

# Natural Language Processing (NLP) in Healthcare

## WHAT

A sub-set of **Artificial Intelligence** (AI) capabilities to help machines understand and interpret human language in both written and voice formats

## WHY

**Exponential growth of healthcare data** from Electronic Health Records, Medical Claims, Scientific Literature and Wearable Devices requires automation for cost-effective processing and application

## HOW

Application of **Machine Learning** techniques to extract meaning through **lower level tasks** (tokenization, sentence boundary, part-of-speech tagging, word decomposition etc.) and **higher level capabilities** (spelling/grammar errors, near entity recognition, word sense, relationships, part/whole, translation etc.)



Use of real world data (RWD) to help generate real world evidence (RWE) is a top strategic priority for the FDA for approval of new products and monitoring of post-market safety



**Scott Gottlieb, M.D.** @SGottliebFDA · Dec 6

Use of RWD has the potential to make our medical product development processes more efficient and help lower the cost of development. Our goal is to close the evidence gap between the information we use to make decisions and the evidence collected by the medical community.



Applications include:

- ✓ Safety surveillance and signal detection from adverse events data, product/disease registries
- ✓ Observational studies using RWD to generate RWE in to derive expanded indications for use
- ✓ Review of scientific literature to accelerate drug discovery, device development
- ✓ Patient monitoring including drug compliance to manage care and reduce cost
- ✓ Automation of medical claims processing



Health Information Systems

Platform/Service/Consulting



Cloud-based APIs (Do-it-Yourself)

# About Exeed™

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