Utilizing data tools and management

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Outline

Expectations

What is Data Management?

Why Data Management?

Data Management in Practice

Final Thoughts

Q&A

Expectations

Of this presentation

- Meet the stated objectives
- Positively affect change related to surveillance and data management within LHDs
- Challenge perceptions of how local epi/CD teams should be structured

Of the audience

- Recognize that health districts fall along a continuum of data management KSAs
- Recognize presenter's bias towards district epi and DSI experiences and approaches
- Offer up thoughts and experiences

What is Data Management?

What is Data Management

Oracle:
Data management is the practice of collecting, keeping, and using data securely, efficiently, and cost-effectively. The goal of data management is to help people, organizations, and connected things optimize the use of data within the bounds of policy and regulation so that they can make decisions and take actions that maximize the benefit to the organization. https://www.oracle.com/database/what-is-data-management/

Tableau:
Data management is the practice of collecting, organizing, protecting, and storing an organization's data so it can be analyzed for business decisions. https://www.tableau.com/learn/articles/what-is-data-management

IBM:
Data management is the practice of ingesting, processing, securing and storing an organization's data, where it is then utilized for strategic decision-making to improve business outcomes. https://www.ibm.com/topics/data-management

SAS:
Data management is the practice of managing data as a valuable resource to unlock its potential for an organization. Managing data effectively requires having a data strategy and reliable methods to access, integrate, cleanse, govern, store and prepare data for analytics.
https://www.sas.com/en_us/insights/data-management/data-management.html

What is Data Management

In summary:

> Collecting, securely protecting, storing, and analyzing data for strategic decision-making.

An ongoing process that reviews and update the principles and strategies applied to data projects and systems as they move through their lifecycle.

Why Data Management?

Why Data Management?

Public Health:

The science of protecting and improving the health of people and their communities.

This work is achieved by promoting healthy lifestyles, researching disease and injury prevention, and detecting, preventing and responding to infectious diseases.

Core Public Health Functions Steering Committee (1994), revised 2020

https://www.cdc.gov/publichealthgateway/publichealthservices/essentialhealthservices.html

Why Data Management?

Virginia Department of Health:

Vision: Become the healthiest state in the nation.
Mission: To protect the health and promote the well-being of all people in Virginia.
Core Values: Our culture values service, equity, and making data-informed decisions.

Strategic Goals:

1. Maintain a competent and valued workforce
2. Foster healthy, connected, and resilient communities
3. Be a trusted source of public health information and services
4. Assure the conditions that improve health opportunity
5. Provide internal systems that deliver consistent and responsive support

Why Data Management?

Public Health Surveillance:

The ongoing, systematic collection, analysis, and interpretation of health-related data essential to planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those responsible for prevention and control.

Data Management in Practice

Data Management in Practice

Data collection

- Storage
- Permissions
- Fields
- Organization
- Methods
- Entry

Data analysis

- Querying
- Cleaning
- Analyzing
- Report Building
- Dissemination
- *Limitations

Data protection

- Documentation
- Policy
- Confidentiality
- Governance
- Retention
- Evaluation

Data Management in Practice

Data system characteristics:

- Central office maintained system
- Local health district maintained system
- Manually entered data
- Externally processed data

Use Case Discussion

	CO data system	LHD data system
Manually entered data		
Externally processed data	ESSENCE, VEDSS ELR	

Use Case Discussion: ESSENCE, VEDSS ELR

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- **Dissemination**
- ***Limitations**

Data protection

- **Documentation**
- Policy
- **Confidentiality**
- Governance
- Retention
- **Evaluation**

Tools: Excel, Google Sheets, Epi Info, R, Tableau, System-specific analytics

Use Case Discussion

	CO data system	LHD data system
Manually entered data	VEDSS, VOSS	
Externally processed data		

Use Case Discussion: VEDSS, VOSS

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Data protection

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Tools: Excel, Google Sheets, Epi Info, R, Tableau

Use Case Discussion

	CO data system	LHD data system
Manually entered data		REDCap, Excel, Google Sheets, etc.
Externally processed data		

Use Case Discussion: LHD-Specific

Data collection

- **Storage**
- **Permissions**
- **Fields**
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Data analysis

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Tools: Excel, Google Sheets, Epi Info, R, REDCap

Final Thoughts

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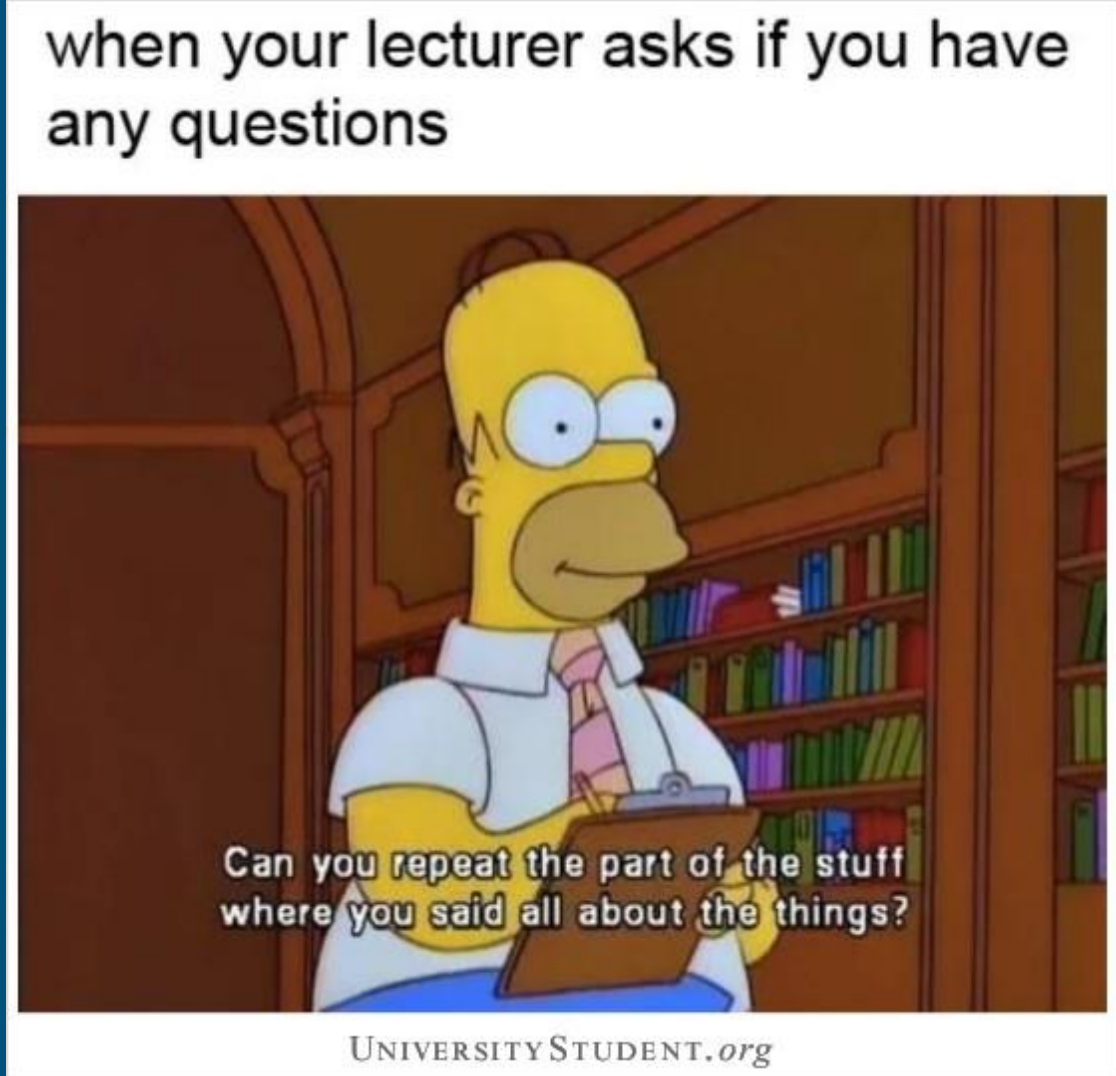
Performing data management with excellence can have a substantial impact on the communication of public health information and informed decision making but requires skilled and dedicated staff in order to achieve.

Expansion of epidemiologic positions at local health districts warrant strategic review for establishing and maintaining investigation and surveillance focused positions/teams.

Q&A


when your lecturer asks if you have any questions
Can you repeat the part of the stuff where you said all about the things?
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