HEPATITIS A: TESTING, REPORTING, AND INVESTIGATIONS IN MASSACHUSETTS

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PRESENTER DISCLOSURE INFORMATION VIRGINIA LIJEWSKI

Consultant	No relevant conflicts of interest to declare or relevant conflict
Grant Research/Support	No relevant conflicts of interest to declare or relevant conflict
Speaker's Bureau	No relevant conflicts of interest to declare or relevant conflict
Major Stockholder	No relevant conflicts of interest to declare or relevant conflict
Other Financial or Material Interest	No relevant conflicts of interest to declare or relevant conflict
Off Label Use of Vaccines	Will be discussed, but in accordance with current ACIP recommendations

HAV BACKGROUND

- HAV is transmitted primarily via the fecal-oral route, although transmission through blood, while rare, has been documented
- The incubation period is 15-50 days, with an average of 25 to 30 days
- Symptoms may include: jaundice (yellowing of the skin and whites of the eyes), as well as dark brown urine and light colored stools, fever, abdominal pain, nausea, diarrhea, fatigue and malaise

HAV BACKGROUND

- Symptoms usually last from 1 to 2 weeks, although some adults may be sick for several months
- People infected with HAV are only infectious during the two weeks prior to symptom onset and for one week following symptom onset. A person is most contagious during the two weeks before the illness begins, when stool contains the highest concentration of virus particles
- HAV does not cause chronic infection

HAV DISEASE CLASSIFICATION

- Confirmed HAV case
  - HAV IgM+ lab result **and** an acute illness with
    - A discrete onset of symptoms
    - Jaundice, dark urine, **or** elevated ALT >200
- Suspect HAV case
  - HAV IgM+ lab result and no symptoms (even with doctor confirmation)
    - No dark urine, jaundice, or ALT >200

DETERMINING HAV CASE STATUS

IgM anti-HAV	Symptoms	Liver Enzymes	Interpretation
Negative	Yes/No	Elevated/Not elevated/NA	Not a case
Positive	Yes	Elevated/Not elevated/NA	Confirmed case
Positive	No	Elevated	Confirmed case
Positive	No	NA/Not elevated	Suspect case
Equivocal	Yes/No	Elevated/Not elevated/NA	Suspect case

"FALSE POSITIVE" HAV CASES

- Between January 1, 2006 and December 31, 2013, there were 1,640 HAV IgM+ lab results reported to MDPH
- 832 (65%) of them were classified as suspect or "false positive" results

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5418a1.htm

WHO SHOULD BE TESTED?

- Who are you currently testing for HAV in your practice?
- Only people who are suspected of having acute HAV infection because of symptoms or risk history should be tested

MDPH INVESTIGATION SCENARIO

- We receive an IgM+ HAV lab result on a 26 year old male
  - What do we do first?
  - What are the right questions to ask?
  - Who conducts the investigation?
  - How do we determine who receives HAV IG or vaccine?

STEPS IN HAV CASE INVESTIGATION

- Confirm the diagnosis
  - A true positive IgM result indicates current or recent infection Healthcare providers may mistakenly diagnose HAV infection based on total anti-HAV results but a total antibody test will only indicate that the person has IgG **or** IgM antibodies (or both)
  - If the patient is an adult and is asymptomatic, has normal LFTs, and is not linked to a confirmed case, the provider will be queried as to the reason the patient was tested
- Obtain the occupation of the case
- Case vaccination status
- Obtain symptom onset date
- Determine infectious period
- Identify close contacts

MDPH INVESTIGATION SCENARIO

- In this scenario we learn that the case is a foodhandler who had vomiting and diarrhea while at work

WHO IS A FOODHANDLER

- In the Isolation and Quarantine Requirements (105 CMR 300.000)
  - Any persons directly handling or preparing food
    - This can include managers, volunteers, family members, etc
    - Includes people handling clean dishes
  - Any person who dispenses medications by hand, assists in feeding, or provides mouth care
    - In a health care setting this includes those who set up trays for patients to eat, assists in patient's eating, or gives oral medication
    - In day care settings this includes those who prepare food or give oral medications
  - This term does not include individuals in private homes preparing of serving food for individual family consumption

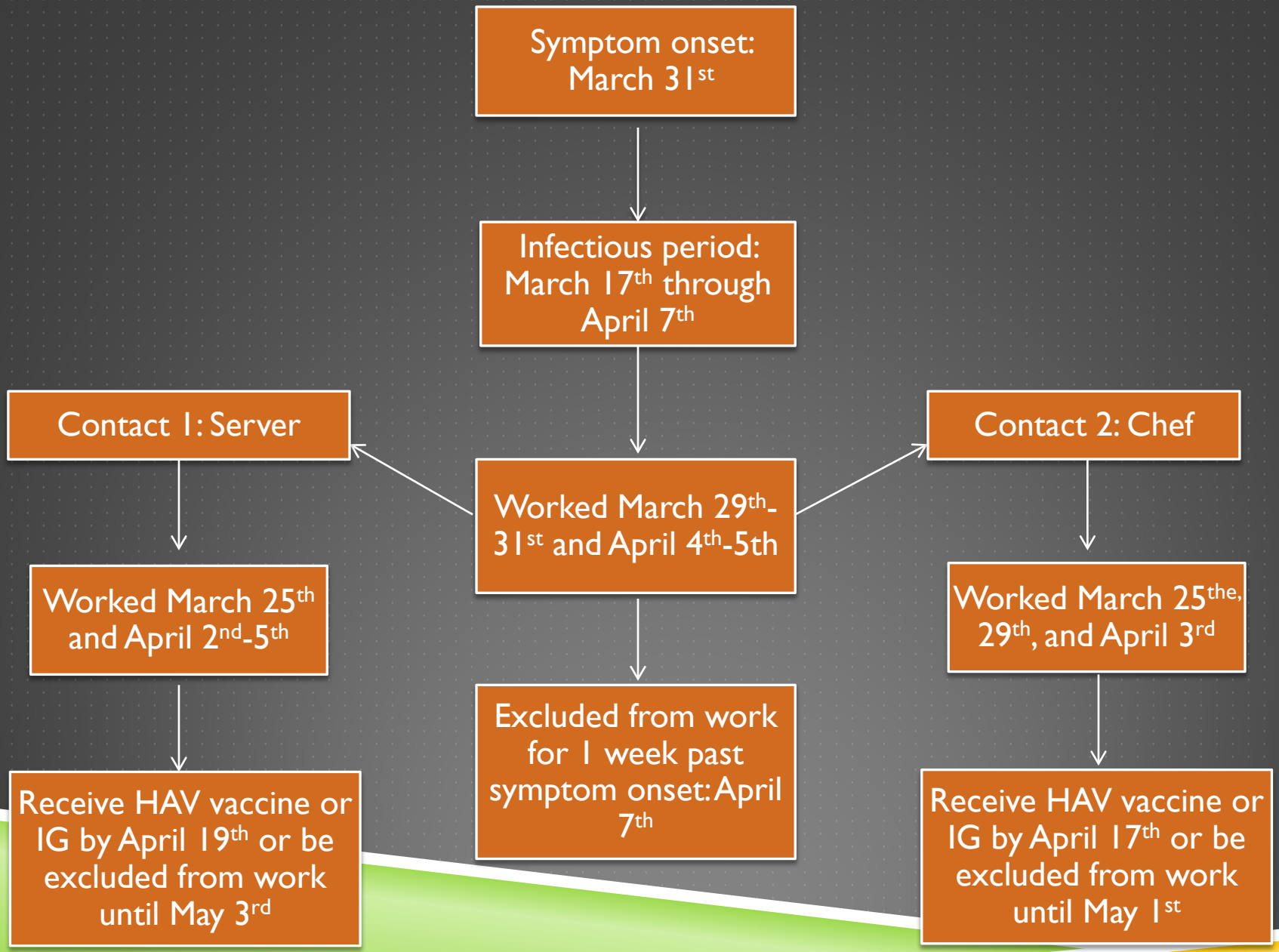
MDPH INVESTIGATION SCENARIO

- Find out where the case works
  - Remember: someone is most infectious in the 2 weeks prior to illness onset and for one week after
  - Notify the Food Protection Program (FPP) and the facility.

- Determine what duties the case performs at his job
  - If the case handles food in any way (server, cook, busser) then they have to be excluded from foodhandling duties for 1 week after the onset of symptoms

MDPH INVESTIGATION SCENARIO

- Who needs HAV vaccine or IG?
  - Any family members or close contact of the case who are themselves foodhandlers have to be excluded from work for 28 days unless they receive the vaccine or IG within 14 days of their last exposure to the case
  - All asymptomatic foodhandlers at the facility where the case worked must receive vaccine or IG within 14 days of their last exposure to the case during their infectious period, unless they can provide proof of immunity
  - In some situations it might be appropriate provide patrons of the establishment with IG or vaccine


Symptom onset: March 31st
Infectious period: March 17th through April 7th
Contact 1: Server
Worked March 29th-31st and April 4th-5th
Contact 2: Chef
Worked March 25th and April 2nd-5th
Worked March 25the, 29th, and April 3rd
Excluded from work for 1 week past symptom onset: April 7th
Receive HAV vaccine or IG by April 19th or be excluded from work until May 3rd
Receive HAV vaccine or IG by April 17th or be excluded from work until May 1st

POST-EXPOSURE HAV VACCINE *

- For healthy persons ages 12 months to 40 years
  - Single antigen HAV vaccine at the age appropriate dose is preferred to IG because of vaccine advantages, including long-term protection
- For persons ages 40 years or older
  - IG is preferred because of the absence of information regarding vaccine performance in this age group and because of the more severe manifestations of HAV in older adults
- For children younger than 12 months , immunocompromised persons, persons for whom the vaccine is contraindicated and persons with chronic liver disease, IG should be used

* Off-label use MMWR 2007:56-1080

PRE-EXPOSURE HAV VACCINE RECOMMENDATIONS

- All children in the US should receive HAV vaccine at 12 through 23 months of age
- People who are at increased risk for HAV infection
  - People travelling internationally
  - Close contacts of newly arriving international adoptees
  - MSM
  - Injection and non-injection drug users
  - People with chronic liver disease
  - People with clotting disorders
  - Researchers working with HAV or HAV-infected patients

2014 US Schedules for Children and Adults

Thank you!

Questions?

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