Washtenaw County
Health Department

Hands-on Workshop: Using R for Epidemiologic Analysis

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Presentation

30 minutes

- R Uses
- R Examples
- MICOM
  - MICOM & WCHD
- MI-Support

Workshop

1 hour, 30 minutes

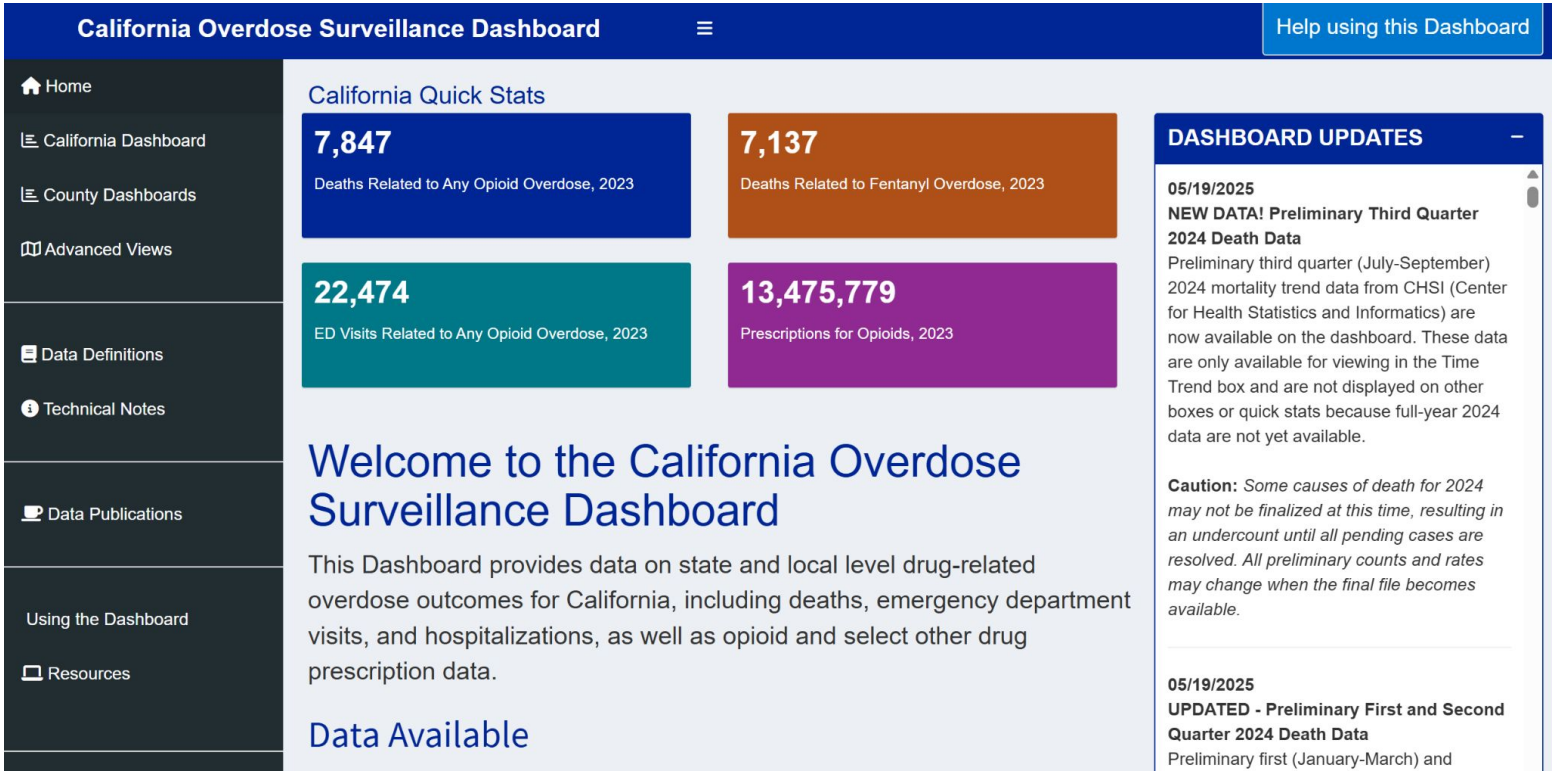
So R? It's pretty cool?

- What we'll see today can be done at different levels, with different tools
- Excel, python, and more can all be leveraged depending on the project/preferences
- R has a good user interface, is free, and has a lot of capabilities, which is why we use it, and recommend it

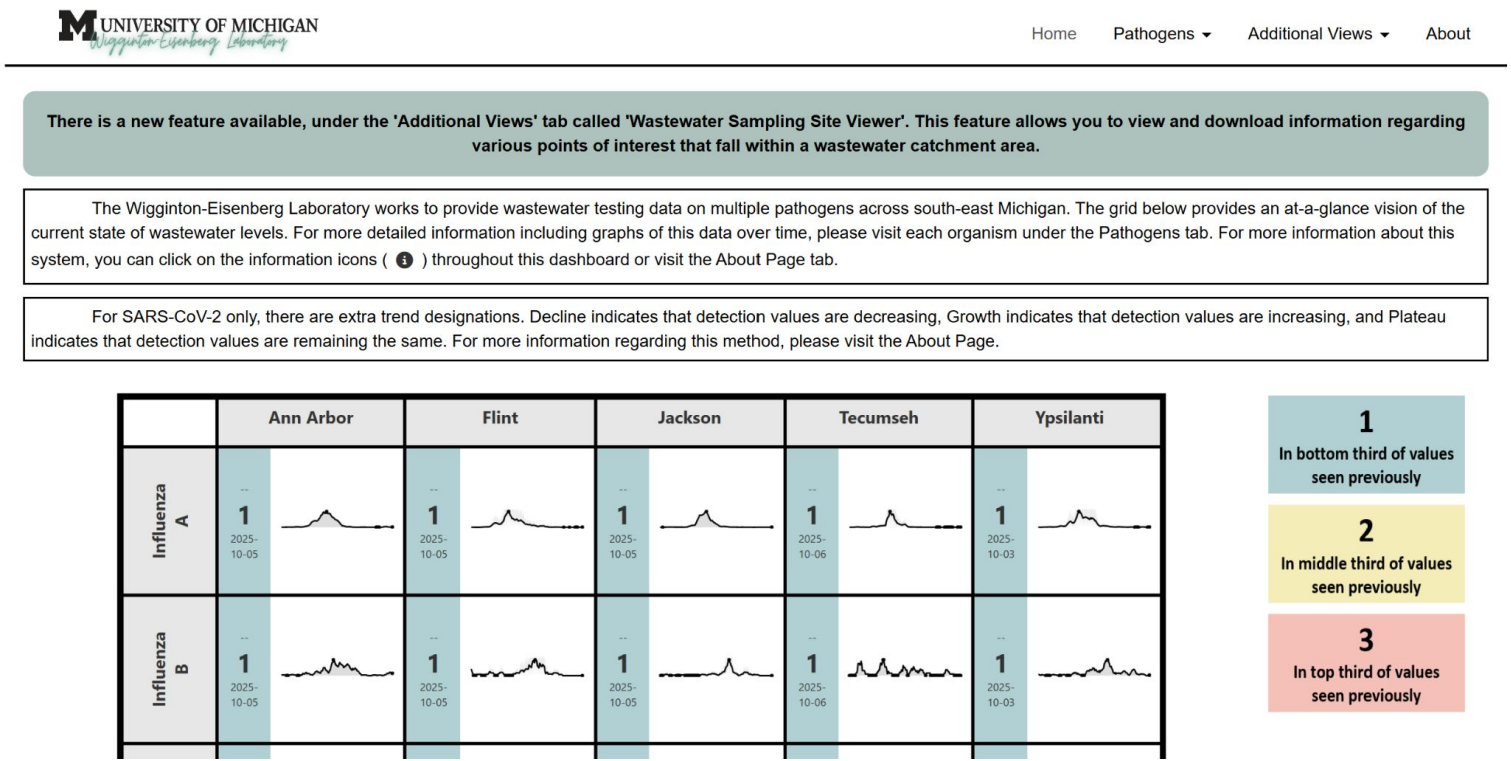
Uses of R - The list goes on and on and on and on

- Usually think of R for statistical analyses and maybe plots?
- But can be as complicated / or not as you want
  - Dashboards / Websites
  - Reproducible Analyses
  - Data processing checks and pipelines
  - Reproducible Reports
  - Book and paper publishing
- Some things you may have seen online:

https://skylab.cdph.ca.gov/ODdash/?tab=Home



https://um.wastewatermonitoring.dataepi.org/



https://www.epirhandbook.com/en/

Need help learning R? Enroll in Applied Epi's **intro R course**, try our **free R tutorials**, post in our **Community Q&A forum**, or ask about our **R Help Desk service**.

The Epidemiologist R Handbook

Welcome

About this book

1 Editorial and technical notes

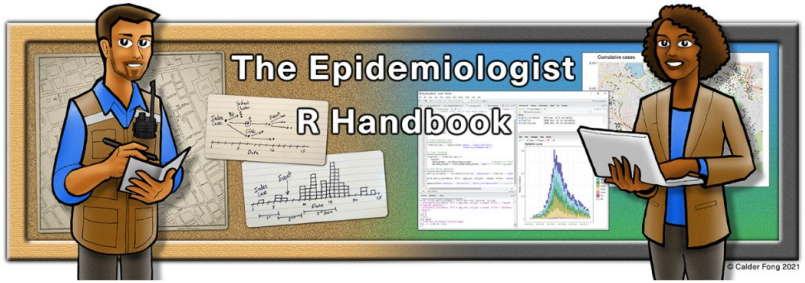
2 Download handbook and data

The Epidemiologist R Handbook

LAST UPDATED

Sep 18, 2024

Welcome



R for applied epidemiology and public health

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R for applied epidemiology and public health

How to use this handbook

Acknowledgements

Terms of Use and Contribution

MICOM = Integrator Center

Part of InsightNet, funded through CDC's Center for Forecasting & Analytics

Partnership between the University of Michigan and Michigan Department of Health and Human Services (MDHHS)

Work to develop modeling tools and data analytic pipelines

Integrated into MDHHS operational workflows and decision-making

Build tools that will benefit directly public health—both in emergencies, and in addressing current, critical infectious disease threats

MICOM & WCHD - The Beginning

- Exploratory conversation
- Technical Assistance
- R Workshops
- Academic Health Department
- Closer ties through meetings, project discussions, collaboration on grants (e.g. CVI), workgroups with other LHDs

In the last year, we've launched MI-Support!

What is MI-Support?

- MI-Support team provides support/staffing to complete requested data analysis/modeling projects from local and tribal health departments across the state of Michigan

- Goals of the program:
  - Provide support and capacity building in response to urgent and/or under supported modeling and analytics needs for LHDs
  - Increased preparedness for public health emergencies
  - Enhanced capacity for analytics and modeling

How does MI-Support work?

- Health department identifies a project that they may not have the staffing/resources to complete
- Member of the health department reaches out to MI-Support via Google Form or email, providing details about the project they are looking to complete
- Request enters queue for review by MI-Support team
- MI-Support deploys team to assist with the requested project

Level of support can range from providing consulting or support to LHD staff working on a project up to fully completing the project in-house, depending on LHD needs/preferences

Projects So Far:

- R Workshops: 11; Various topics
- Automated Internal STI Reports
- Tool for Risk Evaluation and Communication Regarding Measles
- Code to Dashboard Process Documentation and Evaluation Assistance
- Dashboard and Enhanced Analytics for Firearm Injuries
- Streamlining Communicable Disease & TB Reporting for Bi-weekly Interdisciplinary Teams
- Vaccination Geo-spatial Analysis

Taking advantage —

Active call for projects!

Have project ideas for your work or your team(s)?

Email us at micom-misupport@umich.edu or fill out our google form!

Talk to Juan, Marisa, Jack, or Jules today-Wednesday

Workshop

1 hour, 30 minutes

- Loading in data (and checking it!)
- Working with data with a goal in mind
- Making a graph
- Making a table
- Swapping from a script to a report

Presentation

30 minutes