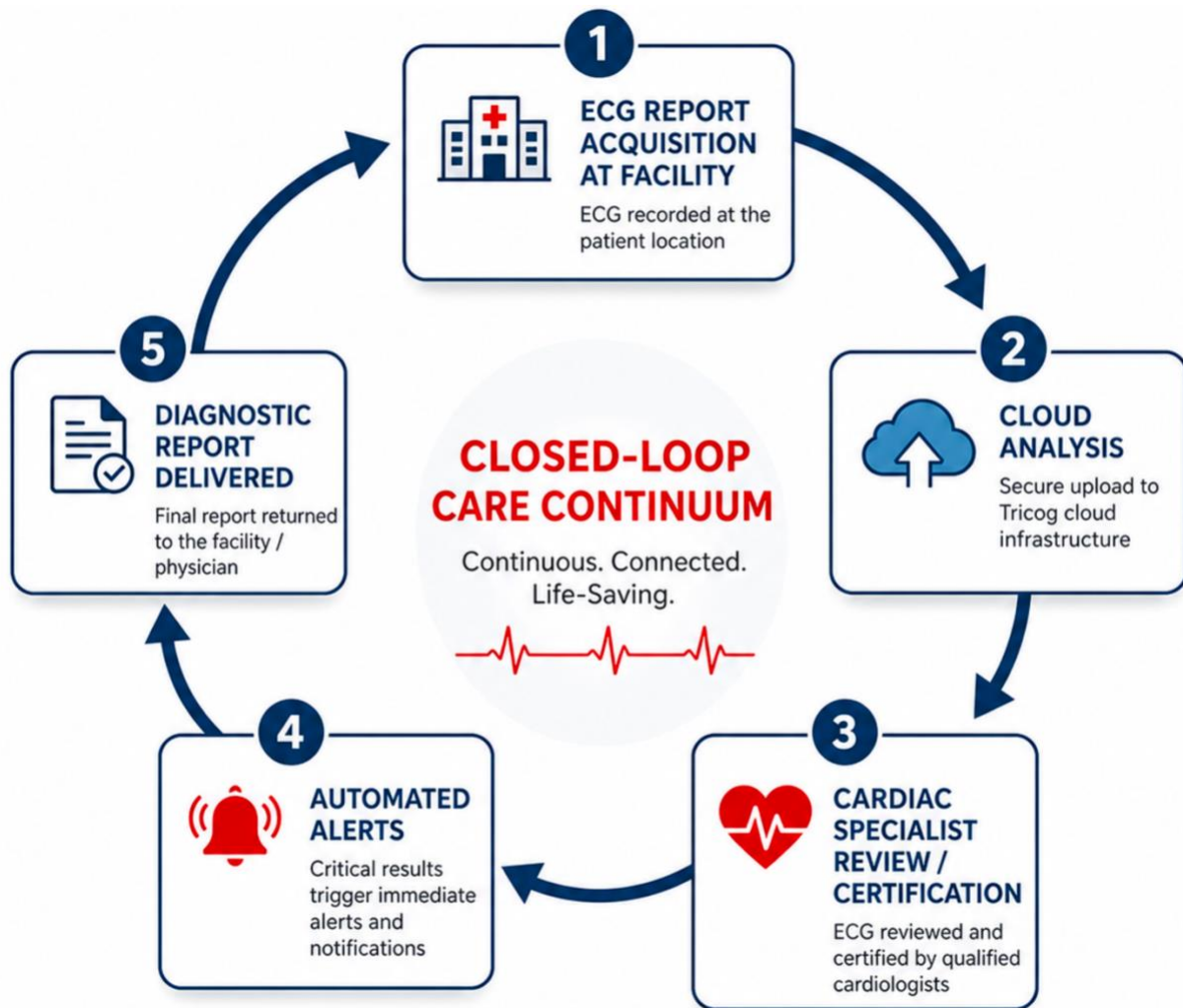
1. Tricog's Platform of AI-Enabled Technology and Related Services

As background, Tricog's InstaECG device and CardioNet platform, form the core diagnostic and coordination layer of Maharashtra's STEMI system of care. At point of first

medical contact, **often rural health centers**, an ECG is performed using **InstaECG**. The device -- a “communicator” integrated with each facility’s 12-lead ECG -- transmits ECG results instantly to Tricog’s **Cloud-based CardioNet platform**, whereupon each ECG undergoes **immediate AI-based interpretation**. Those results are then further reviewed by Tricog’s **network of cardiac specialists**, who are available **24/7**, to **review** and then **validate/certify** all AI-enabled reports, before returning them to the originating site via mobile, web, or SMS channels. The CardioNet system enables interpretation **within minutes** (and **often seconds**), compared to hours in traditional workflows, and sends automated **alerts** when results are “**critical.**”



Two key distinguishing features of Tricog's innovations, thus, are: (1) its **hybrid architecture** -- AI-based rapid interpretation, together with cardiac specialist-review/validation; and (2) its InstaECG, which is not just a device, but part of a **continuous diagnostic loop** that can provide **consistent expert interpretation** across large populations, as shown below:



As used in Maharashtra, described below, Tricog's model transforms ECG from a static test into an active trigger for care coordination, enabling rapid identification and

coordinated treatment of myocardial infarction across widely variable healthcare settings, and allowing the State's hub-and-spoke referral and treatment networks to function at scale.

2. Maharashtra's STEMI Coordination Initiative



Rural primary care



Tricog AI/clinician review



Transport of STEMI patient
for higher-level treatment/care



Public hospital in Maharashtra

In direct response to the challenges and bottlenecks described in Part A of this Spotlight, Maharashtra, with its technology and implementation partner, Tricog Health, have for the last **5** years deployed **one of the largest AI-enabled STEMI public care system in the Global South**. This initiative has transformed the State's

historically fragmented care into a **coordinated network** for time-sensitive myocardial infarction care.

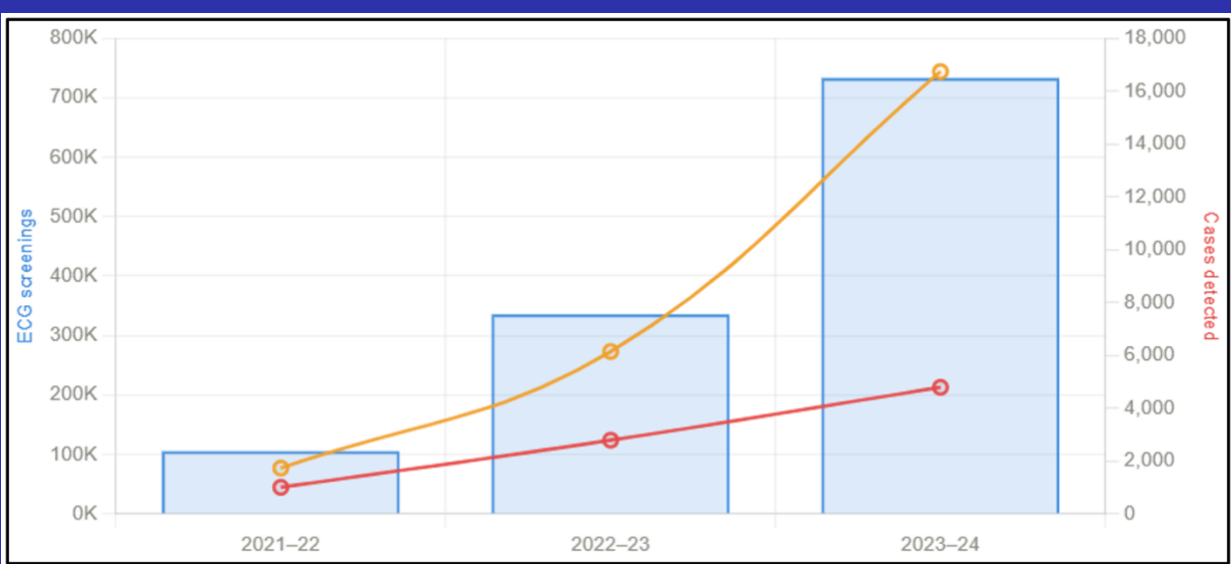
Provided below is the Program's impact by the numbers, through end of FY25 (March 31, 2026). Two aspects of Maharashtra's impact metrics are notable:

- First, the amount of data that has been collected and analyzed is considerably more than we have been able to collect from any of our other portfolio companies, and it represents the first time we have been able to provide **meaningful outcomes data**; and
- Second, these detailed metrics were **easily accessible** by virtue of a **digital dashboard** of de-identified patient data used by Tricog to monitor programs in **real time**.

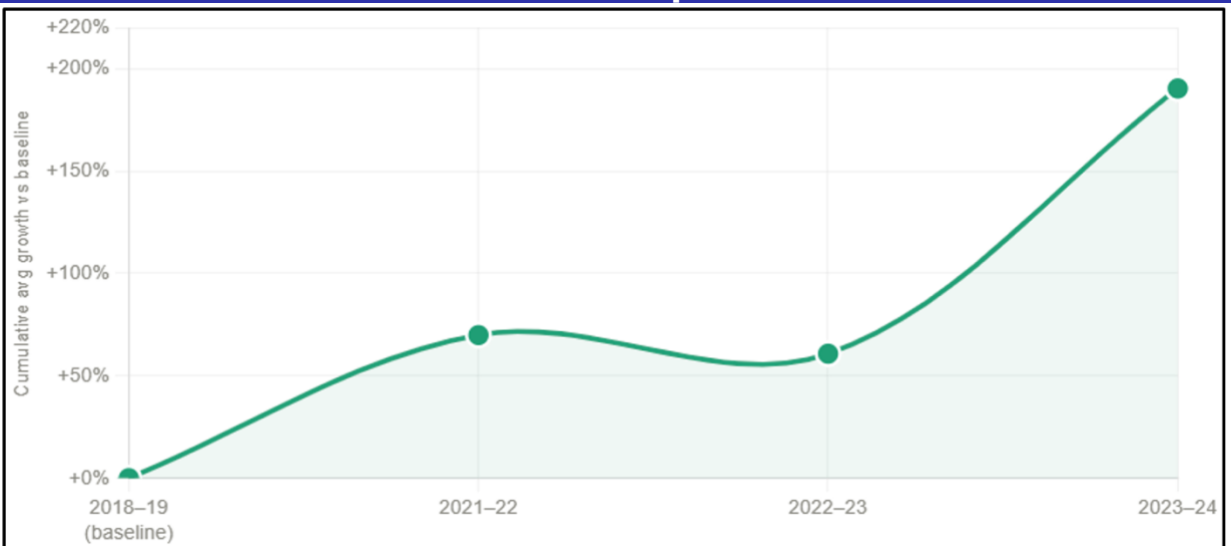
Key Maharashtra Partnership Metrics (through March 2026)

- **2,415** facilities (**94** hubs/**2,256** spokes)
- **34** Districts
- **4.2M** ECG reports
- **240** seconds/**2.5** minutes to diagnosis
- **~22,870** STEMI lives saved

Significant referral increase



- Strong positive correlation ($R^2 \approx 0.996 - 0.998$): The exponential trendlines for both STEMI and other critical case detection align tightly with ECG screening growth—confirming that more ECGs directly generated more actionable referrals to hub hospitals.

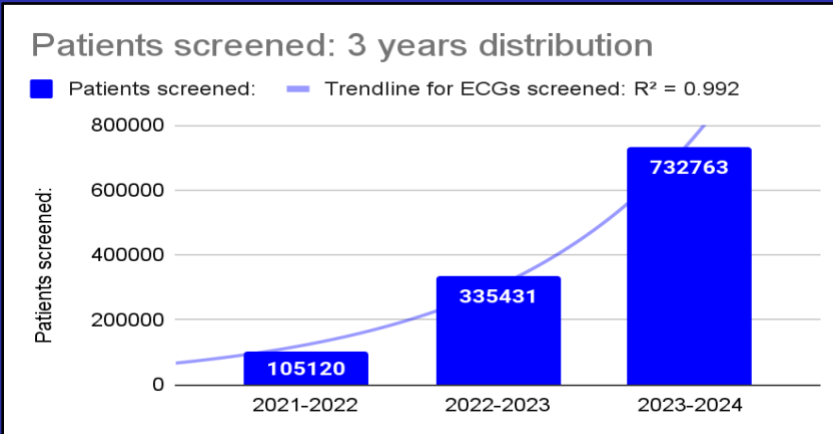
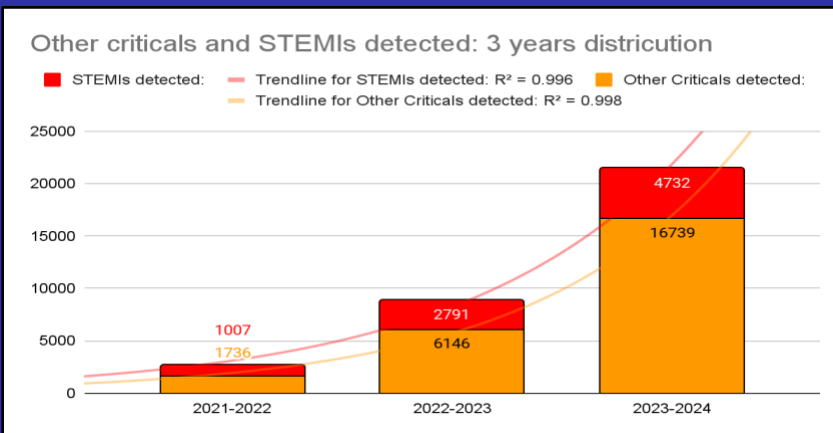


- Post-STEMI implementation, hub hospital referrals, as evidenced by all three procedure categories (Thrombolysis, Angioplasty and CABG) combined, grew by a cumulative **+190.4%** overall, with a consistent double-digit year-on-year acceleration in both intervening

periods **(+69.9%**, then **+60.8%)**, confirming sustained and compounding referral growth, not a one-time spike.

- **3.77M** patients screened (through March 2026)

Trends of patient screenings & STEMI detection – 3-year distribution, until Apr 2024



Training

- **22,161** HCWs trained across the network nodes: **12,510** doctors (specialized), **9,651** medical staff personnel

--Phase 1: All **145** spokes trained & active on Cardionet

--Phase 2: **2,270** spokes trained & **2,256** spokes active on Cardionet

- STEMI GRID training initiative has strengthened frontline clinical capacity, with **250+** medical officers in Maharashtra enrolled in the certification program, enabling faster recognition, triage, and management of STEMI cases at the point of care.
- The MH-STEMI network has expanded emergency response readiness by training and onboarding **407** ambulance drivers onto CardioNet across **1,763** centers in Maharashtra, strengthening coordination and enabling faster cardiac emergency response across the state.

Key Patient Health Metrics

- **25,640** acute cardiac events identified (STEMI)
- **103,835** other “critical” conditions detected
- **1.732M** other abnormal

Demographics

Age

- The majority of acute cardiac (STEMI) patients fall in the **60–79** years age group, accounting for **~53%** of the cohort.
- This is followed by:

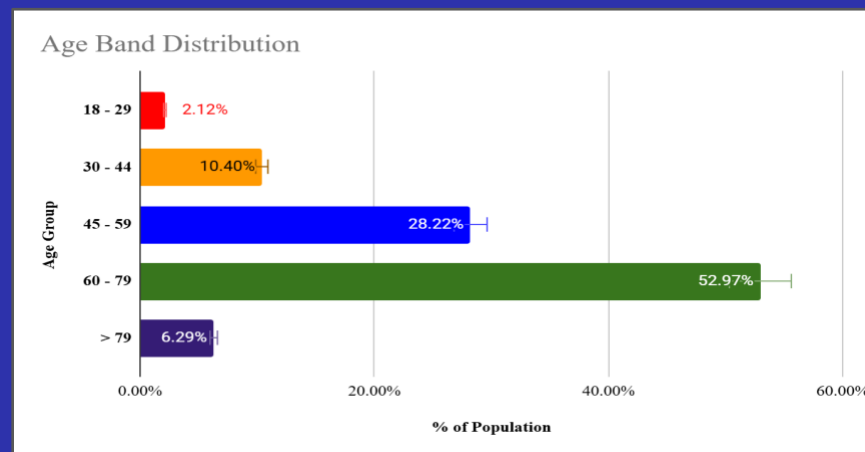
--45–59 years: ~28%	}	<60:~40%
--30–44 years: ~10%		
--18–29 years: ~2%		
-->79 years: ~6%		

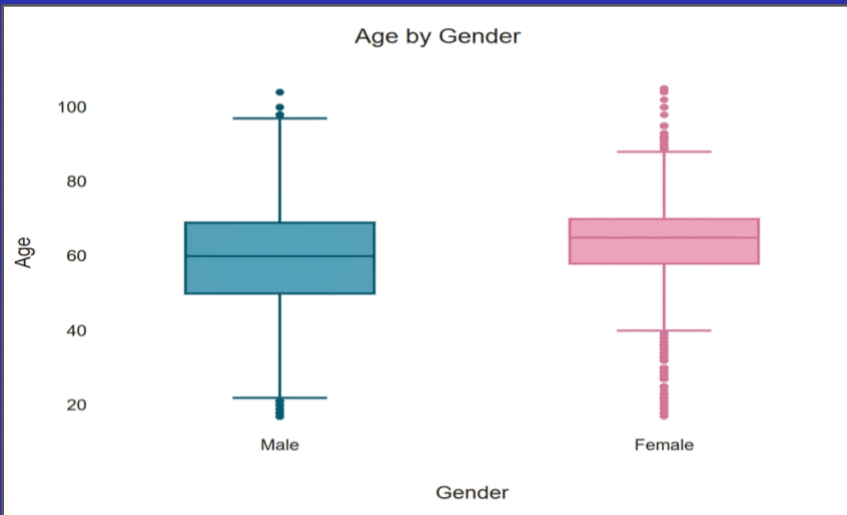
- Of the **~25,640** STEMI cases detected in Maharashtra, **14.7%** were individuals below **45** years of age, highlighting a growing cardiac risk among younger populations. Early STEMI detection and timely intervention played a key role in improving survival outcomes and saving young lives.

Gender/ Gender by Age

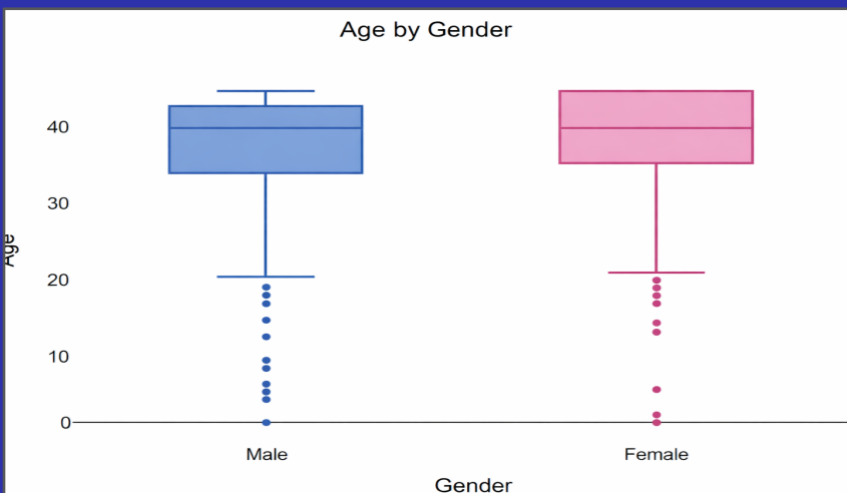
- Overall, males constitute **~74%** of the STEMI cohort compared to **~26%** females (male:female ratio **2.8:1**), with males presenting earlier (**~60** years) than females (**~65** years);
- Notably, among patients below **45** years, male predominance increases significantly with a male:female ratio of **5.8:1**, while both genders present at a similar median age of **[~40% <60]** years.

Overall Demographics





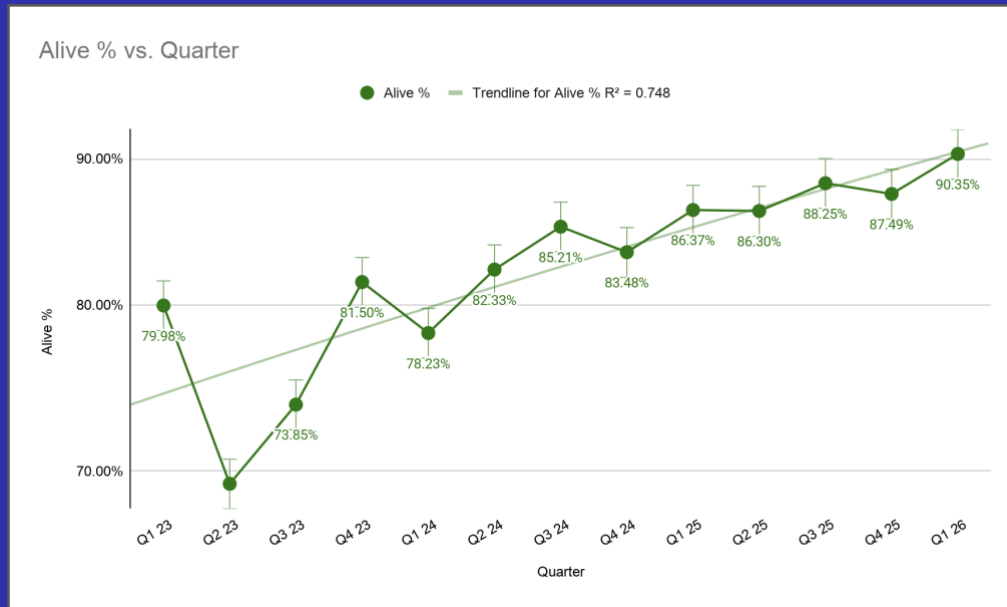
Demographics: Below 45 years of age



Other Outcomes

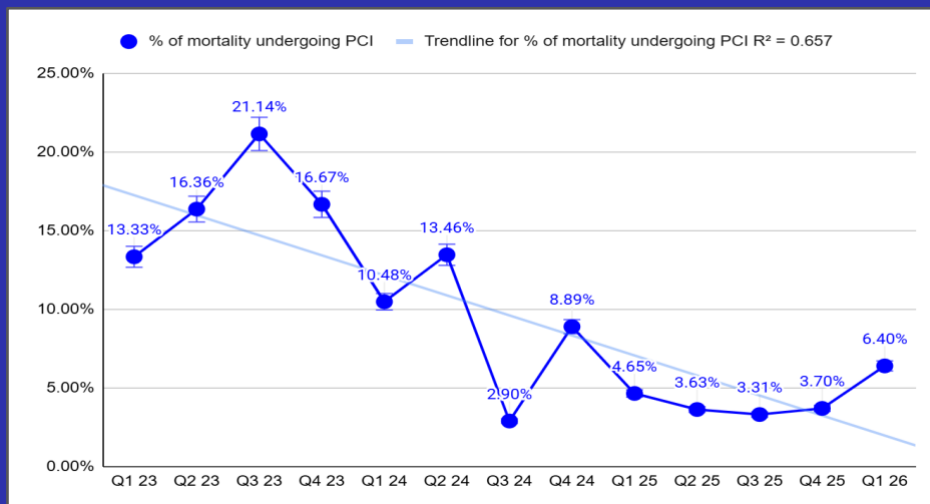
Survival Outcomes

- The MH-STEMI program has demonstrated sustained improvement in patient outcomes over time, with mortality reducing from a baseline of **20.12%** to **9.7%** by Q1 2026, alongside a steady increase in survival rates reaching **90.3%** in Q1 2026.



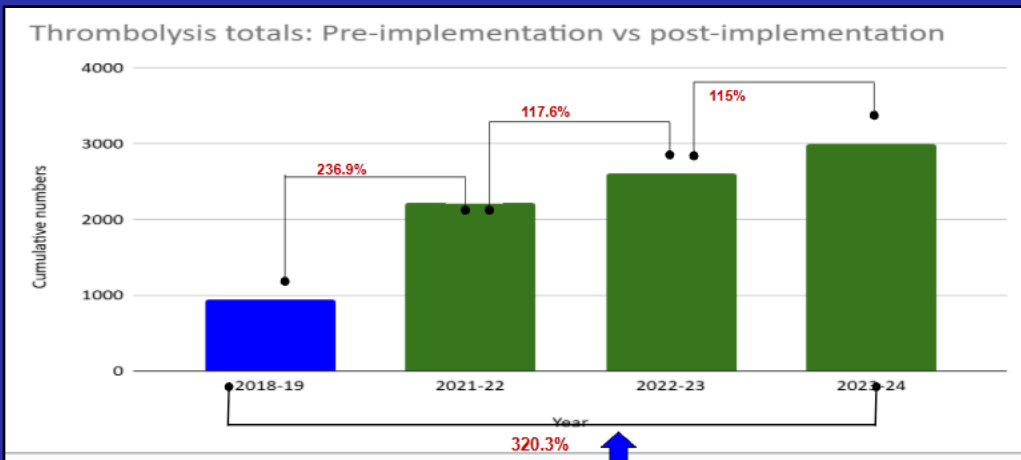
Trends in PCI Mortality

- The MH-STEMI program has demonstrated a statistically significant reduction in PCI mortality over time ($p = 0.026$), with mortality rates declining from 13.33% in Q1 2023 to 6.40% in Q1 2026, reflecting sustained improvement in interventional cardiac care outcomes.



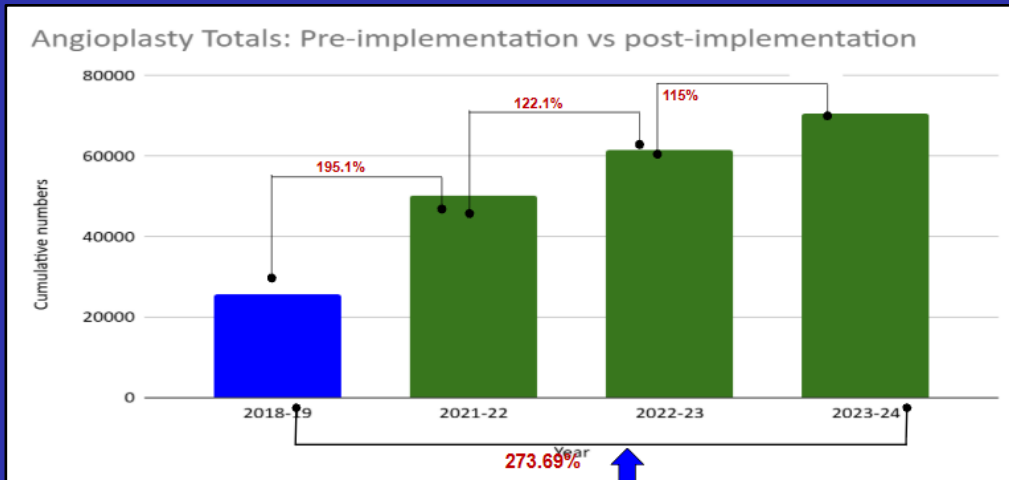
Trends in Thrombolysis

- Post-implementation across Phase I Districts, thrombolysis volumes have shown sustained year-on-year growth, increasing by **209.2%** overall between 2018–19 and 2023–24, indicating significantly improved access to timely reperfusion therapy within the MH-STEMI network.



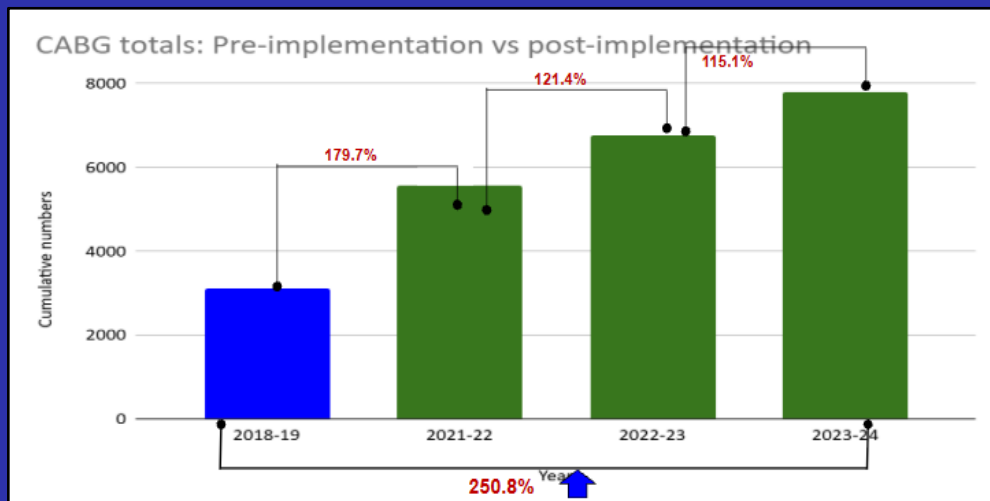
Trends in Angioplasty

- Post-implementation across Phase I Districts, angioplasty volumes increased consistently year-on-year, demonstrating an overall growth of **229.3%** between 2018–19 and 2023–24, reflecting strengthened access to advanced cardiac intervention services within the MH-STEMI network.



Trends in CABG

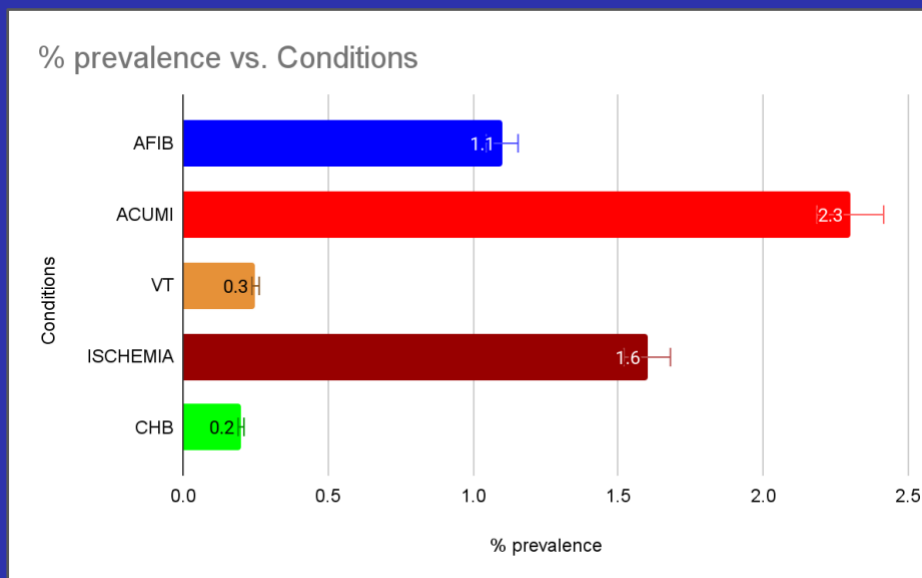
- Post-implementation across Phase I Districts, CABG procedures demonstrated sustained growth, with volumes increasing by **132.6%** between 2018–19 and 2023–24, indicating enhanced access to advanced surgical cardiac care within the MH-STEMI network.



Other Heart Disease Prevalence

- The total dataset also demonstrated notable prevalence of other cardiac abnormalities, including non-STEMI acute myocardial infarction (**2.3%**), ischemia (**1.6%**), AFIB

(1.1%), ventricular tachycardia **(0.3%)**, and complete heart block **(0.2%)** across the total screened population.

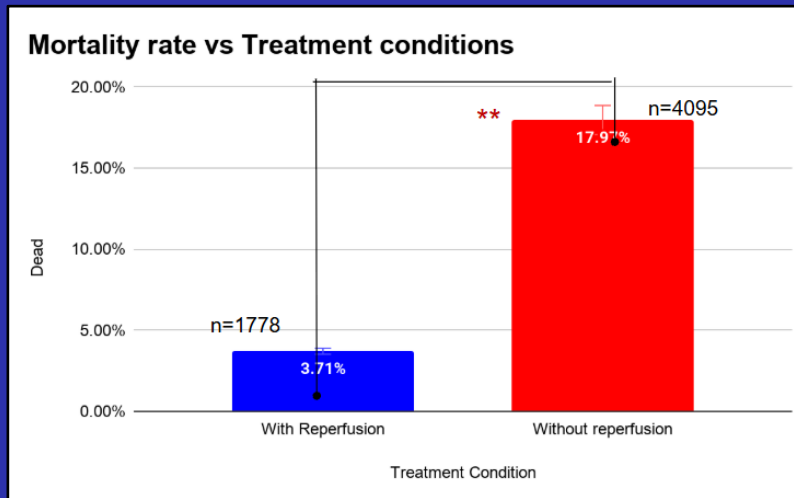


Other Quantitative Trends

STEMI Outcomes Reports to Facilities (Timeline Jan 1, 2023 through March 31, 2026)

- Cohort: **17,049** STEMI patients
- TAT for detection of STEMI = **2** mins
- ECGs done in non-OPD hours (4 PM to 8 AM): **35.37%**
- TAT for non-OPD hour detections: 02 minutes, SD = **+/-3.04** mins.

Impact on Mortality of Patients With and Without Treatment



- STEMI patients who received reperfusion treatment had a significantly lower mortality rate of **3.71%**, compared to **17.97%** among patients who did not receive reperfusion, highlighting the critical impact of timely intervention in improving survival outcomes.

* * *

Maharashtra's STEMI initiative has sought to redesign acute cardiac care around the central clinical fact that survival in STEMI depends on the speed with which diagnosis is made, and reperfusion or other forms of treatment are initiated. As noted, Tricog serves as the backbone of this Program, providing end-to-end technology, implementation, and service support: from installation, to training, STEMI protocols, ECG outcomes, emergency response workflows, timely intervention pathways, patient management, scientific support, awareness initiatives, and data collection and analysis.

The Program's main purposes are two-fold:

(1) to standardize real-time diagnosis and triage pathway processes within the context of variable geography and fragmentation of cardiac care in Maharashtra; and

(2) to reduce the delay between symptom onset, diagnostic confirmation, and downstream treatment, especially in settings where cardiac expertise and/or catheterization capability are not immediately available.

The Program was first launched In **April of 2021**, as a pilot in **~12** Districts, structured around hub-and-spoke architecture much like the earlier successful pilot in the State of Goa, where Tricog also served as technology and implementation partner. Under Maharashtra's Program, patients presenting with acute chest pain -- at their first point of health contact -- typically **primary care centers**, and often in **rural geographies** -- undergo ECG testing, with ECG reports then transmitted in real time through Tricog's **CardioNet** platform for rapid interpretation and appropriate next-step triage of **STEMI** and other **critical patients**.

Reporting on the success of the **pilot** program, in **May of 2024**, the Times of India noted that **>890,000** ECGs had been carried out in the original 12-District pilot, signaling **6,777** acute cardiac events and identifying another **17,922** critical heart diseases. Based on that early piloting success, Dr. Dheeraj Kumar, the (then) Commissioner of

State Health Services for Maharashtra, expanded roll-out of the Program across **~2,415 primary health centers**, for broader Statewide institutionalization. There has been great interest/media attention associated with this roll-out.

Cardiovascular disease: STEMI project fuels hope of cutting down premature deaths

ANURADHA MASCARENHAS
PUNE, SEPTEMBER 28

A MAHARASHTRA government STEMI (ST-Elevation Myocardial Infarction) project to tackle the burden of premature deaths due to cardiovascular disease has used AI-assisted verified technology towards quick detection of a heart attack. Within the first year of implementation, nearly 2.5 lakh people have been screened and more than 2,000 heart attacks have been detected within an astonishing turnaround time of less than 6 minutes, allowing patients to receive treatment promptly.

Ischemic Heart Disease increases the probability of heart attacks, the most common one being ST-Elevation Myocardial Infarction (STEMI), causing premature deaths as well as disabilities in years of life lost (YLLs).

FULL REPORT ON
www.indianexpress.com

State uses AI to quickly diagnose heart diseases

STAFF REPORTER / Mumbai

A leading cause of death in India, heart attacks cost 1.53 million lives every year. Recent reports suggest an increase in cardiovascular diseases in Maharashtra among men in the 30-40 age group and women in the 40-50 age group. One of the conditions causing premature deaths is ST-Elevation Myocardial Infarction (STEMI) - it affects the heart's lower chambers and changes how electrical current travels through them.

To combat this epidemic and provide the state with world-class cardiac care, the Maharashtra government has launched the STEMI programme, a state-wide Artificial Intelligence-powered advanced diagnosis and care co-ordination programme recognised by the National Health Mission (NHM). The aim is to enable rapid diagnosis of heart disease at all government centres with timely treatment.

The State Directorate of Health Services, joint director Dr Padmaja Jogewar said, "STEMI was initiated to tackle the burden of premature deaths due to cardiovascular diseases by using AI-assisted technology."

The initiative has been launched in Akola, Aurangabad, Jalna, Kolhapur, Nagpur, Nanded, Nashik, Pune, Ratnagiri, Solapur, Warananagar and Thane. As many as 2.5 lakh people have already been screened with the help of this programme. Notably more than 2,000 heart attacks have been detected within an astonishing turnaround time of less than six minutes, with timely treatment.

AI helps save over 6,000 at-risk heart patients in Maharashtra in past 2 yrs

Launched in January 2020, the STEMI programme has saved 6,144 lives across 12 districts

SURAJ PANDEY
suraj.pandey@indianexpress.com



THE state health department's AI-equipped programme launched in 2020 to screen and treat the silent killer - heart disease - has so far saved 6,144 people who were in immediate need of medical intervention, said officials.

According to health officials, cardiovascular diseases in Maharashtra are on the rise, affecting men in the age group 30-40 years and women aged 40-50 years.

They said that the risk of heart attack has increased due to ischemic heart disease caused by narrowed arteries. An ST-elevation myocardial infarction (STEMI) is the most common type of heart attack.

Aiming for early intervention, the state government launched the STEMI programme across 12 districts in collaboration with a health care technology company. In January 2020, of the 6,144 patients diagnosed and treated under the programme until now, nearly 1,200 are from the Mumbai Metropolitan Region, said officials.

Quick diagnosis

Explaining the diagnosis process, Tring Health CEO Dr Chaitan Rhojraj said, "The ECG machine is connected with an artificial intelligence transmitter fitted with a SIM, which immediately sends the report to the cardiologists. The doctor diagnoses the severity of the disease within 30 minutes of receiving the report. If the patient urgently needs angioplasty or any other intervention, we immediately guide them to the hospitals under the Maharashtra Jyotiba Phule Yojana and they are treated free of cost."

Dr Padmaja Jogewar, joint director, non-communicable diseases cell of State Directorate of Health Services, said, "The goal of this programme is to provide rapid heart disease screening facilities in all government hospitals of Maharashtra. The motto is to reduce the diagnosis and treatment, and save more lives. Once the diagnosis is done, the patient is referred to the hospital with cardiologists and surgeons."

145 centres

The government along with Tring has set up 145 centres in hospitals across 12 districts, where patients with symptoms like chest pain, shortness of breath, sweating, etc. are screened. If anything serious is found in the investigation, the patient is shifted to one of the 38 hospitals capable of providing treatment for heart-related diseases.

Now, AI programme will take care of heart attacks

Somika Bhatia
somika.bhatia@timesgroup.com



Mumbai: An artificial intelligence (AI)-powered programme to detect and tackle heart attacks within the golden hour has taken off across 12 districts in Maharashtra. In the making since April 2020, the programme aims to reduce cardiac deaths. It has helped diagnose nearly 2,000 heart attacks in little over a year.

The ST-Elevation Myocardial Infarction (STEMI) project is aimed at picking up heart attacks in individuals who come to public health centres with acute chest pain. The implementation is through a 'hub-and-spoke' model, where the 'spoke' centres such as sub-district and rural hospitals would detect and treat at its heart, or take the patient to a 'hub' centre such as a tertiary private hospital or medical college for further management. Currently, 145 spoke and 38 hub centres have been notified for the programme.

At the heart of the project is a single-lead electrocardiogram (ECG) machine, which is instantly updated and connected to a central database, owned by a Bangalore-based firm Tring. In the absence of ECG picking up a myocardial infarction, the application sends an alert to the medical team at the health facility and Cardiac Arrest Doctor (CAD) team, over 1,65,000 ECGs have been carried out, which helped in diagnosing 2,175 heart attacks and over 6,000 abnormal ECGs, as per public health department data.

N. Rameshwar, executive director, National Health Mission, said ischemic heart disease accounts for nearly 12% deaths, as shown in Global Burden of Disease data compiled by WHO. He said STEMI used several young lives, and the state is undertaking steps to improve training new healthcare workers and facilities.

STEMI is a serious condition with a greater risk of complications and death. When there is a decline in the ST segment on shown in ECG, that often means a total blockage of one of the heart's main supply arteries. Thane, Pune, Warananagar, Solapur, Ratnagiri and Kolhapur are some districts where the project is being set up at selected centres, said Dr Padmaja Jogewar, joint director of non-communicable diseases cell. She said nurses and doctors at spoke centres are being trained to diagnose the risk by injecting medicine.

The life of a 50-year-old, who came to Warananagar hospital with severe chest pain, was used in January during STEMI, said Dr Padmaja Jogewar.

The life of a 50-year-old, who came to Warananagar hospital with severe chest pain, was used in January during STEMI, said Dr Padmaja Jogewar.

Maharashtra's initiative thus far may be summarized succinctly by three key learnings:

- **Real-time ECG interpretation at first point of medical contact, is essential for early identification of acute cardiac events;**
- **Diagnosis itself is only part of the solution -- the broader functional architecture is equally important. Beyond the headline metric of STEMI diagnoses, hub-and-spoke coordination is critical if diagnosis is to translate into meaningful treatment in a State known for wide variation in geography and facility capability. Otherwise stated, all aspects of the care continuum are consequential -- from ECG acquisition at the**

spoke; to remote/centralized confirmation; to protocolized decision-making; and ultimately, as needed, to higher-level treatment/care; and

- **Outcomes as ultimate metric:** More recently, as the Program has matured, Maharashtra has expanded its focus beyond the goals of ensuring that acute events are detected within the “golden hour,” and that care pathways are coordinated and standardized. The State now also seeks to track greater details around **patients’ downstream care and outcomes** (e.g., angioplasty, bypass surgery, medical management, death), to ensure pathways move patients to treatment quickly enough to **change outcomes**. Approximately **25,640 STEMI cases** were detected across Maharashtra, of which **89.2%** were successfully managed, translating to **nearly 22,870 lives saved** on discharge through timely intervention and treatment.

Beyond examining changes in clinical outcomes, the State also had interest in evaluating **ecosystem changes/outcomes** from the Program. To that end, before the Program started, an **ecosystem gap assessment** was conducted across **1,766** healthcare facilities, identifying a number of critical challenges affecting timely STEMI diagnosis, treatment, referral, and emergency preparedness. Here is a summary of those gaps/challenges, and a description of how the STEMI Program very specifically responded to those gaps and challenges:

Key STEMI Gaps Identified Before Partnership	
Gap Category	Quantitative Insight
Diagnosis Gaps	~5% facilities have cardiac marker kits
Treatment Gaps	Thrombolytics in ~5.7% facilities; 0% PHCs had trained physicians
Infrastructure Gaps	ICU ~1.1%; ALS ~4.5%
Referral Network Gaps	~14% centers connected to cath labs
Preparedness Gaps	100% facilities required STEMI & thrombolysis training
Community Awareness Gaps	Delayed presentation (qualitative)

Gaps Addressed through Implementation of STEMI Program	
Gap Identified	Corrective Actions Taken
Low ECG access	100% ECG coverage achieved across facilities.
Delay in diagnosis	24x7 cloud ECG reporting enabled Statewide.
Lack of triage protocols	The standardized hub-spoke STEMI Protocol is implemented Statewide, and hubs are networked with the spokes for an effective referral process.
Lack of trained workforce	~22,161+ HCWs trained; STEMI Grid certification launched.
Weak Monitoring & Evaluation	State STEMI Registry & dashboard established.

3. Maharashtra's STEMI Collaboration With Tricog: What it Signals Going Forward and Other Lessons Learned

As introductory commentary to this Section and for broader contextual understanding, we offer two initial overarching observations about Maharashtra and other NCD-related public health tender processes in India:

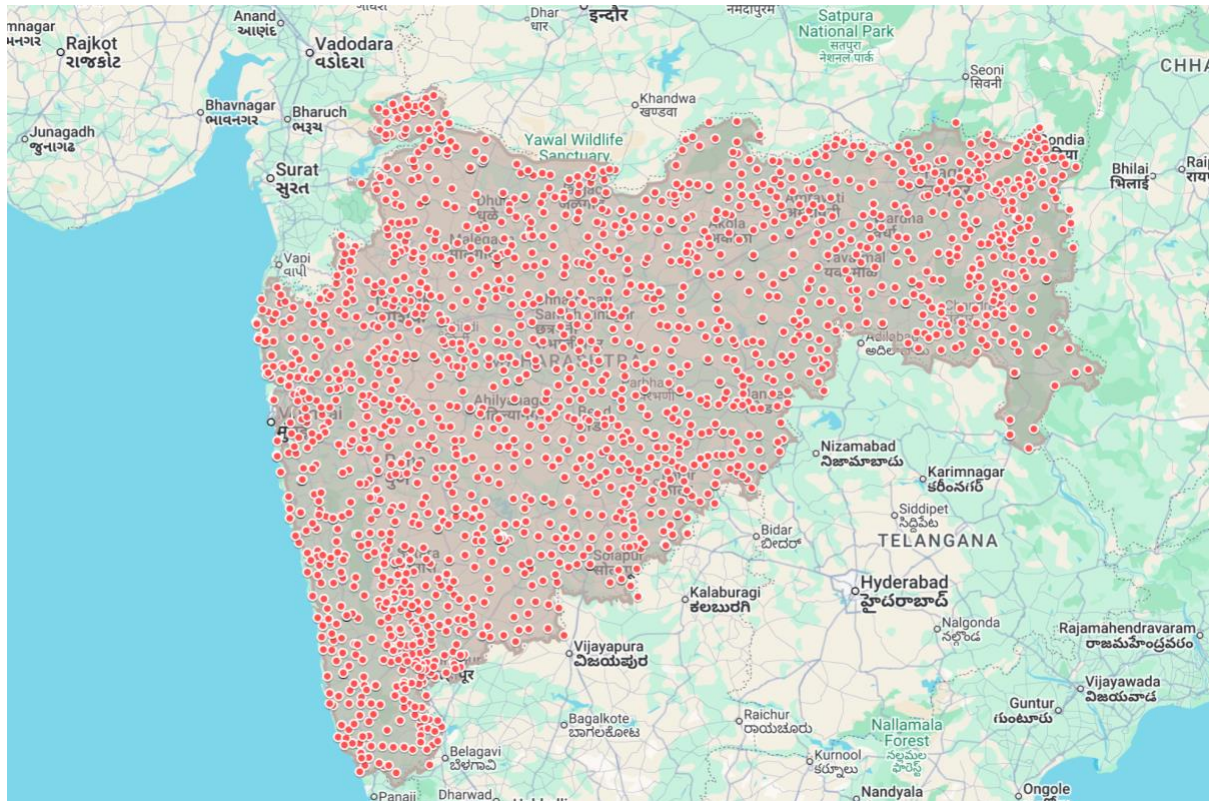
(1) First, about Maharashtra itself: within India's public health landscape, Maharashtra occupies a **leading position** as a **large, complex State** whose Programs are closely watched and often used by other States as a **"reference model"** for **scaling of services**. Successful scaling in Maharashtra, signals the promising potential for scaling in other States (and other LMICs) as well.²

Provided below is what Tricog calls the "red map" -- its installations across Maharashtra -- evidencing just how truly comprehensive this scaling has been.

² While Maharashtra is widely regarded as a benchmark State for large-scale public health deployment, it is part of a **broader group of exemplar States in India**. For example:

- **Tamil Nadu** is often viewed as the gold standard for procurement and supply chain efficiency;
- **Kerala** for primary care and population health outcomes;
- **Karnataka** and **Telangana** for innovation-driven adoption; and
- **Gujarat** for its operational efficiency/discipline and structured governance.

In practice, policymakers and health system leaders draw on insights from **multiple States**, using **Maharashtra** primarily as a **reference point** for **scalability within complex, high-volume environments**.



The depth and scope of this scaling, together with impact/outcomes data described above, place Maharashtra as **India's most significant, successful State model** for **STEMI** care to date.

(2) As a second observation, within India's State tendering processes, the **strengthening of NCD care** systems is a **relatively recent focus** in India. Historically, public health procurement has prioritized infectious diseases and maternal and children's health, reflecting both domestic policy priorities and the direction of global health funding more generally.

As a related observation, **digital AI-enabled care systems**, likewise represent a relatively **recent focus** for India's public health tenders. Digital, AI-enabled **disease-specific systems for NCDs** (vs. broader digital/AI infrastructural architecture), represent an **even newer focus** for public health in India.

For those in private sector focused on **AI-enabled NCD-related care**, these still emerging areas of State healthcare system-strengthening, present **important near-term opportunities** for the right companies, the right innovation, and the right States.

Tricog serves as an **important, first-mover case study** for these opportunities. Its unique private sector successes to date in Maharashtra (and other States), provide a number of insights for those seeking to better understand how India is strengthening NCD care in States' public health systems, starting at the primary care level.

Examples of these learnings follow:

- **Scale of STEMI hub-and-spoke triage and other clinical care interventions are possible even in complex, high-volume, and heterogeneous States (and countries).** Goa's prior pilot study demonstrated well that the hub-and-spoke STEMI model could be implemented, with the right advanced technology and related Company support. Building on pilot precedents, Maharashtra has now **strengthened the National (and broader LMIC)**

argument that the model can function well across very large public health systems with varied/expansive geography, varied capacities, and population scale comparable to countries like Japan.

Relatedly, what has been central to successful scaling across large, heterogeneous States (and countries) like Maharashtra: a **consistently defined framework for diagnosis and intervention**, and **standardization throughout the continuum of care**. In the case of Maharashtra, the Program deployed, for example, uniform criteria for STEMI identification, well-defined referral pathways; consistent escalation triggers; and standardized reporting formats.

- **Priority concerns:** Maharashtra's experience suggests that the most scalable NCD-related digital health deployments not just in India, but in other LMICs as well, will be those that **solve important specific bottleneck(s) in the NCD care continuum**. In this case, the chief bottlenecks were **delayed diagnosis** and **delayed referrals to treatment**.

Given the relative newness of digital NCD system strengthening, there are a **multitude of other bottlenecks yet to be addressed**. Only as examples: scarcity of intensivists in ICUs; poor remote patient follow-up; cancer/stroke/COPD care; the scarcity of NCD risk screening at the population level; and the general absence of longitudinal data relating to patient treatment and care.

- **The most forward-looking LMIC health authorities working to strengthen their NCD systems, will not be deploying isolated AI tools. They are focusing, as they should, on fully integrated, multi-layered, digital health architecture across NCD care systems:**

Maharashtra and Tricog have provided real-world validation that digital health tools are most powerful, when they are integrated at **every level of a State's operating health infrastructure and workflow**. Tricog's is integrated into **primary health centers**; across District **referral pathways**; and through State **training, financing and Program management**. This integration reflects Maharashtra's broader strategy to interweave AI systems into a **cohesive approach** that combines **multi-layered, horizontal AI-enabled platforms**, with **vertical disease-specific care system deployments**. The digital ecosystem is then further harmonized with **institutional partnerships and innovation pipelines**. As examples:

Layer	Partner	Focus Area	Type of Contribution
1	Wadhvani AI	Multi-disease/NCDs	<p>State-wide “horizontal” AI public health platform (major system partner) with formal MoU between Government of Maharashtra and Wadhvani AI.</p> <p>(Very broad NCD relevance) -- deployed across primary healthcare systems, maternal and child health, and digital health platforms.</p> <p>Not a single product (platform-level AI integration across public health). Extends into NCDs via population screening, risk stratification, longitudinal monitoring, and frontline worker support.</p>
2	Tricog Health	Cardiology (STEMI)	Vertical, complementing Wadhvani AI.
3	Driefcase	Digital health records	Provides digital health records; interoperability under National systems; longitudinal patient data management. Not disease-specific, but critical for NCD continuity of care and disease management.
4	AIIMS Nagpur + UNICEF	Childhood NCDs	<p>Formal State partnership with AIIMS Nagpur, supported by UNICEF.</p> <p>Childhood NCDs, including diabetes, asthma, obesity, congenital heart disease, mental health, and sickle cell disease.</p> <p>To be built -- standardized protocols, district-level NCD clinics, screening and referral systems, and workforce capacity building.</p> <p>This is an emerging systems-level NCD program, not a tool, though likely to incorporate AI- and data-driven decision systems.</p>
5	Tata Trusts	Oncology/ NCDs	<p>Multiple MoUs between Maharashtra and Tata Trusts ecosystem partners.</p> <p>Strengthening cancer care, tertiary hospital networks, and rural and urban care access. Includes digital health, care coordination, and financing pathways. Not purely AI, but increasingly data-driven and digitally coordinated care models</p>
6	BETiC (IIT Bombay)	MedTech innovation	<p>MedTech Innovation Ecosystem (Upstream Pipeline).</p> <p>Biomedical Engineering and Technology Innovation Center (BETiC), supported by Government of Maharashtra -- develops medical devices and diagnostic technologies.</p> <p>This is the innovation feeder system, including potentially AI-enabled diagnostics and low-cost NCD tools.</p>
7	ABDM (National)	Digital health infrastructure	<p>National Digital Health and AI Layer (Indirect but critical).</p> <p>Ayushman Bharat Digital Mission (“ABDM”) -- AI-enabled telemedicine and diagnostics infrastructure. Supports data integration and AI deployment at scale. To be used across NCD management.</p>

Two points of note emerge from this table:

--First, virtually all of Maharashtra's AI partnerships (that we were able to locate), have involved **broad digital infrastructural support**, reflecting the relative newness of the State's AI-enabled NCD care system roll-out.

--Second and relatedly, thus far Tricog appears to be the **only contract** that has moved beyond data and analytics infrastructure, to support **disease-specific clinical care (decision support, triage, and intervention)**. This distinction places Tricog in the enviable position as one of very few companies **leading the country in scaled, vertically-integrated NCD care** for public health, starting at the **primary care level**.

Here's a more summary "top-down" view of Maharashtra's NCD-related digital ecosystem layers:

Maharashtra's NCD-Related Digital Health Ecosystem Stack (Top-Down)
ABDM (National infrastructure)
Horizontal AI platforms (Wadhwani AI)
Patient healthcare data layer (Driefcase)
Vertical disease-specific care (Tricog)
Innovation pipeline (BETiC)

- **The importance of supportive National policies:** Helpful to new forms of public health partnerships, are central government policies **encouraging State attention** to specific areas of clinical care (in this case, STEMI). The **National government** has played a **catalytic** role in advancing STEMI care through National programs under the National Health Mission and the National Program for Prevention and Control of NCDs, which emphasize early detection, standardized treatment protocols, and strengthening of District-level infrastructure. These policies lend **political credibility and justification** to new health initiatives, in an environment of **constrained health budgetary resources**, and **competing health system demands**.

The **next step** in **National policymaking** is to scale the success story in Maharashtra, as the **standard** to be **followed countrywide**. We discuss this issue in further detail below.

- **The essential role of pilots, and sometimes more than one:** In complex public systems (and new systems of care for NCDs are some of the most), pilots are the de-risking mechanism through which political, clinical, and operational buy-in is secured. The **more complex** and **clinically significant** the initiative, the greater the need for **multi-staged, sequenced validation**.

For Tricog's purposes, the **Goa pilot** validated the core **clinical** and **technological** model, including the feasibility of ECG transmission; the accuracy and speed of remote interpretation; and the viability of hub-and-spoke referral systems. A second pilot was then undertaken at the District level of Maharashtra to **validate real-world capability to scale** within **large, heterogeneous, and complex public health systems**. By the time the 12-District pilot in Maharashtra had demonstrated success, the core theme for Statewide expansion was no longer feasibility of scale, but, rather, how fast the initiative could be deployed across the State, and how Programmatic success would be reported out and evaluated.

- **Helpful to winning tender bids, are structured procurement models that: (a) reduce the State's financial barriers to adoption; (b) simplify State roles; and/or (c) focus more on service delivery than on ownership of technology.** In Maharashtra, Tricog's financing model was structured on a per-ECG usage basis. This offered a practical and scalable alternative to a traditional capital investment model **eliminating the need for upfront CapEx and related financial commitments by the State (e.g., hardware procurement, software deployment, infrastructure setup, and technology integration).**

Instead, the model functioned as an **end-to-end managed service arrangement**, wherein Tricog

assumed responsibility for the **complete operational ecosystem**, including infrastructure build-out, hardware deployment and maintenance; clinical and operational training; STEMI alert management; reporting workflows; and data management. This procurement structure reduced the State's financial barriers to adoption; simplified implementation; and enabled the health system to focus on (and garner praise for) service delivery and outcomes rather than on the issue of who owned what in the care system process and related technology stack.

- **Especially for digital NCD care, early entrants have both commercial and structural advantages:** In public health system innovation, early entrants can shape the architecture of care delivery itself, creating long-term, structural positioning rather than short-term vendor relationships. This is especially true for tenders involving NCD ecosystem strengthening, which, as noted, is unfolding in India and other LMICs in real time.

Tricog's early involvement in Maharashtra, has provided a meaningful first-mover advantage, **not just commercially**, but **structurally** as well. By entering at an early stage, when States are still in very early phases of strengthening cardiac care pathways, Tricog has been able to help **define clinical workflows**, and **showcase** its platform **more as an infrastructural layer, than as an add-on tool**. Once fully integrated into State procurement, training

systems, and referral protocols, incumbent solutions are seen as having enduring value (i.e., they are difficult to replace).

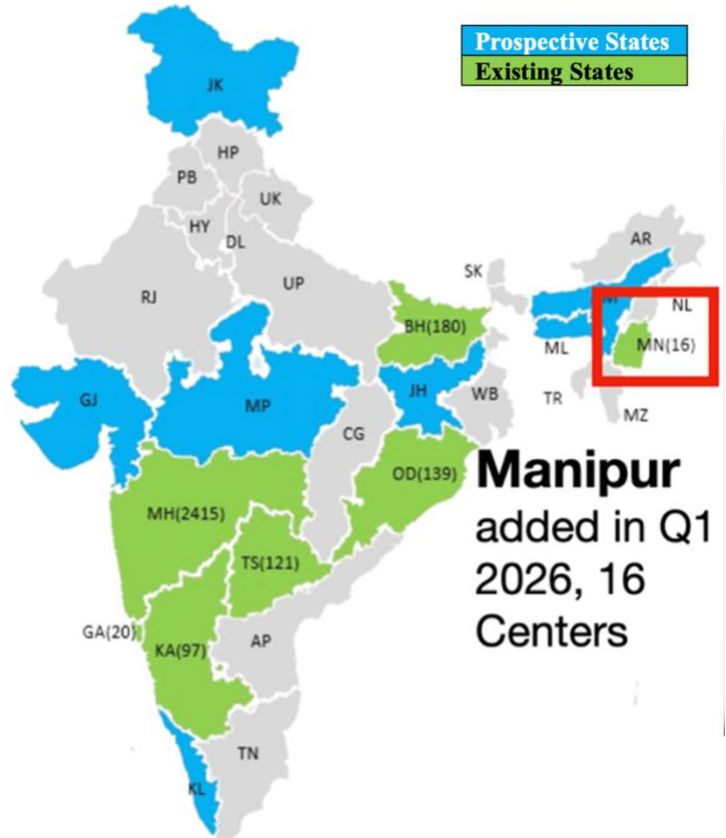
- **The multiplier effects of large public health tender successes:**



To our awareness, Tricog's partnership with Maharashtra represents **one of the first and largest State NCD health tenders to date in India (and the Global South)**, involving **AI-enabled, disease-specific care**. The role of **private sector innovation and implementation leadership** from a small/medium-size entity ("**SME**"), is notable. This successful, well-executed Statewide Program in Maharashtra now functions as a de facto **benchmark for other States**. It signals that **large-scale deployment** of AI-enabled NCD solutions from the **private sector**, including from an **SME**, is **clinically important, politically executable, and operationally viable** across **complex, high-volume** State systems. This Programming, thus, positions the Maharashtra/Tricog success story, as a **general**

template for National scale, materially lowering barriers for **replication by Tricog in other States**.

As evidence of Tricog's favorable momentum at the State level, its partnerships with other States have both **accelerated** and **grown in size**, alongside Maharashtra. Here is a graphic of this growth.



These State activities are not restricted to



STEMI alone. As an example, Tricog, with sponsorship support from **Stanford Biodesign**, has begun an **echocardiography pilot** project in the State of **Uttar Pradesh** to **screen all school children for structural health diseases**. The Company is hopeful that this pilot will allow for expansion of echocardiography in public health settings more broadly, to improve State capacity to identify this

important subset of cardiovascular disease, often invisible until it is too late.

- **Reducing the risk of meaningful competition:** Helpful to scaling opportunities as well, is that Tricog has **high quality innovation** with a **strong experience base** in multiple countries, and **technology moats** to protect against commoditized pricing. These collective attributes allow for **little meaningful competition** in tendering process.
- **The importance of domestic solutions:** Also helpful is that Tricog's innovations are Indian-based. State governments in India often **prioritize domestically developed health solutions** in tender processes, as these are more likely to be viewed as cost-effective, locally adaptable, aligned with National interests, and well-tuned to the operational realities of India's public health systems.
- **The clinical/tech duality of Tricog's AI-enabled offerings, and why it has served as central strategic support:** The successful scaling of digital, AI-enabled health systems -- particularly for acute care settings and for new, complex clinical management protocols -- depends not only on **technological capability**, but also on **clinical authority**.

One of Tricog's defining advantages for State interest, has been its **intentional dual focus** on both clinical

care and AI-enabled technology, rather than positioning itself purely as a digital or AI company. While many digital health platforms rely primarily on algorithmic outputs, Tricog has **embedded clinical expertise** directly into both its **operating model** and **leadership structure**, creating a system that is perceived as medically grounded rather than technologically imposed.



This clinical distinction begins at the **leadership level**. Under the direction of Dr. Charit Bhograj, a well-known and widely respected practicing cardiologist, the Company has been shaped by a clinically informed perspective on care delivery, ensuring that product design, workflow integration, and deployment strategies align with real-world medical practice. This has meaningful implications: decisions around triage thresholds, escalation pathways, and reporting workflows are guided not only by technical feasibility, but by clinical judgment and standards of care.

Equally important is the structure of the diagnostic platform itself. Tricog's network of cardiac specialists who validate, interpret, and contextualize results in real-time, transforms the platform from a diagnostic tool, into a **continuously operating clinical service layer**, effectively extending specialist expertise into

settings where cardiologists are not physically present.

This duality -- AI-enabled speed combined with clinician oversight -- has proven critical in overcoming **one of the most persistent barriers** to AI-enabled health solution adoption worldwide: **trust**. In most health systems, purely algorithmic solutions encounter resistance from **frontline clinicians** concerned about **accuracy** and **proper care**; **administrators** seeking **accountability** and **standardization**; and **key cardiologist opinion leaders** whose endorsement is **necessary for adoption**.

Hybrid AI + Clinical Mode (AI Layer)	Hybrid AI + Clinical Mode (Clinical Layer)
Speed	Validation, authority and proper care
Pattern recognition	Trust
Scalability	Accountability

- **The value-adds of teams in the field:** Digital health systems -- particularly complex systems that trigger new care protocols across widely varying care settings -- succeed only when paired with robust on-the-ground operational support, easily accessible to State personnel managing roll-out and daily use. This is especially important for **SMEs** like Tricog, partnering with **large, heavily populated** States like Maharashtra. Part of the formula for Tricog's success to date, has been its ability to find the right on-the-

ground hardware and technology network that could help mobilize and execute installation orders quickly, and thereafter maintain high-quality logistical/service support, ensuring overall reliability of the system.

Among other activities, the network has focused extensively on capacity building through **training of >22,000**, including **healthcare providers** and **ambulance staff** (STEMI protocols, emergency response workflows, patient management, and timely intervention pathways), complemented by additional **protocol training for medical officers, scientific support**, and **awareness initiatives**. These training obligations are ongoing: the tender requires repeated training, and new training for staff rotations, transfers, and new staff induction.



Tricog's network of field service and program management teams represent a sizeable network of **~60-65 personnel** in Maharashtra, overseeing effective implementation and sustained operational efficiencies.

- **The value-adds of data generated:** Tricog's technology is generating a substantial, highly valuable body of real-world clinical data, with important insights for State health authorities, cardiologists, researchers, and other stakeholders seeking to contribute LMIC solutions to STEMI and CVD care more generally.

For **States** and **National health authorities**, the growing dataset enables:

- (a) improved population-level understanding of not simply STEMI, but other cardiovascular disease patterns as well;
- (b) improved resource allocation down to the District and even hospital level;
- (c) improved insights on not just outcomes, but also such issues as continued care gaps and needed prevention strategies; and
- (d) improved health system planning more generally.

Beyond these benefits, the data are solving yet **another historical bottleneck** in India -- the **relative scarcity of meaningful population-based STEMI and CVD data** -- needed to support programming, policy, and funding decisions, and now available at a fraction of the time and cost. As noted previously, a **digital, de-identified patient registry** and **related**

dashboard, serve as an integral part of the Program, facilitating data collection efforts.

From **Tricog's perspective**, the further aggregation of large-scale, de-identified patient data, enhances discussions with other States and countries concerning the value of its innovations; further refines cardiovascular algorithms, especially for conditions that are rarer and/or hard to diagnose; and otherwise places the Company as having **the largest** repository of STEMI data in India and the Global South more generally.

Tricog's growing dataset has **broader ecosystem relevance** as well. Only as one example, it encourages collaborations with **pharmaceutical companies, medical societies**, and other interested parties (consistent with regulatory/ethical frameworks), to better understand patient cohorts, risk-factors, disease progression, and treatment responses in real-world settings.

- **Effective/sustained program impact relies on the entire ecosystem of stakeholders:** There have been **three categories** of stakeholders critical to Maharashtra's STEMI Program:

--**Public health** and **policy** stakeholders, including the State's **Health Minister** and related **State** and **District authorities**, without whom there would not have been successful roll-out of the STEMI Program;

--**Clinical** stakeholders, comprising both **frontline doctors and other medical personnel** working to ensure implementation and growth; and **scientific/cardiology key opinion leaders**, needed to support the program and advance its mission; and then thirdly,

--**Tricog** and its on-the-ground **network of personnel**, helping to ensure effective implementation, sustained reliability, and operational efficiency of the Program.

Each of these three categories of contributors in Maharashtra's ecosystem, has served as an engine of growth and successful outcomes for the Project. Working relationships between the three categories of stakeholders have had to be **closely synchronized and coordinated**, for these successes to occur.

- **Maharashtra as standard for States across India:** Related to the prior bullet, and in recognition of the close interrelation between these three stakeholder groups, Tricog will convene **stakeholder meetings later this year** to capture the **essential consensus themes** of success, that have emerged from this Program over the last five years. Because Maharashtra represents India's most significant, successful State model for STEMI care to date, and has had time to evolve and refine "best practices"

over the years, the key elements to successful State STEMI care systems, are now well understood.

From these stakeholder discussions will come **published report(s)** to be shared at the National level, to garner National support for Maharashtra's Program serving as the **standard for other States to follow**. The standard for National roll-out would include Maharashtra's implementation processes; its hub-and-spoke referral pathways and protocols; and follow-up/outcomes management (including supporting data). There would also be acknowledgement around the **critical role of Health Ministries** (and **public systems** more broadly), to **meaningful impact**, and there likewise would be acknowledgement of **AI-assisted technology** as a **key enabler** for Program **success**.

To facilitate future referencing of these takeaways from the Maharashtra experience, we summarize below, core marketing insights for scaling AI-enabled, NCD care solutions for use in India's public healthcare systems:

Summary of Core Marketing Insights for Scaling AI-Enabled, NCD Care Solutions for Use in India's Public Systems	
<ul style="list-style-type: none"> • Pilot(s), and prior experience in similar settings, de-risk implementation • Central to State interests: important bottlenecks in NCD care continuum, starting with first medical contact (primary care) • First-mover advantages: both commercial and structural • National policies can be catalytic • Domestic solutions prioritized • High-quality, protected innovations reduce risks of competition from lower price options 	<ul style="list-style-type: none"> • Duality of AI + clinical models builds trust • Key to scaling large, complex systems: standardized/consistent decision-making, and well-defined, coordinated pathways • For SMEs, 3rd party boots-on-ground assistance necessary for large contracts • The multiplier effects of scaling in a large State (other States) • Data as strategic asset • Key stakeholders (government, clinical, private-sector partner), must synchronize their efforts, if success is to be achieved.

C. Conclusion/Looking Forward

As we cast our attention forward and conclude our takeaways from Tricog's partnership, we end this Spotlight with several final observations specifically focused on **impact**:

- **Framework for successful impact through scale:**
In India (and LMICs more generally), specific NCD-related care **solutions at scale** are most likely to succeed when **five conditions are present simultaneously** --
 - (1) a **clearly defined clinical use case**, starting at first point of medical contact (generally **primary care**), addressing a **significant NCD burden**, and helping to solve **important bottleneck(s)**;
 - (2) **high-quality, protected innovation**, and **significant field experience** in multiple settings (especially for **SMEs**). In India, **domestic innovation preferred**;
 - (3) **strong governmental support around clinical need**, including at the National level, coordinated closely with clinical stakeholders, and the private sector partner (and its network, as needed);
 - (4) **full structural integration** into the public health digital ecosystem (vs. add-on innovation); and
 - (5) a **holistic, cohesive pathway**, representing the **full continuum of care** (e.g., from early diagnosis at first point of medical contact, to triage and treatment), with processes **standardized** and **capable of being evaluated** for **cost-effectiveness** and **clinical outcomes**.

Favorable Conditions for Scalable Public Sector Impact in India/LMICs (Five Pillars)
• Clear clinical use case (large NCD burden bottleneck(s), starting at first point of medical contact)
• Government policy support for clinical need
• High quality and well protected tech already used in multiple settings (in India, domestically produced)
• Full tech system integration
• Full end-to-end care continuum of service offerings

- The potential for digital health/State governance divides in India:** It is expected that States like Maharashtra that can implement digital STEMI and other NCD-related care systems into their public workflows, will begin to show measurable outputs and clinical effects. In the case of STEMI: gains in detection, triage, continuity of acute cardiac care, and ultimately outcomes. This will make it harder to justify Indian States with low-integration environments, knowing that the technology exists, but the system response does not. National policy and funding solutions will be needed to reduce these digital health disparities.
- Maharashtra's partnership with Tricog should be studied carefully because its broad framework is a model for AI-enabled, NCD-related primary care and referral systems, applicable to most LMICs:** As other Indian States and LMICs build pieces of their digital health future, Maharashtra's STEMI program serves as a useful "playbook reference," especially for

time-sensitive NCD care. As noted, the Tricog/Maharashtra partnership has achieved “reference” status because of its **first-mover lead** in digital public health infrastructure for specific **NCDs**, and because successful **scaling** in a large, densely populated, and complex State like Maharashtra, serves as **general validation** for other locales.

Beyond the State’s **best practices** and **lessons learned** to be captured at Tricog’s forthcoming stakeholder convening, described previously, Program performance should be evaluated, ideally through multiple independent, evidence-based reviews that assess all important aspects of the Program. Notable features to be included in these reviews: workflows and related implementation methods; procurement models; training and other issues relating to frontline workers; cost-effectiveness and related evaluation processes; State and District governance; data insights, including outcomes; and any remaining gaps in the system warranting further public health and research attention.

The most important of these assessments and related learnings, should then be disseminated broadly through global health conferences and publications.

- **Potential applicability of Maharashtra's STEMI Program to LMICs more generally -- a pathway proposal:**

a. The relevance of Maharashtra to LMICs

As our last, but one of the more significant, takeaways in this report, we note that the relevance of Maharashtra's STEMI initiative, extends well beyond India. While Maharashtra serves as the operational case study for this Spotlight, the underlying challenges it seeks to address -- delayed diagnosis, fragmented referral systems, shortage of specialists, variable frontline care capacity, and prolonged time to treatment -- are common across much of the Global South and other LMICs.

As described in Section A, ischemic heart disease remains the leading cause of mortality worldwide, with an increasingly disproportionate burden falling on LMIC populations. In many countries across Africa, South Asia, and other resource-constrained regions, patients experiencing acute myocardial infarction frequently encounter the same structural barriers observed historically in India: limited ECG access at first point of medical contact; absence of real-time interpretation; delayed referrals; fragmented transport systems; and severe shortages of cardiologists and catheterization facilities. As a result, otherwise treatable cardiac events often progress to avoidable mortality and disability.

Maharashtra's experience demonstrates that these barriers are not insurmountable. The combination of AI-enabled ECG interpretation, cloud-based coordination systems, standardized hub-and-spoke referral pathways, and integration into public health workflows, provides a scalable framework -- a framework capable of materially compressing time to diagnosis and treatment, even across large, heterogeneous, and resource-variable geographies like Maharashtra.

Importantly, Tricog's growing operational footprint outside India further strengthens the applicability of this model to LMIC settings more broadly. The Company's experience in the Philippines, Malaysia, and Kenya, together with planned expansion and data generation efforts in other African countries, provides an increasingly important **cross-regional dataset** reflecting diverse patient populations, healthcare environments, and operational realities. Over time, this expanding body of real-world cardiovascular data is helping to further refine algorithms, improve downstream triage and treatment capacities, and support applicability of Maharashtra's STEMI systems across LMICs.

For these reasons, the Maharashtra experience warrants close attention not only from Indian States, but also from global health agencies/policymakers and LMIC Ministries of Health, seeking scalable

strategies for strengthening acute cardiovascular care. In time, Maharashtra's STEMI initiative could come to be viewed not simply as a successful India State-level program, but as a broader reference framework for scalable, AI-enabled STEMI systems across other LMICs seeking solutions in this area.

b. Advancing the case for Maharashtra's STEMI Program to serve as an evidence-generating, public-system model for AI-enabled STEMI care in LMICs

Should a case be made for Maharashtra's STEMI Program to serve as a standard for LMICs seeking STEMI care solutions, the **World Health Organization ("WHO")** would play a leadership role. This organization both recognizes the severity of STEMI, and also understands that cardiovascular health programs are needed, especially at the primary healthcare level. More specifically, the WHO has acknowledged that **85%** of CVD deaths are due to **heart attack** and **stroke**, and over **three-quarters** of CVD deaths occur in LMICs. In collaboration with the Pan American Health Organization ("PAHO"), it also has endorsed the "HEARTS" initiative, a large-scale global cardiovascular disease prevention and hypertension control program, designed to strengthen primary health care systems, particularly in LMICs.

The principal theme to be advanced to WHO: Maharashtra demonstrates that acute cardiovascular care in low-resource settings can be redesigned as an end-to-end public-care system -- not merely as hospital-based cardiology -- by combining early ECG access, AI-assisted interpretation, specialist validation, standardized hub-and-spoke referral pathways, workforce training, and public-system integration.

Supporting any request that WHO endorse Maharashtra's STEMI care model, would be the following:

1. **Burden alignment:** Heart attack/ischemic heart disease is exactly the kind of high-mortality NCD problem WHO identifies as globally urgent, particularly in LMICs.
2. **Primary-care fit:** Just as the WHO's HEARTS technical package supports the strengthening of CVD management in primary health care settings, so too does Maharashtra's model of care.
3. **The focus is on systems, not just AI:** WHO's digital-health guidance evaluates digital interventions based on health-system benefit, harms, feasibility, resource use, acceptability, and equity. Maharashtra is an end-to-end, system-strengthening intervention, not a tech product, and there are favorable data

available addressing all of the WHO's considerations for evaluating digital health systems.

4. **Equity:** The model extends expert cardiac interpretation and related care services into rural and underserved settings where cardiologists are absent. More broadly, the public health model by definition is intended to support a locale's most underserved populations.

5. **Scalability:** Maharashtra is large in scale, heterogeneous, urban/rural, as densely populated as Japan, and operationally complex, making it an ideal proof point vs. a pilot.

6. **Replicability:** Experience in the Philippines, Malaysia, Kenya, and other countries in Africa, demonstrates that the model is not India-specific but, rather, adaptable across LMIC settings.

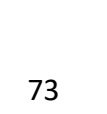
Beyond these broad categories of support, as noted, there is precedence for recommending Maharashtra's STEMI model for broad LMIC use. Like Maharashtra's primary-care model, the WHO/PAHO advanced the HEARTS initiative as a primary-care CVD management package, especially for hypertension and CVD risk management. A WHO-endorsed STEMI diagnostic-and-referral model, enabled through AI and based on Maharashtra's deployment, would be somewhat more novel than the HEARTS precedent; however, with the right multi-

country evidence, and the right policymakers and key opinion leaders championing the effort, WHO support is potentially achievable and should be considered. As noted, any WHO request should be framed carefully -- not as a Company or technology endorsement, but around Maharashtra's evidence-generating, public-system model for AI-enabled STEMI care.

We provide next, a more granular look at the type of evidence that might be helpful to making this case. The first column of evidence in particular warrants consideration, and peer-reviewed publication(s), including outcomes, leads that list.

CRITICAL EVIDENCE REQUIRED FOR WHO CONSIDERATION OF A SCALABLE AI-ENABLED STEMI CARE MODEL IN LMICS

Building the Evidence Base for Scalable, Equitable, and Life-Saving Impact

#	EVIDENCE CATEGORY	WHAT WHO WILL NEED TO SEE	WHY IT MATTERS TO WHO	KEY EXAMPLES OF INDICATORS
1	 INDEPENDENT PEER-REVIEWED OUTCOMES DATA <i>Impact on Patient Outcomes</i>	Published studies demonstrating impact on STEMI patient outcomes. <ul style="list-style-type: none"> All-cause mortality reduction 30-day mortality In-hospital mortality 	 WHO requires credible, independent evidence that the intervention improves survival—not just increases detection.	<ul style="list-style-type: none"> Risk-adjusted mortality rates 30-day survival rate In-hospital mortality rate Event rates per 10,000 population
2	 TIME METRICS IMPROVEMENT <i>Faster Care, Better Survival</i>	Measured reductions in key time intervals. <ul style="list-style-type: none"> First medical contact to ECG First medical contact to diagnosis Diagnosis to reperfusion/definitive treatment 	 Time is directly linked to survival in STEMI care. WHO prioritizes interventions that measurably reduce treatment delays.	<ul style="list-style-type: none"> Median time to ECG Median time to diagnosis Median time to reperfusion Door-to-needle / door-to-balloon time
3	 REFERRAL & CARE CONTINUITY METRICS <i>From Diagnosis to Treatment</i>	<ul style="list-style-type: none"> Referral initiation rates Referral completion rates Treatment completion rates Loss to follow-up rates 	 Demonstrates that the system not only detects patients but ensures they reach and complete lifesaving treatment.	<ul style="list-style-type: none"> % of STEMI patients referred % reaching hub hospital % receiving recommended treatment Loss to follow-up rate
4	 COST-EFFECTIVENESS EVIDENCE <i>Value for Money</i>	<ul style="list-style-type: none"> Cost per life saved Cost per DALY averted Cost per STEMI case managed Implementation and operating costs 	 WHO requires evidence that the intervention is affordable, provides value for money, and is sustainable at scale.	<ul style="list-style-type: none"> Cost per life saved (USD) Cost per DALY averted (USD) Cost per STEMI case managed (USD) Cost per facility / per year
5	 MULTI-GEOGRAPHY EVIDENCE <i>Applicability Across LMICs</i>	Evidence of implementation and outcomes across diverse settings (e.g., India – Maharashtra, Kenya – Nairobi, Angola, and other LMIC regions).	 Demonstrates adaptability and reproducibility across different health systems, geographies, and populations.	<ul style="list-style-type: none"> Number of countries implemented Urban vs. rural performance Population coverage Consistency of outcomes
6	 IMPLEMENTATION PLAYBOOK <i>How It Works in Practice</i>	<ul style="list-style-type: none"> Standardized protocols & workflows Training & capacity building model Governance & quality assurance Procurement & deployment model Data protection & interoperability 	 WHO needs a clear, replicable framework for how the model can be adopted, implemented, and sustained in public health systems.	<ul style="list-style-type: none"> Implementation guide / SOPs Training curricula & reach Quality assurance framework Governance structure Interoperability standards
7	 EQUITY & ACCESS EVIDENCE <i>Leaving No One Behind</i>	Evidence that the model increases access for underserved populations (e.g., rural, low-income, remote communities) and reduces disparities.	 WHO prioritizes interventions that advance health equity and leave no one behind.	<ul style="list-style-type: none"> Rural vs. urban access gap Gender equity in access & outcomes Socioeconomic coverage Equity impact analysis
8	 DATA QUALITY & MONITORING <i>Reliable Data, Continuous Learning</i>	<ul style="list-style-type: none"> Data completeness and accuracy Real-time monitoring dashboards Longitudinal data collection Outcome tracking and reporting systems 	 High-quality data systems are essential for ongoing evaluation, learning, and continuous improvement.	<ul style="list-style-type: none"> Data completeness rate Dashboard functionality Longitudinal follow-up rate Audit & data quality reports



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Although tailored to STEMI, other first-movers of AI-enabled NCD technology, especially those with significant impact in multiple LMICs, may find this framework guidance helpful, as they seek pathways to broaden their impact.

* * *

We conclude this report with one final observation about the transformative impact on public health from AI-enabled, NCD care systems. Serving the most underserved populations through public health, represents the most powerful pathway to achieving scalable and equitable health impact. By engaging with State systems, solutions are deployed not only where need is greatest, but where infrastructure gaps have historically limited access to timely and quality care. These partnerships have **impact with multiplier effects**:

- they extend advanced diagnostics and remote clinical expertise into communities that would otherwise remain beyond reach;

- they generate important data insights upon which further policies and Program patient care refinements can be made; and

- they establish new durable systems that continue to benefit patients' health long after their initial implementation.

In short, Maharashtra's STEMI Program represents the very definition of **transformative AI innovation**, developed by Tricog as part of an entire STEMI care system, also authored by that Company. We will watch with great interest as this leading CVD innovator continues to develop and deploy other forms of important AI-enabled CVD-related solutions, with the **mission to save 100 million lives by 2030**.

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