

Human Resource and Skill Requirements in the **Pharmaceuticals**

Executive Summary



N · S · D · C
National
Skill Development
Corporation

Disclaimer for the skill gap report :

NSDC engaged KPMG (KPMG Advisory Services Pvt. Ltd.) to prepare this report, which is based on independent research and analysis done by KPMG. This report is not based on, or derived from, any other report or research paper. Any similarity with any other paper may purely be a co-incidence.

All rights reserved. All copyright in this report and related works is solely and exclusively owned by NSDC. The same may not be reproduced, wholly or in part in any material form (including photocopying or storing it in any medium by electronic means and whether or not transiently or incidentally to some other use of this presentation), modified or in any manner communicated to any third party except with the written approval of NSDC.

This report is for information purposes only. While due care has been taken during the compilation of this report to ensure that the information is accurate to the best of KPMG's and NSDC's knowledge and belief, the content is not to be construed in any manner whatsoever as a substitute for professional advice.

KPMG and NSDC neither recommend nor endorse any specific products or services that may have been mentioned in this report and nor do they assume any liability or responsibility for the outcome of decisions taken as a result of any reliance placed in this report.

Neither KPMG nor NSDC shall be liable for any direct or indirect damages that may arise due to any act or omission on the part of the user due to any reliance placed or guidance taken from any portion of this report.

Industry Overview

The Indian pharma sector witnessed a robust growth over the last 5 years to reach USD 34.5 billion by 2014

Key Growth Drivers

- Increased budgetary allocation for healthcare spending, which is expected to have an overall positive impact on the sector. There has been a proposal to extend weighted deduction of 200 percent for R&D expenditure in an in-house facility for a further period of five years beyond 31 March 2012
- In the 2013–14 budget, the healthcare sector witnessed a 22 percent increase in allocation from INR30,702 crore allocated in 2012–13 to INR37,330 crore. Out of this, 56 percent is allocated to primary healthcare
- There has also been a 24.5 percent rise over RE in the new national health mission for training and education in the budget, INR1,650 crore have been allocated to set up six AIIMS- like institutes

India's Competitive Advantage

Favourable FDI policies

100 percent FDI was allowed in the pharma sector through automatic approval route in the new projects. The cumulative FDI in the drugs and pharmaceuticals sector from 2009–10 to December 2012 stood at US\$4,243.34 million. Zero duty for technology upgrades in the pharmaceuticals sector through the Export Promotion Capital Goods (EPCG) Scheme

Strong domestic manufacturing sector

The country's strong local manufacturing sector offers advantage in the case of pharma. As a result, the leading domestic players have been able to or are trying to establish notable international presence

Labor abundance

India also has availability of low-cost skilled labor force in abundance

Greater public-private partnerships

Major multi-billion dollar initiative of the government with 50 percent public funding through a public-private partnership (PPP) model aims at harnessing India's innovation capability. The government aims to make India one of the top five pharmaceutical innovation hubs by 2020, targeting to achieve a global niche with one out of every 5–10 drugs discovered worldwide by 2020 originating from India

Leading industry players in the sector

Ranbaxy Labs. (CY12)

Revenue from Exports 10,124.74

Dr Reddy's Labs

Revenue from Exports 9,741.20

Sun Pharma.Inds

Revenue from Exports 8,206.62

- According to government estimates, the pharma exports are poised to reach US\$25 billion in 2016

Sources: KPMG in India analysis

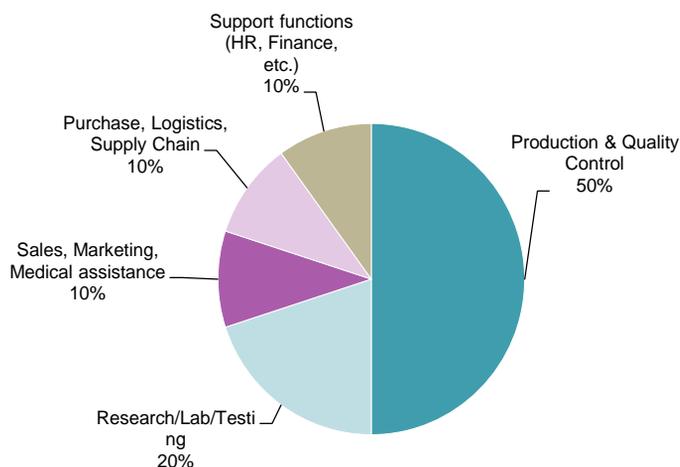
Demographic characteristics of workforce

The upward movement in the value chain is likely to create more demand for skilled labor

- A large percentage of the workforce in the sector is categorized under the informal/ un-organized bracket making it necessary to streamline job profiles and skill assessment for the people falling under these categories
- The workforce is expected to undergo gradual changes in its composition by in the next decade
- The managerial roles are expected to witness the steepest rise. This is indicative of the presently evolving status of the industry and the upward movement in the value chain
- Commerciality of the sector makes it a preferred employer for management graduates and accountants, while the production and research component makes it a preferred option for people with science and pharmacy backgrounds
- Colleges in India offer diplomas, undergraduate and post graduate degrees in pharmaceutical sciences
- Graduates in science also find employment in the pharmaceuticals sector
- The higher spectrum of R&D organizations requires candidates who have a doctorate or post doctorate degree
- Maximum number of employees (about 50 percent) in the pharma sector are engaged in the production and quality control division
- Ph.D/ M.Tech/ M.Sc account for only 5–8 percent of the workforce in the chemicals and pharmaceuticals segment, while a majority of the people employed in the sector have an educational background of 12th grade or below

Key Characteristics of Workforce

Percentage distribution of manpower in pharma industry



Qualifications of personnel employed in the chemicals & pharmaceuticals segment

Qualifications	Distribution
Ph. D / M.Tech / M.Sc etc.	5–8%
Graduate Engineers	15–25%
Diploma Engineers	10%
ITI and other vocational courses	15–20%
Graduates (BA/ B.Sc./B.Com/ others)	15–25%
12th standard or below	20–25%

Sources: Industry Interactions; KPMG in India analysis

Incremental Human Resource Requirement (2013-22)

Current workforce of ~1.86 million (2013) is expected to increase 3.5 million by 2022

Human Resource Growth Trends in the Sector

Segment	Employment (in Million)			Employment Growth 2013-17	Employment Growth 2017-22	Employment Growth 2013-22
	2013	2017	2022	(In millions)	(In millions)	(In millions)
Manufacturing	0.69	0.89	1.15	0.20	0.25	0.45
R&D	0.07	0.09	0.11	0.02	0.02	0.04
Wholesale Sales	0.20	0.29	0.42	0.09	0.13	0.22
Pharma Retail	0.90	1.32	1.90	0.43	0.58	1.00
Total	1.86	2.60	3.58	0.74	0.98	1.72

Nearly one third of the workforce in the sector is categorized under the informal/unorganized indicating the necessary to streamline job profiles to enhance productivity levels

Field force (medical representatives) form a significant portion of the employment pie under the sales function

New areas/ trends in the sector

- Discovery of drug processes and not just pre-clinical trials
- Specialized manufacturing processes for specific streams
- Oncology, particularly in the field of biotechnology
- Sales an emerging function or skill in the industry

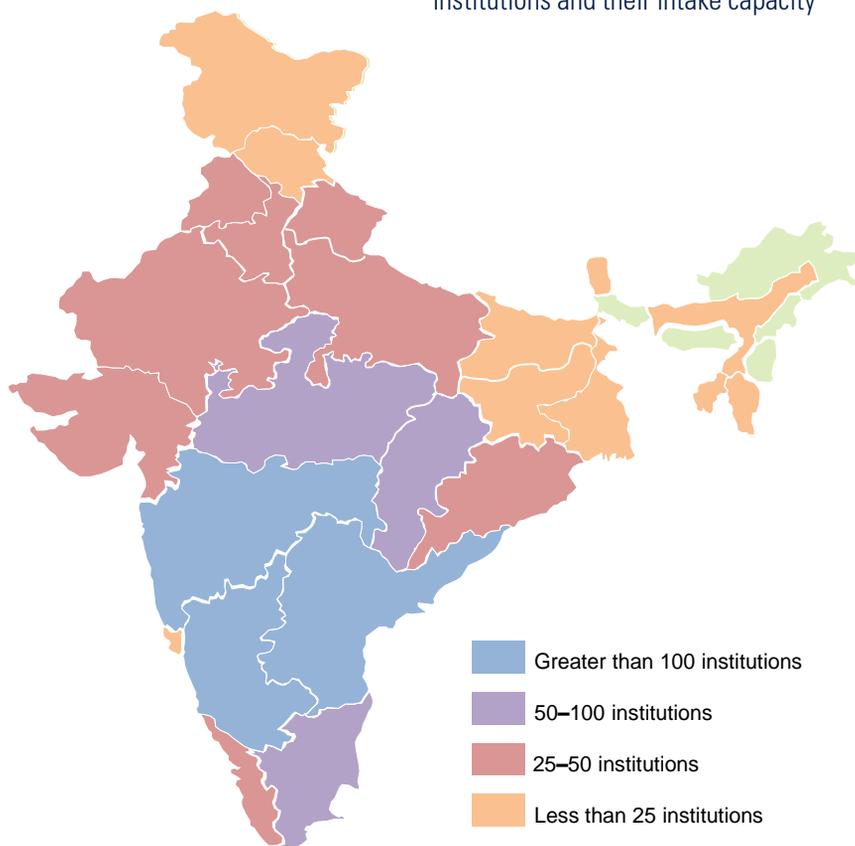
As companies strategize to establish a footprint in rural areas and tier II and tier III cities, it is vital to establish credible distribution channels and a supply chain, which leads to a need for increased recruitment in these area

Job Roles	Representative Skill Gaps
Medical representative, territory manager	Workers possess the theoretical knowledge, but lack the training required to fit into the job. Disconnect between teaching and industry requirements. Lack of structured training programs for MRs
Area sales manager, regional/zonal sales manager, National sales manager	Lack of technical skills and regular trainings to stay updated on current norms. Lack of people management skills
Product executive, product manager	Lack of candidates with both technical and market acumen, Lack of a structured training programs focused on pharma marketing
Production manager, head-production, head- R&D)	Lack of focus on research and hence lesser PhDs and Post-Doctoral fellows entering the industry. Lack of innovative ideas, focus on reverse engineering

Supply & Training Infrastructure

There is a visible disparity in the distribution of educational institutes that offer pharma education across the country

Institutions and their intake capacity



State/ UT	Total intake
Maharashtra	10,240
Karnataka	8,410
Andhra Pradesh	5,682
Madhya Pradesh	4,250
Tamil Nadu	3,390
Kerala	2,205
Uttar Pradesh	2,200
Rajasthan	2,069
Gujarat	2,025
Punjab	1,920
Haryana	1,745
Orissa	1,370

Challenges associated with training institutes

Lack of skills premium

- There is a lack of skills premium correlation to increasing wages, as the industry does not pay premium for pharmacy graduates in the sector

Standards in training

- Lack of coordination among regulatory bodies, leading to stagnation of curriculum

High Attrition

- Students lack patience and progression to higher job roles is slow in the industry, hence lot of them move to other industries

Lack of awareness

- Low awareness of emerging streams such as regulatory space, drug auditing and clinical pharmacy

Recommendation	Implications
Strong industry-academia linkage to figure out the industry needs and teach and train students accordingly	<ul style="list-style-type: none"> ▪ Curriculum should be revised with inputs from industry people ▪ Incentivize them, with realization that they can save money spent on training, if students are trained in college only (as per the requirements)
Regulations should be formulated wherein pharma students are preferred for employment	<ul style="list-style-type: none"> ▪ Government should formulate regulations which would promote employment for pharma students and provide opportunities at par with other stream students
Industry needs to be proactive and invest in training	<ul style="list-style-type: none"> ▪ Industry needs to be proactive and design training process as per the requirements of job ▪ They need to work in liaison with educational institution for devising a comprehensive and successful training program
Incentivize and bring good quality teachers in the pharma sector	<ul style="list-style-type: none"> ▪ More benefits should be given to teachers joining in, so that they stick with the profession and institute ▪ Incentives should be given on part of government's policy as well as institutes'
Up gradation infrastructure to impart industry-relevant training	<ul style="list-style-type: none"> ▪ Improvising infrastructure would provide facilities for students to acquire better skill set ▪ Quality infrastructure, good curriculum, & good teachers would renown a college on national/international level
Coordination between various accrediting bodies to have coherent curriculum and rules	<ul style="list-style-type: none"> ▪ Inputs from academia, industry, government bodies, advisory should be taken for holistic development of curriculum, which meets the market requirement
Promoting and investing in R&D	<ul style="list-style-type: none"> ▪ Government needs to invest heavily to boost R&D in pharma sector ▪ Collaborations with international university/colleges would help in improvisation of the same
Awareness about emerging job roles has to be spread among students & customization of the curriculum accordingly	<ul style="list-style-type: none"> ▪ A mobile application for updates on the vacancies in pharma sector in key towns and cities would be useful for the workers to locate jobs



cutting through complexity

This report is prepared by KPMG Advisory Services Pvt Ltd (KASPL).

KPMG is a global network of professional service firms offering Audit, Tax and Advisory services with presence in 152 countries and a combined strength of nearly 145,000 people. In India, the firm provides services to Government, Indian and International companies through offices in Mumbai, Delhi, Chandigarh, Bangalore, Hyderabad, Chennai, Pune , Kolkata, Kochi and Ahmedabad.

KPMG is one of the first professional services firms to align its services and professionals along industry verticals developing an intensive understanding of different industries, providing clients with an informed view on specific issues and a tailored service response. KPMG is first advisory firm to establish Centre of Excellence in Education in India providing holistic support in funding, structuring and consulting solutions across strategy, process, people and technology in the sector.

KPMG has, over the years gained an expertise in the area of Education Advisory backed by capabilities such as

- Comprehensive and focused solution for education, Skill Gaps, research and training services combined with through insights and analysis from its Centre of Excellence for Education in India - networked globally
- Access to our wealth of knowledge – Thought leaderships, Industry monitors and database through our Education - Centre of Excellence in India
- A strong cross functional team with expertise of Consulting, Corporate Finance, Tax teams – focused on education sector
- Working closely with Central Govt., MoHRD, State Govts, Apex bodies and funding agencies
- Use of robust proprietary tools and methodologies assuring quality delivery to our clients

Narayanan Ramaswamy

Head – Education Advisory

KPMG India

(+91) 44 3914 5208

email: narayananr@kpmg.com

Madhavan Vilvarayanallur

Director – Education

Advisory, KPMG India

(+91) 44 39145286

email: vmadhavan@kpmg.com

Gaurav Kumar

Associate Director – Education

Advisory, KPMG India

(+91) 124 3345203

email: gauravkumar1@kpmg.com

For more details please contact:



N · S · D · C
National
Skill Development
Corporation

National Skill Development Corporation
Block A, Clarion Collection, (Qutab Hotel)
Shaheed Jeet Singh Marg
New Delhi 11 0 016
Tel : +91-11-47451600
Fax : +91-11-46560417
Email : skillgapstudies@nsdcindia.org

www.nsdcindia.org