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36. Rapid development of the FDA ACMT COVID-19 ToxIC (FACT) pharmacovigilance pilot project to monitor adverse events reported in association with COVID-19 therapeutics

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Background: When the COVID-19 pandemic emerged, many treatments were administered either off-label, under U.S. Food and Drug Administration (FDA) Emergency Use Authorizations, or through compassionate use programs. The rapid spread and high mortality of COVID-19 emphasized a need to develop a surveillance system to identify adverse drug events (ADEs) specifically related to emerging COVID-19 therapeutics. In addition to conducting routine surveillance, FDA contracted with the American College of Medical Toxicology's (ACMT) Toxicology Investigators Consortium (ToxIC) to establish a novel multi-center active surveillance network to capture ADEs associated with COVID-19 therapeutics.

Methods: In October 2020, ToxIC recruited medical toxicology site investigators from 15 medical centers across the United States to establish a pilot toxicosurveillance program to proactively identify and report ADEs associated with COVID-19 therapeutics to a new ToxIC Sub-registry. This FDA ACMT COVID-19 ToxIC (FACT) Pharmacovigilance Project focused on providing timely data about adverse drug events associated with exposures to medications or substances used for the treatment or prevention of COVID-19 in inpatient and outpatient settings. Site-based research assistants worked with the principal investigators at all 15 sites to proactively identify cases of interest via site-specific mechanisms. These included reports from medical toxicology consultations, the patient's treatment team, the pharmacy, and by chart review. A HIPAA-compliant web-accessible REDCap data collection instrument was developed in collaboration with the FDA to facilitate case submission and provide for real time reporting. Over the initial 6 months of data collection, case identification criteria evolved to specifically target serious (e.g., death or hospitalization) and unlabeled adverse drug events. FDA Disclaimer: This abstract reflects the views of the author and should not be construed to represent FDA's views or policies.

Results: Between 11/23/20 and 4/30/21, 513 cases were submitted across all 15 sites. Through close collaboration with the FDA and continued assessment of emerging literature, investigators were guided to identify important ADE signals. For example, we developed a data collection form specific for remdesivir-associated bradycardia (heart rate below 60 after therapy initiation), which ToxIC shared with the sites, leading to the identification of 118 cases.

Conclusion: In partnership with the FDA, ToxIC rapidly developed a multi-center pharmacovigilance pilot project to help identify and analyze ADEs associated with COVID-19 therapeutics. Early identification of potential safety signals and creation of enhanced data collection instruments allowed timely investigation of the potential causality and clinical significance of adverse drug events reported with COVID-19 therapeutics. This project demonstrates that in the face of a national public health emergency, ToxIC can adapt to collect real-time data for public health analysis.