STAT Reporting from the frontiers of health and medicine

Tracking How Federal Health Cuts Impact Your Communities

2025 National Fellowship
USC ANNENBERG CENTER FOR HEALTH JOURNALISM

https://github.com/statnews/uscfellowship25

PRESENTED BY

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STAT News

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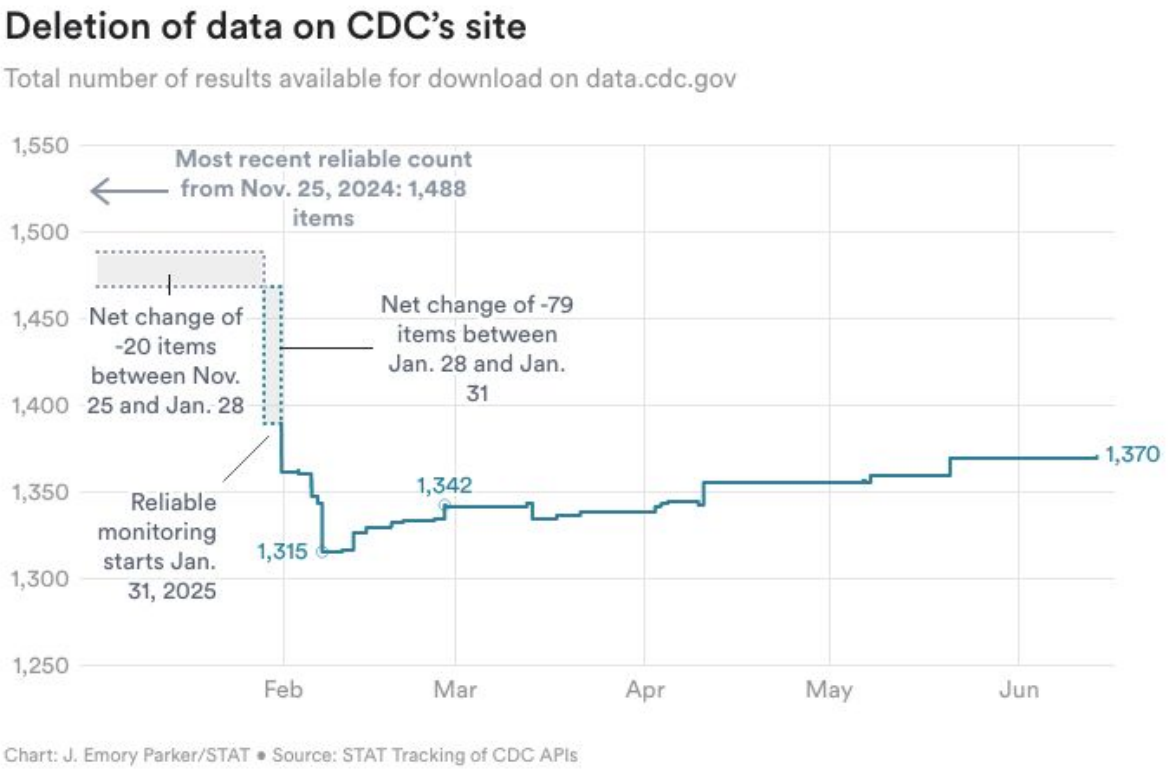
Backing up every CDC dataset



Reconstructing the past

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Date ▼	Change	Name	ID
2025-06-13 12:30:33	Added	hcp_influenza	89x6-rgq5
2025-05-20 15:19:07	Added	DASH GSHS - No Fast Food (2015)	4bif-w52v
2025-05-20 15:19:07	Added	DASH YRBSS - Did not participate in 60 minutes of activity 1x/weekly (MS)	8u74-z25n
2025-05-20 15:19:07	Added	DASH YRBSS - Physical Fight (MS)	dr7j-7p7w
2025-05-20 13:21:14	Added	DASH YRBSS - Students who are Currently Sexually Active (HS)	5dm2-74uk
2025-05-20 13:21:14	Added	DASH - Youth Risk Behavior Surveillance System (YRBSS): Middle School	k5bc-k3g8
2025-05-20 13:21:14	Added	DASH - Global School-based Student Health Survey (GSHS)	pxpe-pgrg
2025-05-20 13:21:14	Added	DASH - Youth Risk Behavior Surveillance System (YRBSS): High School – Including Sexual Orientation	q6p7-56au

Get the data

Tracking changes as they happen

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Row	...	Topic	Data_Value	...	StratificationCategory1	Stratification1	StratificationCategory2	Stratification2
1	...	Heart Disease Mortality	182.4	...	~~Gender~~Sex	Overall	Race/Ethnicity	Overall
2	...	Heart Disease Mortality	172.6	...	~~Gender~~Sex	Overall	Race/Ethnicity	Overall
3	...	Heart Disease Mortality	255.6	...	~~Gender~~Sex	Overall	Race/Ethnicity	Overall
4	...	Heart Disease Mortality	343.4	...	~~Gender~~Sex	Overall	Race/Ethnicity	Overall
5	...	Heart Disease Mortality		...	~~Gender~~Sex	Overall	Race/Ethnicity	Overall
6	...	Heart Disease Mortality	218.6	...	~~Gender~~Sex	Overall	Race/Ethnicity	Overall
	...	...	...	...	...	...	...	...
59091	...	Heart Disease Mortality		...	~~Gender~~Sex	Male	Race/Ethnicity	Asian and Pacific Islander
59092	...	Heart Disease Mortality		...	~~Gender~~Sex	Female	Race/Ethnicity	Asian and Pacific Islander
59093	...	Heart Disease Mortality	338.4	...	~~Gender~~Sex	Overall	Race/Ethnicity	American Indian and Alaskan Native
59094	...	Heart Disease Mortality	432.2	...	~~Gender~~Sex	Male	Race/Ethnicity	American Indian and Alaskan Native
59095	...	Heart Disease Mortality		...	~~Gender~~Sex	Female	Race/Ethnicity	American Indian and Alaskan Native

Drilling down into changes

Backup copies of data that's been removed from data.cdc.gov

Search in table

Page 1 of 6 ›

id	Name ▲	Mentions "gender"	Download	File size	File type
vtwh-8kxg	**Adult Tobacco Consumption In The U. S. Glossary And Methodology**		Download	0.07 MB	xls
hfr9-rurv	**Alzheimer's Disease and Healthy Aging Data**	⚠	Download	120.26 MB	csv
xs7u-t3bn	**Alzheimer's Disease and Healthy Aging Indicators: Caregiving**	⚠	Download	10.21 MB	csv
jhd5-u276	**Alzheimer's Disease and Healthy Aging Indicators: Cognitive Decline**	⚠	Download	10.80 MB	csv
thir-stei	**American Community Survey (ACS) – Vision and Eye Health Surveillance**	⚠	Download	334.65 MB	csv
4ht3-nbmd	**Archived Cumulative Data: Percent of pregnant people aged 18-49 years receiving at least one dose of a COVID-19 vaccine during pregnancy overall, by race/ethnicity, and date reported to CDC-Vaccine Safety Datalink, *United States | December 20, 2020 – Jan***		Download	0.04 MB	csv
fpp2-pp25	**Behavioral Risk Factor Data: Tobacco Use (2010 And Prior)**		Download	9.80 MB	csv
wsas-xwh5	**Behavioral Risk Factor Data: Tobacco Use (2011 to present)**		Download	11.80 MB	csv
ikwk-8git	**Behavioral Risk Factor Surveillance System (BRFSS) - National Cardiovascular Disease Surveillance Data**	⚠	Download	54.57 MB	csv
iuq5-y9ct	**Behavioral Risk Factor Surveillance System (BRFSS) Historical Questions**	⚠	Download	1.99 MB	csv

Making the data available

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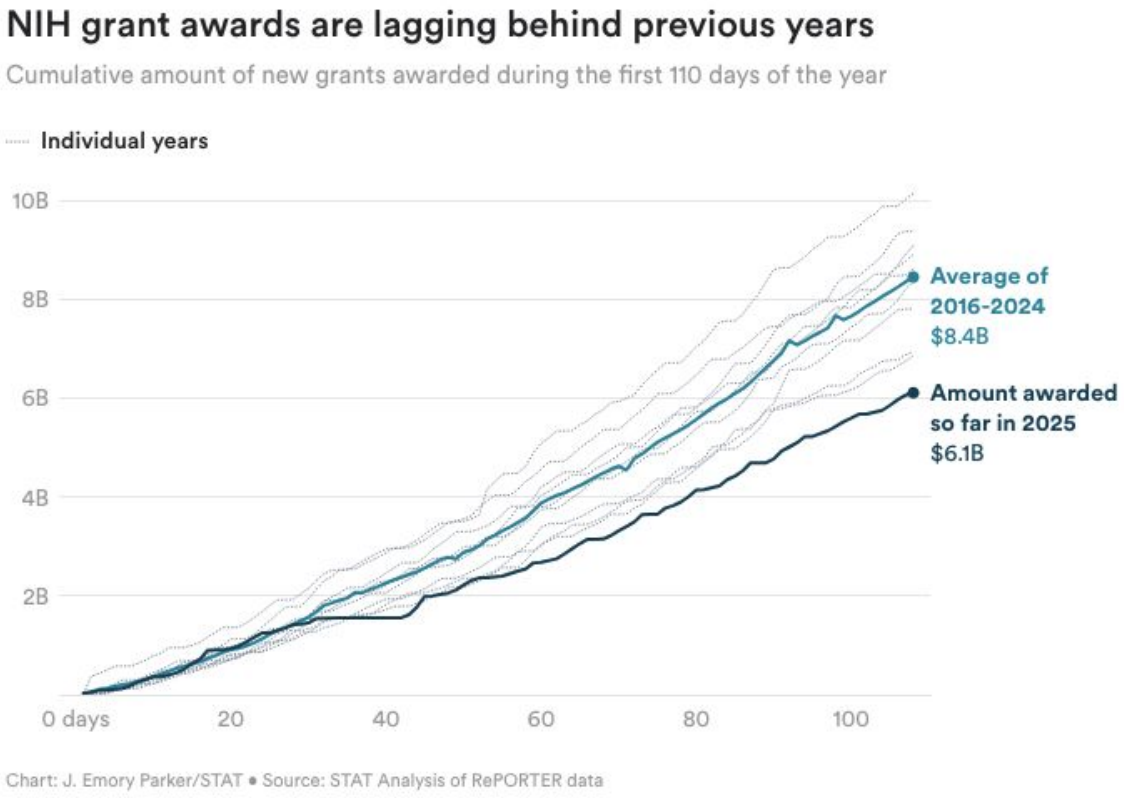
https://tinyurl.com/3sr8y6xt

Tracking deficits in NIH grant funding

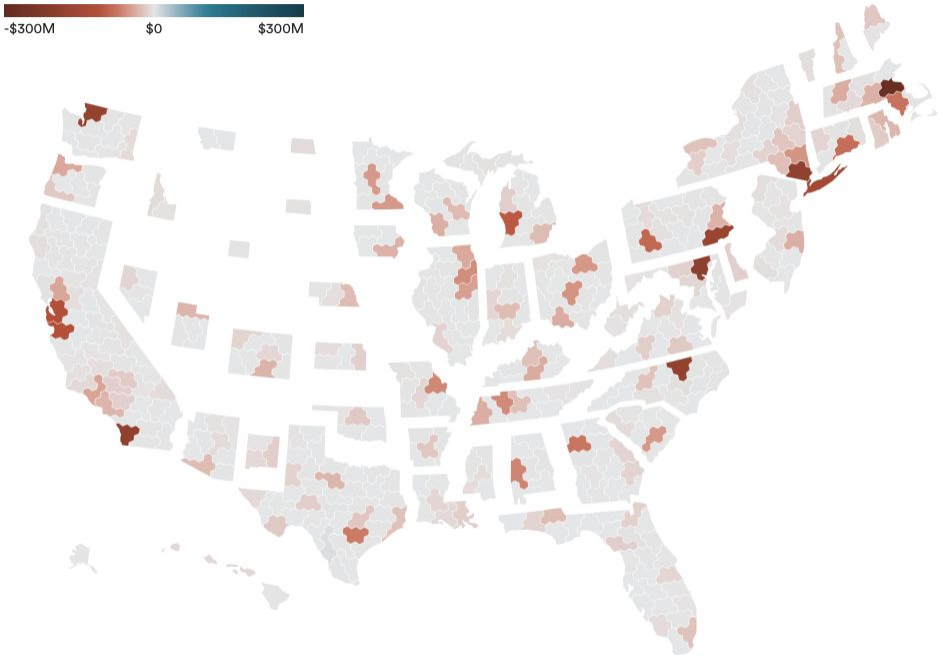

NIH grant awards are lagging behind previous years
Cumulative amount of new grants awarded during the first 110 days of the year
Individual years
10B
8B
6B
4B
2B
0 days
20
40
60
80
100
Average of 2016-2024 $8.4B
Amount awarded so far in 2025 $6.1B
Chart: J. Emory Parker/STAT • Source: STAT Analysis of RePORTER data

The upshot

Drilling down

Big cities and university towns lost the most from decline in grant awards

Change in the cumulative amount of new NIH grants awarded by congressional district in the first 110 days of 2025 compared with the average for the same period from 2016-2024.



Note: In this image the size of states has been scaled by population to make every district the same size. The shapes of districts have also been simplified for legibility. This exaggerates the geographic size of cities to enhance visibility. The position of districts may not match their real-world locations.

Map: J. Emory Parker/STAT • Source: STAT Analysis of RePORTER data

Localizing our findings

10 institutions that had the largest drop in new NIH grants

Cumulative amount of new NIH grants awarded to research institutions in first 100 days of 2025 compared with the median for the same period in 2016-2024. It does not include grants that were terminated or frozen.

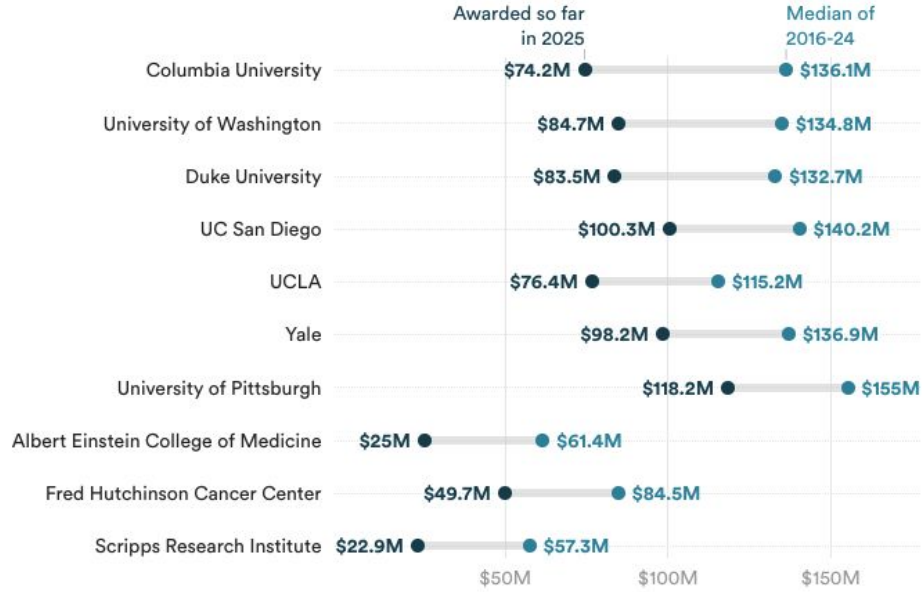


Chart: J. Emory Parker/STAT • Source: STAT Analysis of RePORTER data

Results

Funding is drying up, and so are career options. Some budding scientists are debating abandoning their research.

Across New England and the country, thousands of budding scientists have awoken to a stark new reality

By Chris Serres and J. Emory Parker Globe Staff and STAT , Updated May 27, 2025, 9:58 a.m.

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Working with The Globe

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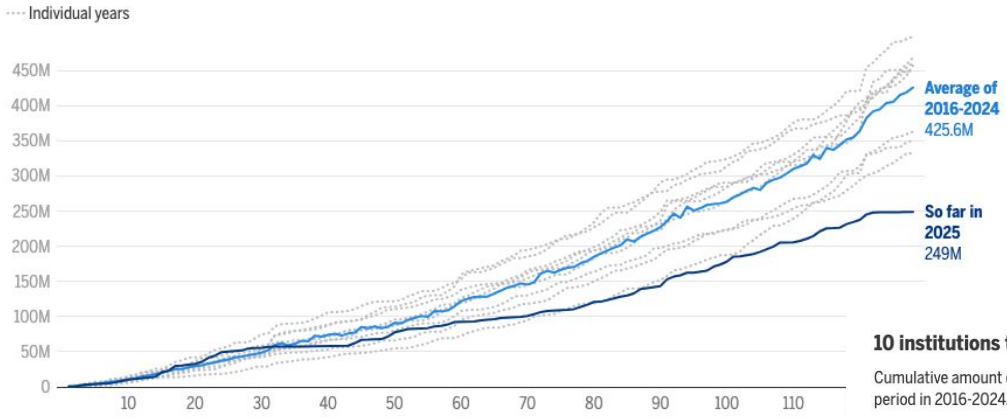
$177 million less awarded for early career grants so far this year

Cumulative dollar values of new grants awarded during the first 128 days of the year



Early career grants have activity codes F30, F31, F32, T32, T34, T35, TL1, K01, K08, K12, K22, K23, K24, K43 and K99.

Chart: J. Emory Parker/STAT • Source: Analysis of RePORTER data

10 institutions that had the largest drop in early career grants

Cumulative amount of new NIH grants awarded to research institutions in first 128 days of 2025 compared with the median for the same period in 2016-2024. It does not include grants that were terminated or frozen.

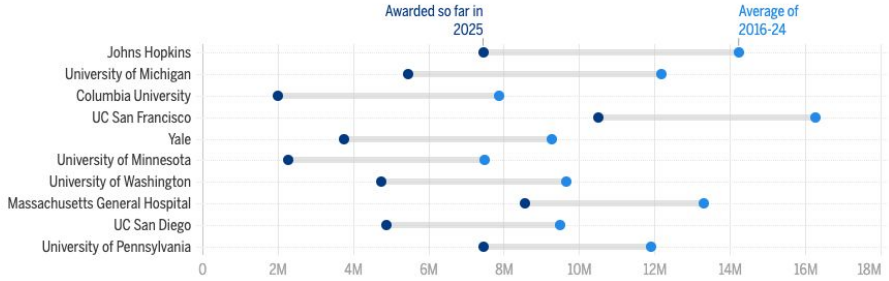


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Chart: J. Emory Parker/STAT • Source: Analysis of RePORTER data

Results of early career analysis

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Tabula can turn PDFs into spreadsheets

Tabula

Get it at tabula.technology

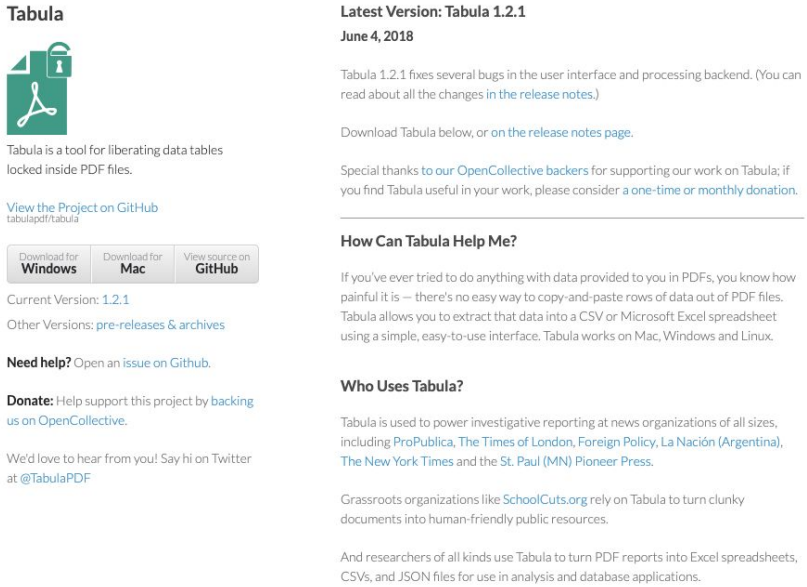
Runs entirely on your machine

Only works for text-based pdfs, will not work with scanned pdfs

HHS cancelled grants PDF

Shortened: https://tinyurl.com/25efmb8z

Full version: https://taggs.hhs.gov/Content/Data/HHS_Grants_Terminated.pdf



Tabula

Tabula is a tool for liberating data tables locked inside PDF files.

View the Project on GitHub
tabulapdf/tabula

Download for Windows | Download for Mac | View source on GitHub

Current Version: 1.2.1

Other Versions: pre-releases & archives

Need help? Open an issue on Github.

Donate: Help support this project by backing us on OpenCollective.

We'd love to hear from you! Say hi on Twitter at @TabulaPDF

Latest Version: Tabula 1.2.1
June 4, 2018

Tabula 1.2.1 fixes several bugs in the user interface and processing backend. (You can read about all the changes in the release notes.)

Download Tabula below, or on the release notes page.

Special thanks to our OpenCollective backers for supporting our work on Tabula; if you find Tabula useful in your work, please consider a one-time or monthly donation.

How Can Tabula Help Me?

If you've ever tried to do anything with data provided to you in PDFs, you know how painful it is — there's no easy way to copy-and-paste rows of data out of PDF files. Tabula allows you to extract that data into a CSV or Microsoft Excel spreadsheet using a simple, easy-to-use interface. Tabula works on Mac, Windows and Linux.

Who Uses Tabula?

Tabula is used to power investigative reporting at news organizations of all sizes, including ProPublica, The Times of London, Foreign Policy, La Nación (Argentina), The New York Times and the St. Paul (MN) Pioneer Press.

Grassroots organizations like SchoolCuts.org rely on Tabula to turn clunky documents into human-friendly public resources.

And researchers of all kinds use Tabula to turn PDF reports into Excel spreadsheets, CSVs, and JSON files for use in analysis and database applications.

Let’s give Tabula a try…

Tabula

Install and run Tabula. It will open in a browser window.

The main screen will allow you to import new PDFs and access PDFs you've imported in the past.

Select "Browse…" to locate a PDF on your system.

> We'll be using the shortened `HHS_Grants_Terminated.pdf` file for this example.

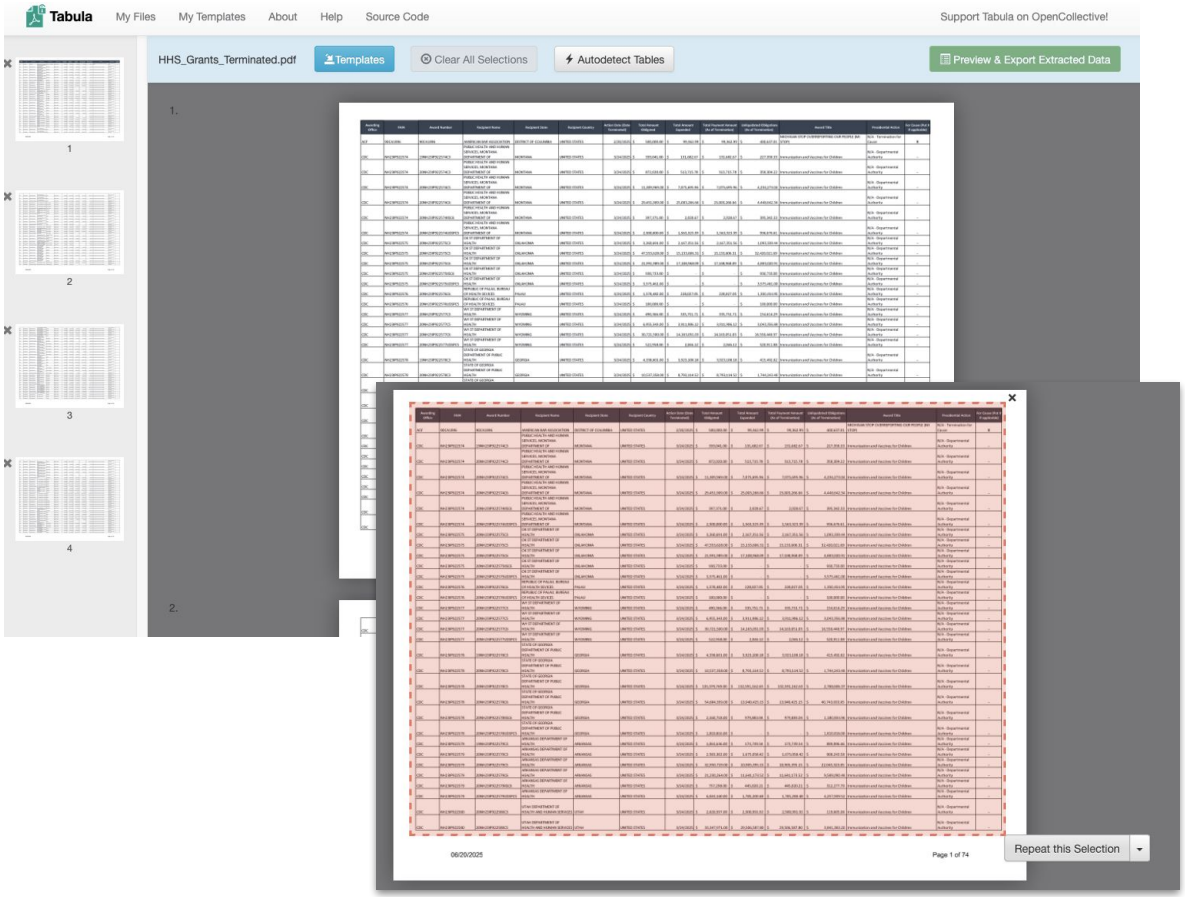
Then select "Import" to begin the process of extracting data.

Tabula

Draw a box around the table on the first page of the document.

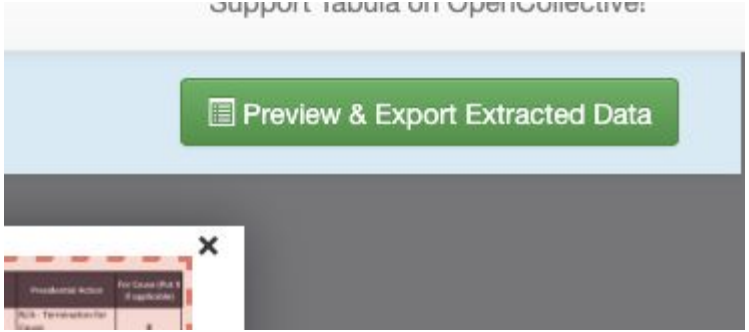
If the document contains similar tables on every page, like this example, select “Repeat this Selection” to automatically copy the box to every page.

Manually adjust the boxes on each page, if necessary.



Tabula

Once you have all the tables selecting within red boxes, select “Preview & Export Extracted Data” to proceed to the next step.



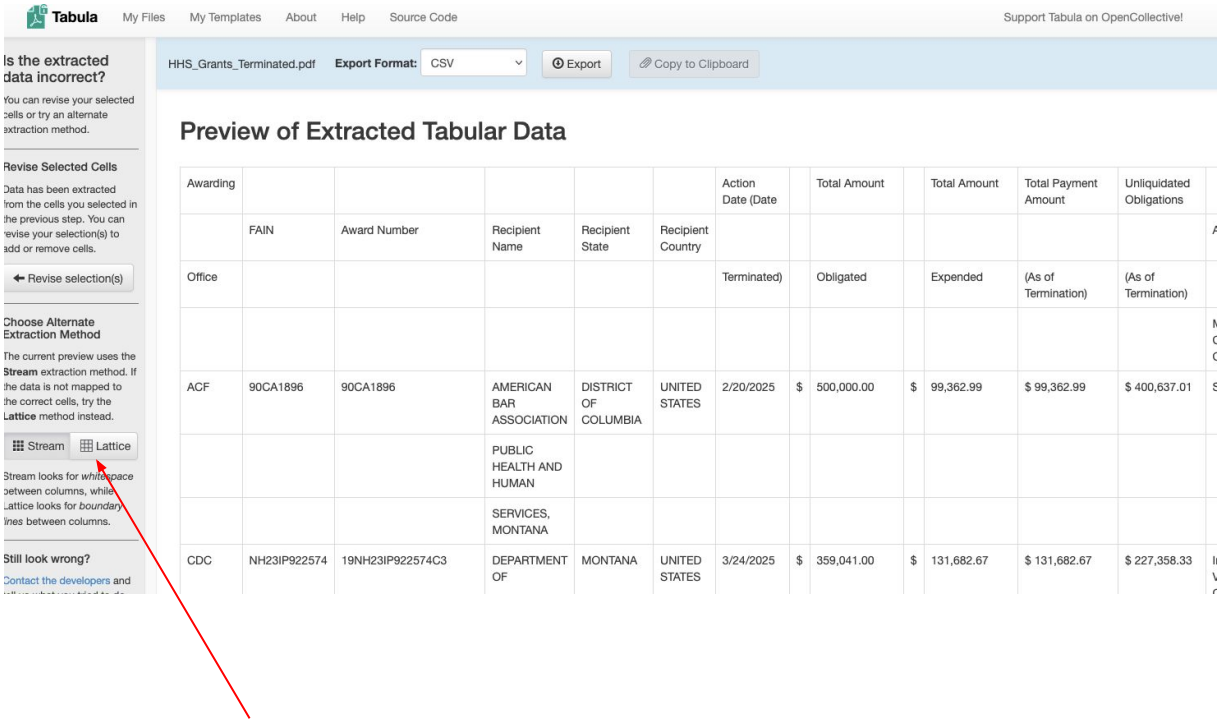
Tabula

You'll get a preview of what the extracted data will look like.

In this case, the preview doesn't look right.

In this document, the table is made up of lines so we need to change the extraction method to "lattice".

Use "stream" when there aren't lines in the document.



Awarding						Action Date (Date		Total Amount		Total Amount	Total Payment Amount	Unliquidated Obligations	
	FAIN	Award Number	Recipient Name	Recipient State	Recipient Country								
Office						Terminated)		Obligated		Expended	(As of Termination)	(As of Termination)	
ACF	90CA1896	90CA1896	AMERICAN BAR ASSOCIATION	DISTRICT OF COLUMBIA	UNITED STATES	2/20/2025	$	500,000.00	$	99,362.99	$ 99,362.99	$ 400,637.01	
			PUBLIC HEALTH AND HUMAN										
			SERVICES, MONTANA										
CDC	NH23IP922574	19NH23IP922574C3	DEPARTMENT OF	MONTANA	UNITED STATES	3/24/2025	$	359,041.00	$	131,682.67	$ 131,682.67	$ 227,358.33	

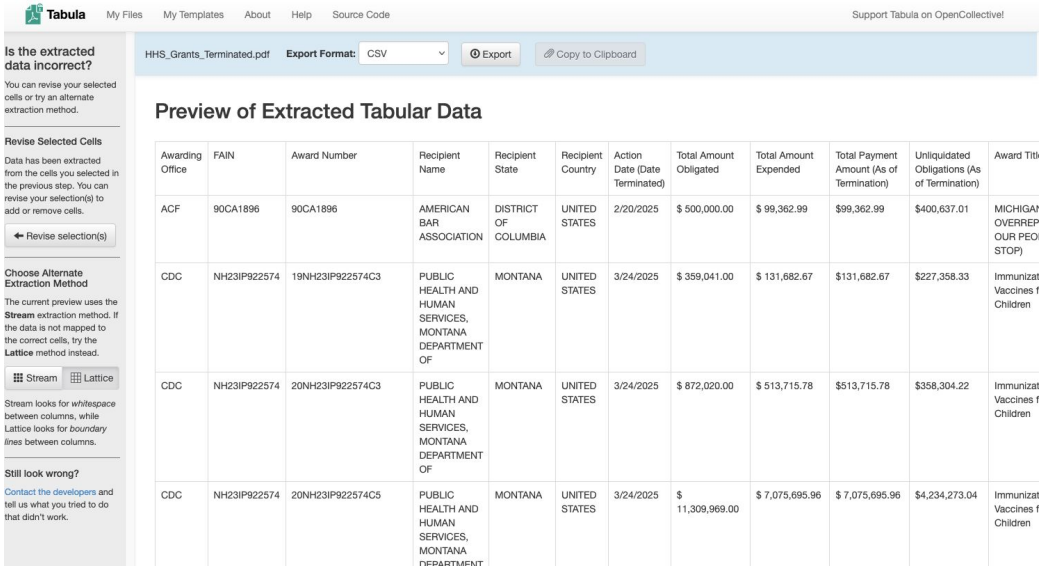
Tabula

That looks better!

All that's left is to select an export format (CSV should be fine for most cases) and select "Export".

Tabula will then save a .csv file wherever your browser usually saves downloads.

The CSV file can be opened in Excel or Google Sheets.



Tabula

NIH RePORTER is useful for looking tracking grants

RePORTER Basics

https://reporter.nih.gov/

Covers grants from NIH

Website is useful for searching for grants, but for more comprehensive analysis you'll need to use the API and have some code knowledge

STAT Reporting from the frontiers of health and medicine

https://github.com/dhoconno/reporter

This resource provides real-time analysis similar to STAT's

File and code here are open source and you're able to freely use and redistribute them

Quick links

All terminated grants:
https://raw.githubusercontent.com/dhoconno/reporter/refs/heads/main/data/processed/taggs/hhs_grants_terminated.csv

All grants:
https://github.com/dhoconno/reporter/raw/refs/heads/main/data/processed/reporter/nih_awards_all.csv.zst

All meetings in federal register:
https://github.com/dhoconno/reporter/raw/refs/heads/main/data/processed/federal_register/nih_fr_meetings_all.csv.zst

Note: the .zst files are compressed.

Uncompressing ZST files

On Mac

Open the Terminal application.

Navigate to the location where of the file.

Example: if it's in your "Downloads" folder
Type: `cd ~/Downloads`

Use the UNZSTD command

Example: to uncompress the file "nih_awards_all.csv.zst"
Type: `unzstd nih_awards_all.csv.zst`

This will create a new file "nih_awards_all.csv" in your Downloads folder

NIH and NSF cancelled grant trackers

STAT Reporting from the frontiers of health and medicine

Where to access Scott Delaney's data

NIH data

https://grant-watch.us/nih-data.html

Click "download all as CSV" to follow along

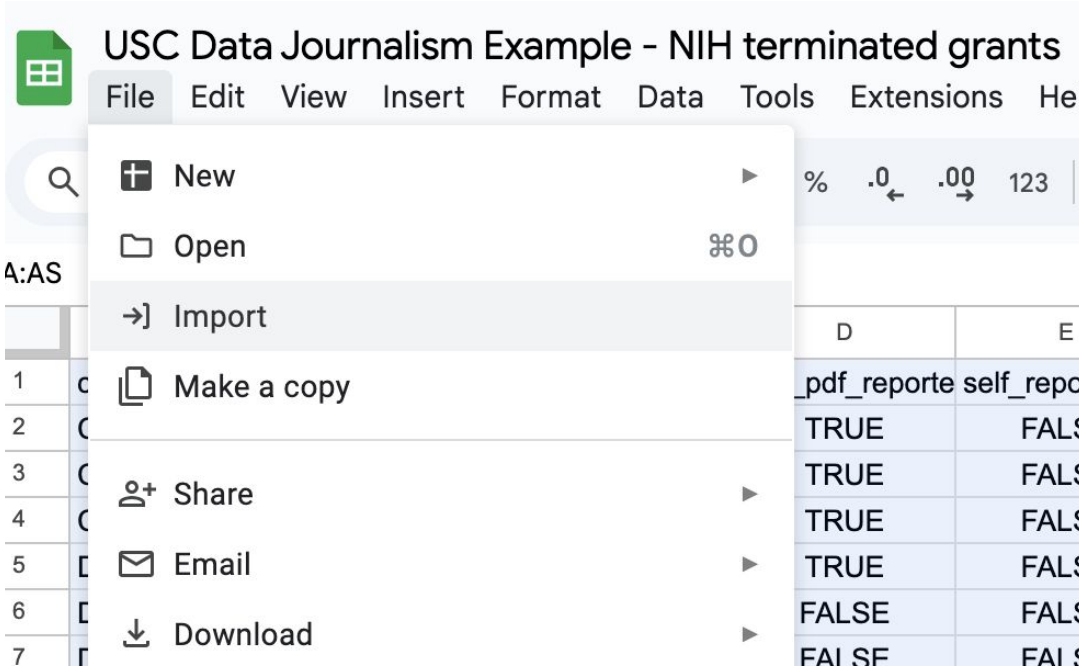
Access my completed Google Sheet here:
https://docs.google.com/spreadsheets/d/1G6Y581pqxLy-hEgFUc2HPWvUCc12dbbUGO1theRdSkQ/edit?usp=sharing

NSF data

https://grant-watch.us/nsf-data.html

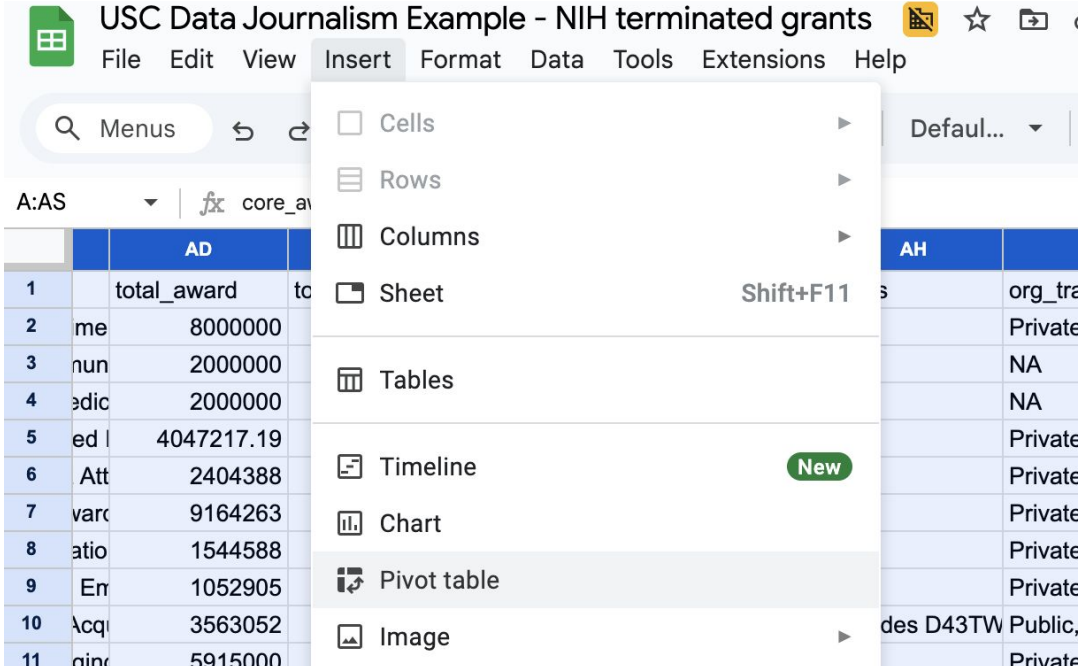
Let’s try some quick analysis of NIH terminations…

Getting started



Open Google Sheets and import the NIH terminated grants csv file from the previous slide.

Create a pivot table

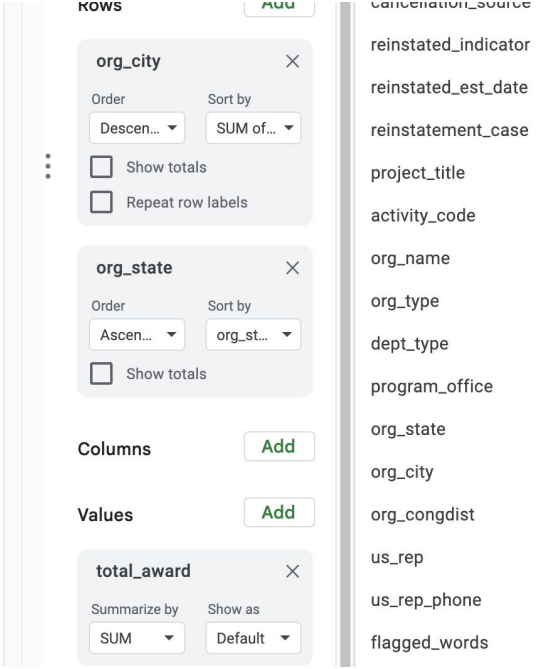


Select all columns in the spreadsheet.

Select Insert > Pivot table

Select Insert to New sheet and click Create

Let’s get the total $ by city and state



Drag org_city and org_state into the Rows area.

Drag total_award into the Values area.

Set “Summarize by” to SUM.

Uncheck “Show totals” and “Repeat row labels” if checked.

Under org_city, set “Order” to Descending and “Sort by” to “SUM of total_award”.

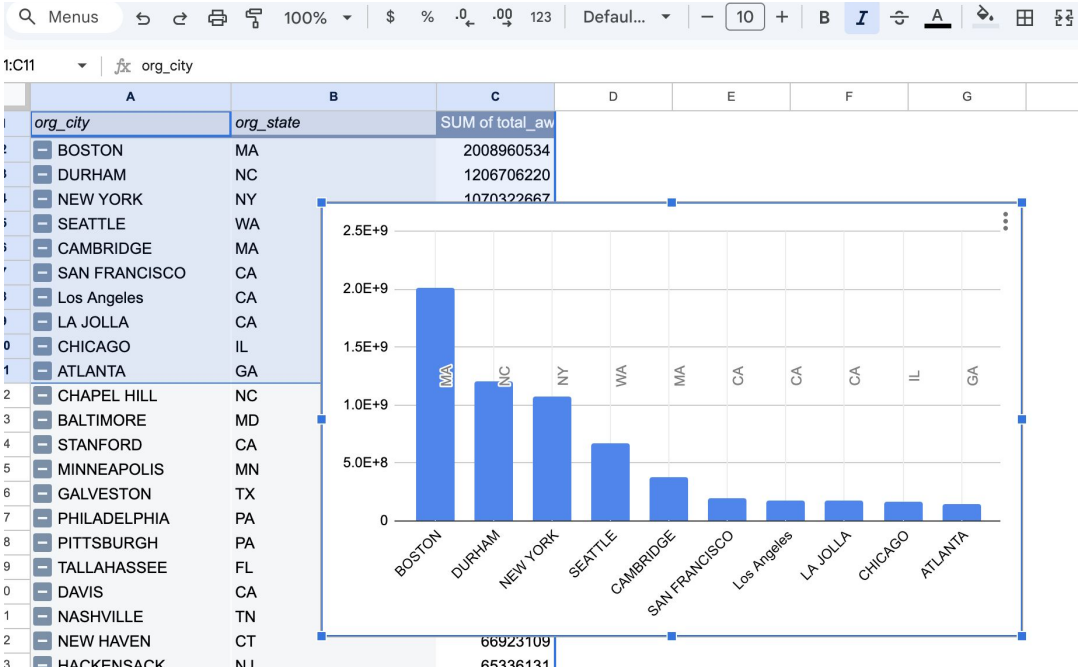
What are the most impacted cities?

1	org_city	org_state	SUM of total_aw
2	BOSTON	MA	2008960534
3	DURHAM	NC	1206706220
4	NEW YORK	NY	1070322667
5	SEATTLE	WA	673106722.3
6	CAMBRIDGE	MA	377649851.4
7	SAN FRANCISCO	CA	196858417.9
8	Los Angeles	CA	176116814.8
9	LA JOLLA	CA	173505245.2
10	CHICAGO	IL	164050717.7
11	ATLANTA	GA	144354675
12	CHAPEL HILL	NC	135286849
13	BALTIMORE	MD	127478894
14	STANFORD	CA	118276300.7
15	MINNEAPOLIS	MN	113511057

You should now have a table that looks like this.

What other variables should we look at?

Let’s make a quick chart



Highlight the top 10 cities and select Insert > Chart.

You should now have a chart that looks like this.

Play with the settings in the “Chart editor” panel to the right.

How can we improve this chart?

What next?

Hint: we could replicate when we just did with the csv of all grants we uncompressed earlier.

This would tell us about areas that have historically benefitted from grants.

Could we then compare our analysis of historical grant data with our analysis of terminated grants?

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Some additional resources

Using Google Cloud with Google Sheets (when your dataset is very big!)

https://docs.google.com/presentation/d/1KSuvk23sUVTqH6fpe367_M3W2LGAyJrMroqLZyMdlLc/edit?slide=id.p#slide=id.p

Using IF and VLOOKUP functions in Google Sheets

https://resources.ire.org/tipsheets/20250309-30389.pdf

Advanced pdf techniques (requires command line)

https://github.com/chadday/nicar_ocr

https://github.com/jsvine/nicar-2025-pdf

plumber-workshop

Introduction to the command line

https://github.com/ghing/nicar-2025-command-line

Advanced resources for the adventurous

Python

Simple Python for Spreadsheets

https://docs.google.com/document/d/1hzyXER2Cs7OY4j8NOA47RAoXQ0zATBCjEfCrDtHOPRI/edit?tab=t.0#heading=h.l3xoyau58q91

Intro to PANDAS

https://docs.google.com/document/d/1uoFrbpwmQP4-Kddpa4VErdWDz2Pqz-NPnca9NvFm9OE/edit?tab=t.0#heading=h.93s6hba7j4u2

R

Introduction to R and Rstudio

https://github.com/ireapps/teaching-guide-R123

Introduction to R walkthrough

https://github.com/ireapps/nicar25-intro-to-R