Attributes of an Electronic Surveillance System

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Starting with the 'Why?'

What are the goals of hepatitis surveillance?

- Prevalence estimates for chronic hepatitis
- Identification of emerging trends for acute hepatitis
    - HAV person-to-person outbreaks
    - Increases in young people with hepatitis C
- Identification of missed opportunities for prevention
- Identification of cases for perinatal prevention program

What is needed to accomplish goals?

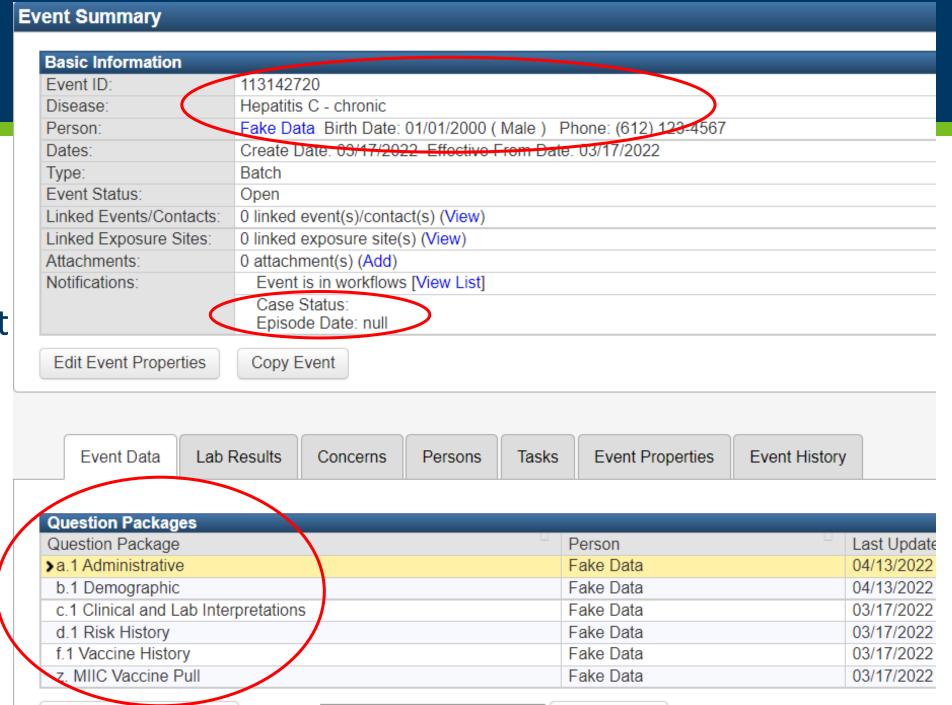**Data!** (collection & storage)

- Deduplication
- Ability to identify acute cases
- Storage of pertinent data
  - Demographics
  - Test results
  - Symptoms
  - Risk history
  - Vaccination history

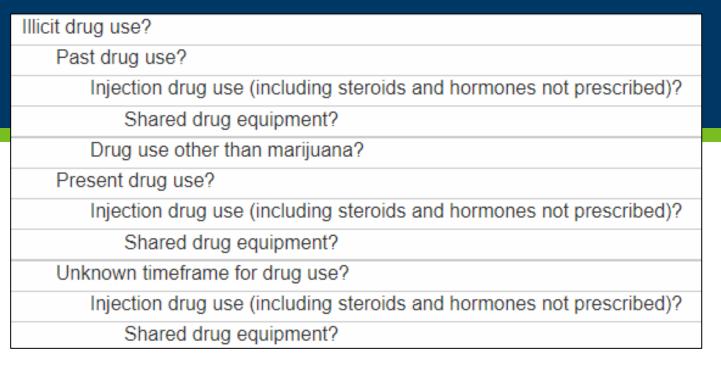# MN Electronic Disease Surveillance System (MEDSS)

- Maven product

- Person-based system

- Long-standing hepatitis surveillance (25+ years)

- Transitioned to Maven in 2013

- Moved from two systems into one

- Hepatitis A, B, C, D, E and perinatal hepatitis B & C (*including peri HBV case management*)
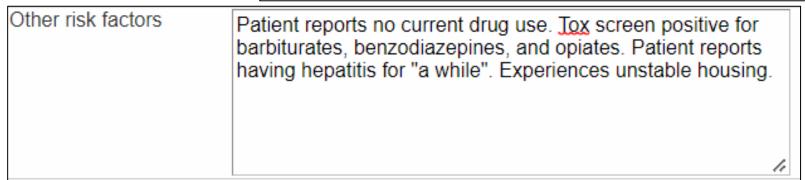
Main screen of disease event

- What's important to see quickly?

Event Summary

Basic Information

Event ID:	113142720
Disease:	Hepatitis C - chronic
Person:	Fake Data Birth Date: 01/01/2000 (Male) Phone: (612) 123-4567
Dates:	Create Date: 03/17/2022 Effective From Date: 03/17/2022
Type:	Batch
Event Status:	Open
Linked Events/Contacts:	0 linked event(s)/contact(s) (View)
Linked Exposure Sites:	0 linked exposure site(s) (View)
Attachments:	0 attachment(s) (Add)
Notifications:	Event is in workflows [View List]
	Case Status:
	Episode Date: null

[Edit Event Properties] [Copy Event]

| Event Data | Lab Results | Concerns | Persons | Tasks | Event Properties | Event History |

Question Packages

Question Package	Person	Last Update
> a.1 Administrative	Fake Data	04/13/2022
b.1 Demographic	Fake Data	04/13/2022
c.1 Clinical and Lab Interpretations	Fake Data	03/17/2022
d.1 Risk History	Fake Data	03/17/2022
f.1 Vaccine History	Fake Data	03/17/2022
z. MIIC Vaccine Pull	Fake Data	03/17/2022

- Keep your variables simple (when possible)
- Keep free-text and repeatable fields minimal

Illicit drug use?
   Past drug use?
      Injection drug use (including steroids and hormones not prescribed)?
         Shared drug equipment?
      Drug use other than marijuana?
   Present drug use?
      Injection drug use (including steroids and hormones not prescribed)?
         Shared drug equipment?
   Unknown timeframe for drug use?
      Injection drug use (including steroids and hormones not prescribed)?
         Shared drug equipment?

Race ⊟	Black African American ⌄
Please specify	⌄
Race ⊟	White ⌄
Race ⊟	Black African American ⌄ Add New
Please specify	Ethiopian ⌄

| Other risk factors | Patient reports no current drug use. Tox screen positive for barbiturates, benzodiazepines, and opiates. Patient reports having hepatitis for "a while". Experiences unstable housing. |

- Workflows are your <u>best friend</u>
- Group cases by type or by action needed
- Use for assigning cases to others
- Use for catching errors or missed data/steps

New ELR reports - Hepatitis A
New ELR reports - Hepatitis B
New ELR reports - Hepatitis B - Hennepin
New ELR reports - Hepatitis B - open Hennepin events
New ELR reports - Hepatitis B lab report added to existing event
New ELR reports - Hepatitis B to send to Hennepin
New ELR reports - Hepatitis B women 14-46 or pregnant
New ELR reports - Hepatitis C
New ELR reports - Hepatitis C - Hennepin
New ELR reports - Hepatitis C - open Hennepin events
New ELR reports - Hepatitis C lab report added to existing event
New ELR reports - Hepatitis C to send to Hennepin
New ELR reports - Hepatitis C under 3
New ELR reports - Hepatitis E
New ELR reports - Hepatitis Other

Acute HBV closed cases to send to CDC
Acute HBV closed cases without county
Acute HCV closed cases to send to CDC
Acute HCV closed cases without county
Chronic HBV closed cases to send to CDC
Chronic HBV closed cases without county
Chronic HCV closed cases to send to CDC
Chronic HCV closed cases without county
Closed cases without state

d1. Infants needing HBV2 - low birth weight
   Infants needing HBV3
f1   Received first dose but not second, at least 1 month old, birth weight less than 2000g

Workflows are amazing

This workflow is for MDH to assign case statuses for cases investigated by LPH.

Workflows are powerful

Print Template

Set Print Date

- Opens a specific print template.
- Set up to move patient data into specific fields in the document.
- Opens document in Word, where it can be easily printed.
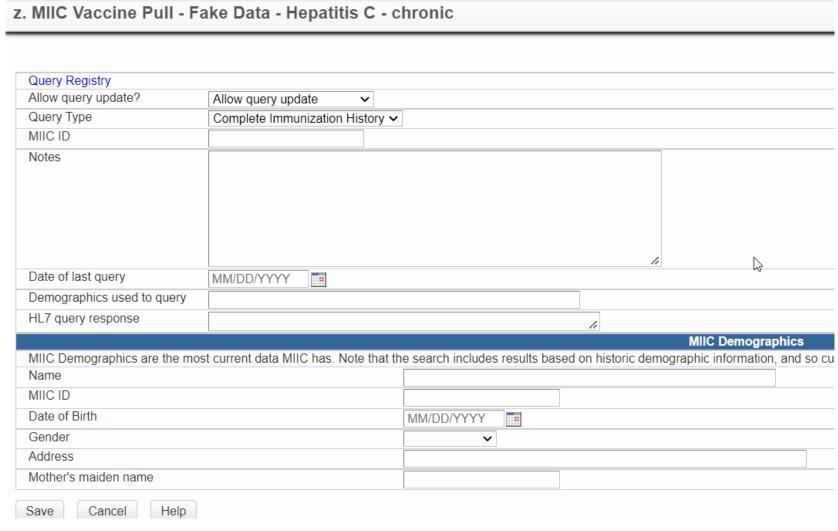- Batch process – can do forms for 20 cases at a time.

- This button does THREE things!
- Batch process – can update 20 cases at a time.
- Used in a workflow that finds cases based on lab results

Set Status to Undefined, ELR Reviewed to Yes, EDBO to Event Date

Possibilities…

- **Always** ask if something is possible

- Ask again in a year if the initial answer is "No"

- Be the first disease area to test new things and stay engaged in changes

Know and use existing tools

In your surveillance system:

- **Workflows**: Manage flow of work (*many*)

- **Question packages**: Store data (*few*)

- **Wizards**: Custom set of variables for entering data (*few*)

- **Reports**: Pull data (*many*)

Resources:

- Other jurisdictions

- Other disease areas inside/outside your jurisdiction

- Existing documentation on system

- IT staff/System admins

Overall suggestions

- The first step is to map your surveillance process (*this takes time*)

- Start small, make it simple, and keep in mind how/where you will expand

- Copy from other disease areas, but have your own disease model

- Ask for what you want/need (you never know what is possible!)

- Keep the work as simple as possible – *don't do what a computer can do for you*

- Always consider how you will get the data out and analyzed

- Reassess and reevaluate as time goes on – you should create a system that you can change and improve over time

Overall suggestions

Don't recreate the wheel – borrow from others whenever possible

MDH is happy to provide:

- Our full hepatitis model – includes nearly all components of our variables

- Our workflow criteria – includes filter statements used to move cases in/out

- Logins to our external "test" system – allows access to a non-identifiable version of our Maven system (*please only request if absolutely needed*)

- An intro/walkthrough of our system and how we use it

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