

The Power of Prevention: How Early Diagnostic Testing Transforms Your Health Journey

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The quest for good health is inherent in every living being. Good health demands fresh air, healthy food, and a secure environment—things that are rapidly becoming the exception in today's metro life. The road to wellness revolves around disease prevention, starting with screening. Just as, a housemaker avoids wastage by monitoring kitchen stock periodically, diagnostics promotes preventive medicine. Prevention has two levels: individual screening and population-based programs. India's National Health Mission and Ayushman Bharat Health & Wellness Centres under Universal Health Coverage (UHC) offer free screening of NCDs (Non-communicable diseases) to crores of people, and Rashtriya Bal Swasthya Karyakram (RBSK) screens

more than 100 million school-going children every year¹. This movement from hospital-based testing to screening at the community and school level brings early detection within reach at scale, targeting chronic diseases that cause 61.8% of deaths in India³.

Understanding the Preventive Testing Landscape

An active approach switches emphasis from the cure of disease to the prevention of disease prior to occurrence. Prevention starts with self-care and then moves to screening body fluids (blood, urine, swabs), imaging methods (X-ray, CT, MRI, ultrasound), and genetic testing. Chronic diseases—heart disease, cancer, diabetes, stroke,

arthritis, obesity, hypertension, and Alzheimer's—fuel healthcare spending and death. While posing significant risks, they tend to be preventable by lifestyle modifications. Prevention always reduces complications, costs, and enhances survival rates.

The Pillars of Preventive Health

Early Detection at Scale: Detecting health issues in treatable stages through individual screening and population-level programs in schools, workplaces, and communities.

Risk-Informed Action: Assessing risk factors through genetics, lifestyle, and environment to facilitate timely interventions for improved outcomes.

Universal Access: Making diagnostic services accessible to all populations—urban metropolises to rural villages—under UHC as a right, not a privilege.

Why Preventive Testing Matters

Preventive testing saves lives and money. Early diagnosis of diabetes, cardiovascular disease, and cancer prevents mortality and complications. A cholesterol screening detects risks years ahead of a heart attack; cancer screening detects tumors at cure rates of over 90%². Early detection of diseases forestalls costly surgeries and hospital stays—preventive tests save thousands in the long run². Population scale amplifies impact. Screening at the community level targets disease hotspots and high-risk groups. Screening in schools makes prevention mainstream from an early age. India's NPCDCS (National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke) indicates each rupee spent on mass screening saves ₹7-10 in treatment⁴, directly contributing to UHC objectives.

Managing chronic conditions through prevention

NCDs account for 73% of global deaths³. In India, NCD burden rose from 37.9% (1990) to 61.8% (2016)³. The five major NCDs—cardiovascular diseases, cancers, chronic respiratory diseases, osteoarthritis, and diabetes³—require specific diagnostics delivered through healthcare facilities, workplace programs, mobile camps, and school initiatives:

Cardiovascular diseases: Lipid profiles, ECG (electrocardiogram), cardiac biomarkers (Troponin, BNP), and cardiac imaging⁴.

Cancers: Mammography, CT scans, Pap smears, tumor markers (PSA (Prostate-Specific Antigen), CA-125), genetic testing (BRCA1/2)^{5,6}.

Respiratory diseases: Pulmonary function tests, chest imaging, biomarker analysis (CRP, Clara Cell protein)⁷.

Osteoarthritis: X-rays, MRI, clinical assessments, DEXA scans⁴.

Diabetes: FBG (Fasting Blood Glucose), PPBG (Postprandial Blood Glucose), HbA1c, OGTT (Oral Glucose Tolerance Test), microalbuminuria testing, retinal examinations⁸.

When administered at scale through government programs, workplace initiatives, and community camps, these screenings reach millions each year, altering population health.

Preventive Diagnostics at Scale - Models propelling UHC

UHC is accomplished through diagnostics infrastructure outside of hospitals:

School-Based Screening: RBSK mobile health teams visit government schools quarterly, screening 100+ million children annually for vision defects, hearing loss, anemia, developmental delays, and dental issues⁹. Early identification maximizes intervention impact and normalizes preventive culture.

Community Screening Camps: Mobile diagnostic units with ECG, ultrasound, and on-site laboratories conduct multi-disease screening in villages, slums, and remote areas. Public-private partnerships with diagnostic chains enable subsidized mass screening. Disease-specific camps targeting diabetes, hypertension, and cervical cancer reach populations who would never access hospital diagnostics.

Workplace Wellness: Annual comprehensive health checks capture working-age adults who often neglect prevention. On-site screening for metabolic syndrome, occupational hazards, and mental health integrates diagnostics into daily routines.

Government Infrastructure: Ayushman Bharat's 1.5 lakh Health & Wellness Centres provide free NCD screening at grassroots level⁹. NPCDCS systematically screens high-burden districts⁴, demonstrating decentralized diagnostics increase coverage while reducing per-test costs through economies of scale.

Technology-Enabled Scale: AI-powered retinal screening, smartphone diagnostics, point-of-care rapid tests, and telemedicine make mass screening operationally viable. Digital health records track longitudinal outcomes, identifying coverage gaps.

These models prove preventive diagnostics can operate at population scale, making early detection accessible regardless of geography or income—the essence of UHC. Success depends on reliable

manufacturing infrastructure. Organizations like Yashraj Biotechnology Ltd. contribute as quality suppliers of antigens and antibodies for in vitro diagnostics, ensuring diagnostic kits used in community camps, school screenings, and wellness centres deliver accurate, dependable results.

Making Prevention Part of Your Routine

Make prevention a habit through individual commitment and community involvement. Schedule yearly health checks—your doctor advises tests depending on age, gender, and family history. Be familiar with your genetic map. Don't wait for symptoms since prevention is better than treatment. Take advantage of digital health tools and wearables. Participate in scaled prevention programs: Get children involved in school screening. Take advantage of workplace wellness benefits. Get screened through community screening camps. Get free NCD screening at Ayushman Bharat Health & Wellness Centres. Advocate for full programs if not available. Most tests fall within a lunch break or a weekend. When whole communities get involved with prevention, population health is revolutionized.

Building a Prevention-Focused Future

Large-scale preventive diagnostics to reach UHC demands concerted action. Governments need to prioritize policy changes such as full preventive screening in health insurance with no co-payment, formulate national screening guidelines with quality standards, and enhance primary care diagnostic strength at 1.5 lakh Health & Wellness Centres.

Investment in infrastructure is essential—bringing mobile diagnostic units to far-flung locations, building screening facilities in schools, and designing hub-and-spoke models linking district hubs to peripheral centres. Public-private partnerships can draw on diagnostic industry knowledge through subsidized testing contracts, low-cost field device technology development, and CSR-supported screening initiatives. Workforce capacity development by training health workers in point-of-care testing, increasing laboratory technician education, and task-shifting, which creates human resources to match scaled aspiration. Integration of technology—AI-driven diagnostics, smartphone devices, and digital health records—makes mass screening operationally efficient and cost-effective. Effectiveness needs to be gauged by coverage rates across demographics, screening-to-treatment cascades, and cost-effectiveness measures such as Disability-Adjusted Life Years (DALYs) averted, and long-term population health outcomes.

As each child gets screened at school, each community is reached by periodic camps, and each citizen has access to wellness centres, prevention is made universal. This change needs steady investment and political commitment, but the payback—healthy populations fuelling economic productivity—is certain. Act today: make your comprehensive screening appointment this month, join workplace and community initiatives, and promote universal access. Your commitment to prevention today creates healthier communities tomorrow. Prevention is always better than cure, and your health is your most precious asset.