Supporting use of computational methods on the Opioid Industry Documents Archive

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- 1. What is the Opioid Industry Documents Archive (OIDA)?
- 2. Why is the web interface to this digital archive insufficient for certain research questions?
- 3. How do we aim to support use of computational methods on this digital archive?





What is the Opioid Industry Documents Archive (OIDA)?





Our vision: to serve a groundbreaking digital archive of documents arising from the opioid industry that advances understanding of the **root causes** of the **opioid epidemic** and helps address **corporate behavior** that is **harmful** to **public health**.









The Opioid Industry Documents Archive...

Consolidates publicly available information into an easily accessible digital archive for use by researchers, journalists, policy-makers, community members, and other stakeholders



- Aids in the search, retrieval and analysis of documents arising from opioid litigation including:
 - Court and litigation documents (expert depositions, complaints and amendments, internal company communications)
 - Documents from federal, state and local government agencies
 - Testimony from advocacy organizations (accounts of people with lived experience, addiction, and impact of the epidemic)
- Offers reference and technical assistance to those wishing to use materials
- Serves as a repository for new information from future cases
- Provides evidence to support changes in policy and practice







Massachusetts Governor Maura Healey

A top focus of our opioid litigation has always been about ensuring transparency and telling the story of the harm done to families across this country. Making this evidence available to the public will pave the way for important reforms that will save lives and let the families, survivors, and advocates who have been affected by the opioid epidemic see the truth. We thank UCSF and Johns Hopkins University for launching this digital document archive as we continue the fight to make evidence in our opioid cases public.



Maura Healey Attorney General of Massachusetts (2021)





Winner of the 2023 Archival Innovator Award from the Society of American Archivists

The Archival Innovator Award recognizes an archivist, a group of archivists, a repository, or an organization that demonstrates the greatest overall current impact on the profession or their communities.



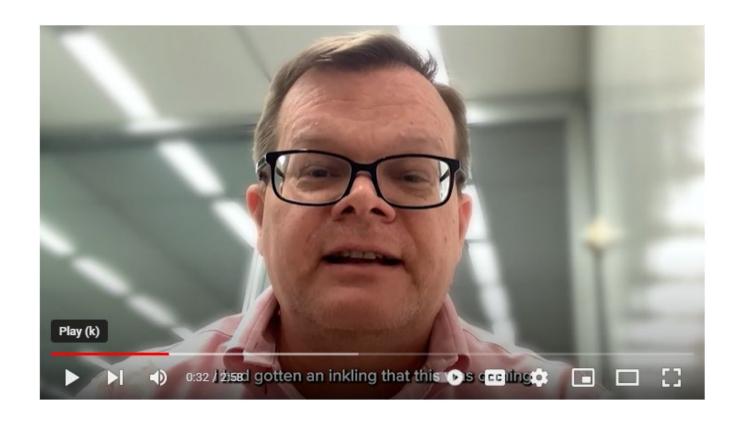
OIDA's development has continually showcased innovative thinking and practice . . . The success of OIDA's development is due in part to the collection's wide engagement outside of academia.

https://www2.archivists.org/recipients/archival-innovator-award-opioid-industry-documents-archive





Mike Forsythe, New York Times reporter on OIDA



The quality of the documents is incredible [. . .] it's so comprehensive – you've got emails, you've got spreadsheets, PDF documents. [. . .] [It's] a very rare opportunity to look very deep into an industry that is extremely difficult kind of material for journalists to obtain.

https://youtu.be/kCi1Tc---60





OIDA Addresses Many Important Questions

- 1. How have **pharmaceutical companies** driven the current opioid epidemic?
- 2. What was **known within these companies, at what time, by whom,**regarding potential risks of addiction
 and overdose?
- 3. How have marketing and promotional practices deviated from FDA standards?

- 4. How have intermediary organizations, such as advocacy organizations, been used by the industry to promote messaging that misconstrues the risks and benefits of opioids?
- 5. What role have other stakeholders (e.g., wholesalers, pharmacies) played in driving opioid oversupply?



Why is our web interface insufficient?





A massive and growing collection

- Online as of February 2024: 12,724,315 pages in 3,173,947 documents
- About 1.5 million documents in the pipeline (most need to be redacted before they can go online)
- About 4 million documents that we are likely to receive during 2024
- Tens of millions more documents that might become available for disclosure due to pending litigation



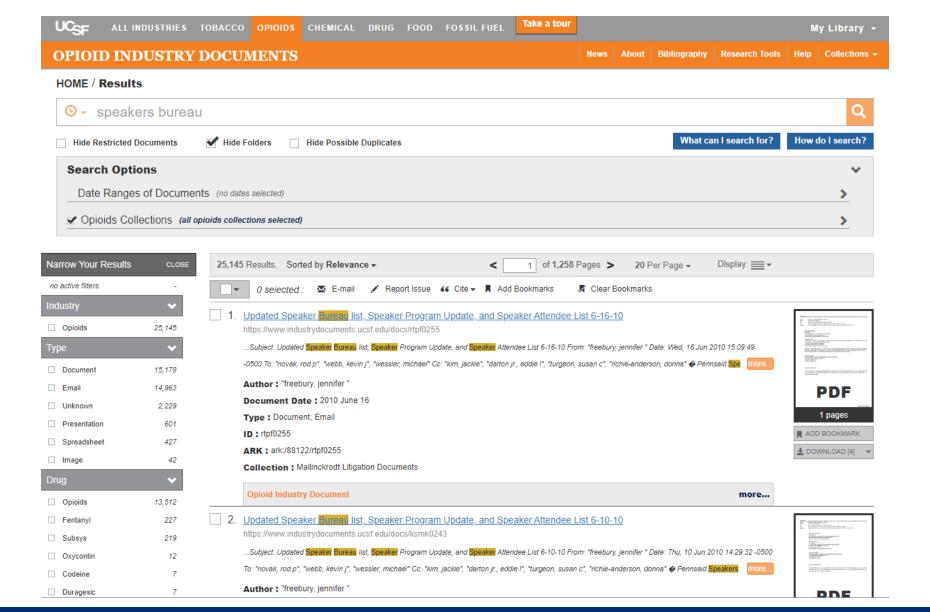
An archive of millions of documents created by opioid manufacturers and related companies, hosted by the UCSF Library in collaboration with Johns Hopkins University.

| SEARCH | | | ADVANCED SEARCH | |
|--|---------------------------------------|-------------------------------------|------------------------|------------------|
| | | | | |
| | | | CLEAR | SEARCH |
| Hide Restricted Documents | ide Folders Hide Possible Duplicates | | What can I search for? | How do I search? |
| Search Options | | | | ~ |
| Document Date Ranges (no dates selected) | | | > | |
| ✓ Opioids Collections (all opioids collections selected) | | | | ~ |
| Florida Walgreens Litigation Docume | ✓ McKinsey Documents | ✓ Purdue Pharma HOC Investigation | | |
| ✓ Insys Litigation Documents | National Prescription Opiate Litiga | San Francisco Walgreens Litigation | | |
| KHN OxyContin Collection | Ohio Pharmacy Litigation Documents | ✓ Washington Post Opioid Collection | | |
| Kentucky Opioid Litigation Document | Oklahoma Opioid Litigation Document | | | |
| ✓ Mallinckrodt Litigation Documents | ✓ Purdue Pharma Bankruptcy Transcript | | | |















Needing to support computational methods





Research questions that require computational methods

- Social network analysis: Which employees within a company communicated with each other most frequently, and during which time periods? What does this social network tell us about how communication and decision-making work in a large organization?
- **Sentiment analysis**: Did employees in certain roles use language (euphemisms, tone, commands, etc.) in certain ways, or did it change over time? What does this tell us about how language is used in the modern workplace and in relation to specific steps in the wrongdoing of these companies?
- Other forms of text mining:
 - At what point were key decisions made, and by whom? How did these patterns differ from one company to another?
 - After manually locating a few instances of deception or misconstrual of evidence in the OIDA corpus, can we
 detect more instances automatically using machine-learning models?







Supporting computational methods by humanities scholars and others





What functionality do we think we need to support?

- Querying and retrieving documents by metadata, by full text, and by format
- Processing documents remotely (including on cloud platforms) or locally
- Building visualizations and other tools on top of our data without requiring people to download everything
- Integration of our content with other document corpora

And we need to support users of different technical abilities!







What are we exploring?

- Making data and Jupyter notebooks available in SciServer
- Making data available in the Registry of Open Data on AWS
- Working with the developers of the Archives Research Compute Hub (ARCH) to allow for OIDA documents to be searched and queried alongside web archives
- Creating custom datasets of particular types of documents
- Creating an API for querying and retrieving full content Currently we have an API for metadata only.

Check out what we have so far at https://oida-resources.jhu.edu/oida-toolbox/







To receive updates on OIDA, including our support for computational methods

purl.org/oida/subscribe











Opioid Industry Documents Archive https://www.industrydocuments.ucsf.edu/opioids