

NOTE TO EDITORS: This release updates an earlier version dated May 7, 2019

Adoption of Artificial Intelligence Is High across Pharmaceutical Industry, According to Tufts Center for the Study of Drug Development and DIA

BOSTON – May 14, 2019 –The pharmaceutical industry is adopting artificial intelligence (AI) on numerous fronts, from discovery and clinical development to risk assessment and safety monitoring, regulatory, and manufacturing, according to an analysis recently completed by the [Tufts Center for the Study of Drug Development](#) and DIA.

"Pharmaceutical and biotechnology companies as well as service providers now rely on AI technologies across all therapeutic areas, including most strongly for oncology, central nervous system, cardiovascular, immunology, rare diseases, and metabolic/endocrine diseases," said Mary Jo Lamberti, research assistant professor and associate director of sponsored research at Tufts CSDD, who co-led the analysis with Sudip Parikh, DIA senior vice president and managing director for the Americas.

Parikh noted that the advent of precision medicine and targeted therapies, as well as increasing demand for new treatments for rare diseases, will drive further, likely exponential, growth of AI use, especially as health authorities and industry develop standard policies and a regulatory framework to address concerns such as ethical use, bias, and validation.

Despite the widespread and growing embrace of AI in drug development, lack of adequate staff skills, difficulty in adapting unstructured data, and insufficient budgets remain major challenges to adopting AI, according to Tufts CSDD and DIA.

The analysis, summarized in the May/June [Tufts CSDD Impact Report](#), found that:

- The clinical operations function makes the highest use of AI (61%), followed by pharmacovigilance/safety/risk management (57%), and information technology (IT) (55%).
- 42% of respondents in a global survey reported that AI implementation is not centrally managed at their companies, while 20% indicated that it is managed by R&D and 12% said that it is overseen by the chief information officer.
- 59% of respondents plan to expand AI staff through 2020, with the largest staffing increases slated for data scientists, computer scientists, IT specialists, and AI architects.

The survey generated responses from 402 industry professionals working for pharmaceutical or biotechnology companies, contract research organizations, technology/data providers, and other organizations in North America (61%), Europe (23%), Asia Pacific (11%), Latin America (2%), and Rest of World (3%).

ABOUT DIA

DIA (<https://www.diaglobal.org/>) is a global, member-driven organization that mobilizes life sciences and health care professionals to collaborate for policies, regulations, science, research, and development that lead to better patient outcomes worldwide.

ABOUT THE TUFTS CENTER FOR THE STUDY OF DRUG DEVELOPMENT

The Tufts Center for the Study of Drug Development (<http://csdd.tufts.edu>) at Tufts University provides strategic information to help drug developers, regulators, and policy makers improve the quality and efficiency of pharmaceutical development, review, and utilization. Tufts CSDD, based in Boston, conducts a wide range of in-depth analyses on pharmaceutical issues and hosts symposia, workshops, and public forums, and publishes Tufts CSDD Impact Reports, a bi-monthly newsletter providing analysis and insight into critical drug development issues.

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