Driving innovation in the use of social media and machine learning

A selection of applications across the development lifecycle

2014

STUDY OF ADULT VACCINATIONS UNCOVERED IMPORTANT **METHODOLOGICAL CONSIDERATIONS** FOR RESEARCH BASED ON SOCIAL MEDIA

Used Twitter data to discover unsolicited **patient opinions** about multiple sclerosis treatments to guide medical affairs activities →

EXPLORED USEFULNESS OF SOCIAL MEDIA AND PATIENT FORUMS IN IDENTIFYING **INDIRECT COSTS** OF A DISEASE

Assessed **ethical and legal considerations** in the use of social media
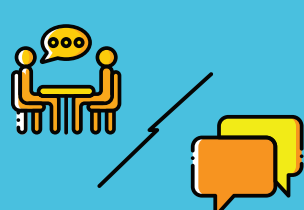
2015

Used machine learning to **identify under-recorded patients** with post-stroke spasticity in England

2016

Compared qualitative interviews versus social media for **concept elicitation** in post-surgical Staphylococcus aureus infections

2017

EVALUATED RISKS ASSOCIATED WITH ANTIRETROVIRAL TREATMENT FOR HIV USING **QUALITATIVE ANALYSIS** OF SOCIAL MEDIA DATA →

Compared machine learning versus traditional statistical approaches for the ANALYSIS OF REAL-WORLD DATA

FDA encourages researchers to explore social media tool as a means to incorporate patient perspective in research →

2018

USING SOCIAL MEDIA...

HIGHLIGHTED UNMET NEEDS IN PATIENTS WITH AML AND MDS INELIGIBLE FOR CHEMOTHERAPY

Conducted first-ever study to **understand patient and clinician perceptions** of cell and gene therapy in oncology

EVALUATED DISEASE SYMPTOMS AND **ADVERSE EVENT PROFILE** OF TREATMENTS IN BREAST CANCER
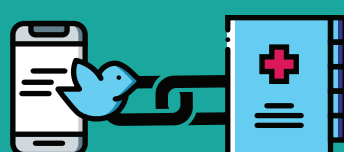
Uncovered **patient perceptions and motivations** for **clinical trial participation**

PRESENTED KEY STEPS FOR **SUCCESSFUL IMPLEMENTATION OF MACHINE LEARNING** IN BIOPHARMA APPLICATIONS AT ADVANCED PHARMA ANALYTICS, LONDON
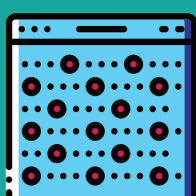
2019

Discussed how linking social media to EMRs can help **capture the patient voice** in the absence of PROs →

NICE provides first scientific advice on patient preference study design that includes social media listening for a deeper understanding of patient perspectives, needs, and attitudes →

Developed machine learning and NLP methodology for EXTRACTING TREATMENT PATTERNS FROM SOCIAL MEDIA IN KIDNEY CANCER →

Used social media to uncover **treatment experiences and decisions** in patients with acute myeloid leukemia or myelodysplastic syndrome