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Specialised Skill Development for Global Capability Centres (GCCs) in India

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India is a key hub for Life Sciences and Healthcare (LSHC) Global Capability Centers (GCCs). With over 280,000 professionals, 40 per cent are focused on clinical research and using AI for healthcare advancements. The AI talent pool in India is projected to grow to 633,000 by 2025, emphasising the need for specialised skills and continuous learning to maintain its reputation as a top destination for LSHC GCCs.



India has solidified its position as a pivotal hub for Global Capability Centers (GCCs), especially in the Life Sciences and Healthcare (LSHC) sectors. These centres are instrumental in driving advancements in research and development, digital transformation, regulatory compliance, pharmacovigilance, clinical trial analytics, and supply chain management for global pharmaceutical and healthcare enterprises.

To sustain this momentum, developing a workforce with specialised skills is essential. Currently, LSHC GCCs in India employ over 280,000 professionals. Of this talent pool, 43 per cent are engaged in core healthcare and R&D, 16 per cent specialise in IT, and 41 per cent focus on business process management.

This article delves into the initiatives undertaken for skill development, the contributions of industry leaders, emerging competencies, and the role of GCC consortiums in fortifying the talent pipeline for LSHC GCCs in India.

Escalating Demand for Specialised Skills in LSHC GCCs

As India cements its status as a preferred destination for LSHC GCCs, there is an escalating demand for professionals proficient in Regulatory Affairs & Compliance for navigating guidelines from authorities such as the US Food and Drug Administration (FDA), European Medicines Agency (EMA), and Central Drugs Standard Control Organisation (CDSCO) of India for drug approvals; Clinical Research & Data Management for executing clinical trials, analysing real-world evidence, and managing extensive healthcare datasets.
Currently, 40 per cent of the GCC talent pool is engaged in clinical research, Digital Health & AI/ML Applications for leveraging artificial intelligence for drug discovery, diagnostics, and personalised medicine.

India's AI and big data analytics talent base is projected to reach approximately 633,000 professionals by 2025, with a broader goal of 30 million digitally skilled professionals by 2026; Pharmacovigilance & Medical Writing for ensuring drug safety through monitoring adverse events and preparing scientific regulatory documents.; and Healthcare Supply Chain & Operations for overseeing procurement, logistics, and employing predictive analytics to enhance supply chain efficiency.

To bridge the skill gap, a concerted effort involving government bodies, industry leaders, academic institutions, and GCC consortiums is underway, implementing structured programmes to upskill professionals in these critical domains.

Strategic Initiatives for Skill Development

Government-Led Skill Development Programmes

Recognising the potential of LSHC GCCs, the Indian government has launched several initiatives to cultivate a highly skilled workforce:
Skill India Mission & National Skill Development Corporation (NSDC): These programmes offer specialised courses in clinical research, medical coding, and pharmaceutical manufacturing, aiming to enhance employability in the LSHC sector.

Life Sciences Sector Skill Development Council: Established by NSDC, the initiative aims to empower approximately 6.15 million skilled professionals in the sector within the next decade.

Biotechnology Industry Research Assistance Council (BIRAC) Initiatives: Focused on R&D skill enhancement in biopharma and life sciences, BIRAC supports startups and enterprises in developing innovative solutions. Under the National Biopharma Mission, BIRAC has conducted 43 training programmes, trained approximately 7,000 professionals.

Healthcare Sector Skill Council (HSSC): Provides targeted training in healthcare technology, diagnostics, and regulatory affairs to ensure alignment with industry standards.

AI & Digital Health Upskilling: The Ministry of Electronics and Information Technology (MeitY) collaborates with healthcare firms to offer AI training tailored to medical applications, fostering digital transformation in healthcare.
LSHC GCC Consortium: The Government of Telangana has facilitated the formation of India's first-of-its-kind GCC Consortium with 40 LSHC companies, which is dedicated to developing a highly skilled workforce to meet industry demands.

Industry-Led Initiatives in Skill Development

Corporate Training Programmes (CTPs)- Life sciences and healthcare companies are proactively investing in skill development through CTPs. Companies such as Roche, AstraZeneca, and Biocon have established specialised internal training modules focusing on R&D, regulatory compliance, and clinical research to enhance employee competencies.
Centres of Excellence (CoEs)- Organisations like Johnson & Johnson have established CoEs dedicated to skill development in pharmaceutical innovations and medical technology, fostering continuous learning and innovation.

Healthcare-Academia Partnerships- Collaborations between global healthcare firms and academic institutions facilitate certification programmes, hands-on training, and workshops for clinical and regulatory professionals, bridging the gap between academia and industry.

Startup Engagement & Incubation Support- Many leading healthcare companies are investing in incubators focused on AI-driven diagnostics, medical devices, and drug discovery, nurturing innovation and entrepreneurship.

Initiatives by Leading Companies in Skill Development

Several multinational and Indian companies are undertaking targeted efforts to enhance skill development in the LSHC GCC sector. In collaboration with universities, Pfizer runs workforce upskilling programmes focusing on clinical research and regulatory affairs, aiming to align academic curricula with industry requirements.

Through its generative AI programme, AstraZeneca enhances the digital capabilities of its employees, focusing on data science and machine learning applications in healthcare.

Biocon conducts hands-on training programmes in biopharmaceutical manufacturing and quality control, ensuring adherence to global standards and best practices.

Cipla has launched the "Cipla University" to provide continuous learning and development opportunities for its employees.

Merck in collaboration with CSIR-IMTECH, has established a High-Tech Skill Development Centre to address employability gaps by offering specialised training in advanced technologies.

GE Healthcare runs skill enhancement programmes for medical device engineering and healthcare technology management, addressing the evolving needs of the medical technology sector.

Role of GCC Consortiums in Skill Development

The government of Telangana has enabled a one-of-its-kind LSHC GCC Consortium in India to further nurture and accelerate the ecosystem. GCC consortiums play a pivotal role in building talent pipelines by Specialised Training Programmes with a focus on areas such as molecular chemistry, data sciences, and regulatory sciences. Companies like Dr. Reddy’s

Laboratories provide specialised training at institutions like Young India Skills University.
Industry-Academia Collaboration brings together 40 life sciences companies to enhance skill development in Telangana.

Technology Integration focuses on incorporating Artificial Intelligence (AI) and advanced technologies into life sciences education.
Hybrid Course Development designs courses that blend traditional science education with modern technology skills.

Curriculum Enhancement collaborates with universities to include emerging niche areas in academic programmes.

Bridging Skill Gaps ensures students graduate with industry-relevant skills, creating a steady pipeline of skilled professionals.

Industry-Academia Collaborations

Strategic partnerships between LSHC GCCs and academic institutions are instrumental in aligning educational outcomes with industry requirements,
Joint Degree & Certification Programmes: Institutions such as the National Institute of Pharmaceutical Education and Research (NIPER) offer specialised courses in biomedical informatics, regulatory sciences, and data analytics, developed in collaboration with industry stakeholders.

Internship & Apprenticeship Models: Companies like Novartis, Pfizer, and Johnson & Johnson provide structured internship programmes, offering students hands-on experience in GCC operations and bridging the gap between theoretical knowledge and practical application.

Corporate Training Centres: Several multinational healthcare firms have established dedicated training centres within universities to enhance R&D and regulatory skill sets, fostering a culture of continuous learning and innovation.

Focusing on Skill Development

As India continues to solidify its position as a global leader in LSHC GCCs, investing in skill development is crucial for sustaining innovation and growth. Government policies, industry-led initiatives, academia collaborations, and GCC consortium-driven strategies are collectively shaping a future-ready workforce. By addressing skill gaps proactively and fostering continuous learning, India can reinforce its role as a preferred destination for LSHC GCCs, driving advancements in global healthcare and life sciences.

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