



# News

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NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY

## Anwar Harnessing Social Media to Study Opioid Epidemic in North Carolina

**Greensboro, NC – March, 2019** – Dr. Mohd Anwar, associate professor in the Department of Computer Science within the College of Engineering at N.C. A&T, is performing computational health research using the Twitter social media platform to study the opioid epidemic. With more than 50,000 opioid-related overdose deaths estimated in 2017 in the United States, the opioid epidemic has emerged as a major health crisis.



Anwar began collaborating with RTI experts Dr. Kevin Conway (RTI's Survey Research Division) and Dr. Steven Cohen (RTI's Division for Statistical and Data Sciences) in the fall of 2018 to study the extent to which social media data can be harnessed as an indicator of the opioid epidemic in the US. The collaboration explores the power of social media to inform the progression of the opioid crisis in near-real time, and to understand how data mined from social media platforms covary with ground truths such as drug overdoses.

Dr. Anwar's scope of work focuses on gathering, mining, and scientifically translating publicly available opioid-related Twitter data in the state of North Carolina, to understand and identify interventional opportunities. In February, Anwar presented preliminary results on the content and changing patterns of opioid-related conversations occurring in the North Carolina Twitterspace, as well as implications for future research comparing subgroups, using larger samples, and integrating additional social media platforms.

"RTI's collaboration with Dr. Anwar offers a key component – social media – in RTI's Data Fusion Center, whose mission is to integrate multiple existing data sources in ways that help us track and potentially mitigate the nation's opioid crisis," explains Dr. Kevin Conway, a senior behavioral health scientist at RTI. "We expected the social media data stream to be highly exploratory and that it would lag behind other data components. To our surprise, working with Dr. Anwar rapidly accelerated our progress on the social media front. Based upon our very preliminary results of Twitter posts in North Carolina from 2009 to 2018, it seems that mentions of prescription opioids, heroin, and synthetic opioids (including fentanyl) follow a trend that resembles the three phases of the opioid epidemic as indicated opioid overdose deaths in the state during this nine-year period."



**North Carolina Agricultural and Technical State University** is the nation's largest historically black university. Classified a "higher research" university by the Carnegie Foundation, it is a land-grant member of the University of North Carolina System. A&T is known for its leadership in producing graduates in engineering, agriculture and other STEM fields. The university was founded in 1891 and is located in Greensboro, North Carolina.

This exciting collaboration is a signal that social media platforms like Twitter represent alternative indicators of the evolving opioid crisis. Moreover, these kinds of data are nearly omnipresent, timely, and readily-ingested for research purposes. This study is just the tip of the iceberg in terms of the potential for social media data that RTI will continue to explore in collaboration with Dr. Anwar and N.C. A&T.

Dr. Mohd Anwar is the first N.C. A&T faculty member to be selected as an RTI University Scholar. The RTI University Scholars Program, in its fourth year, supports highly-talented academics who take scholarly leave from their home institutions to collaborate with RTI researchers, advancing research in priority areas of national need. Anwar's cohort includes researchers from Duke University, North Carolina State University and the University of North Carolina at Chapel Hill.

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