

Foodborne Illness Investigation of a Wedding Outbreak and Other Stories from the Field (or How not to Burn Down a Police Station)

Charles Alpren MD MPH MBA,

Epidemic Intelligence Service Officer, Centers for Disease Control and Prevention
Assigned to Boston Public Health Commission

A Recent Outbreak

Monday morning.

Inspectional Services tell you that several guests at a wedding at a hotel on Saturday night became sick straight after the wedding.

From the Father-of-the-Bride

140 guests at wedding

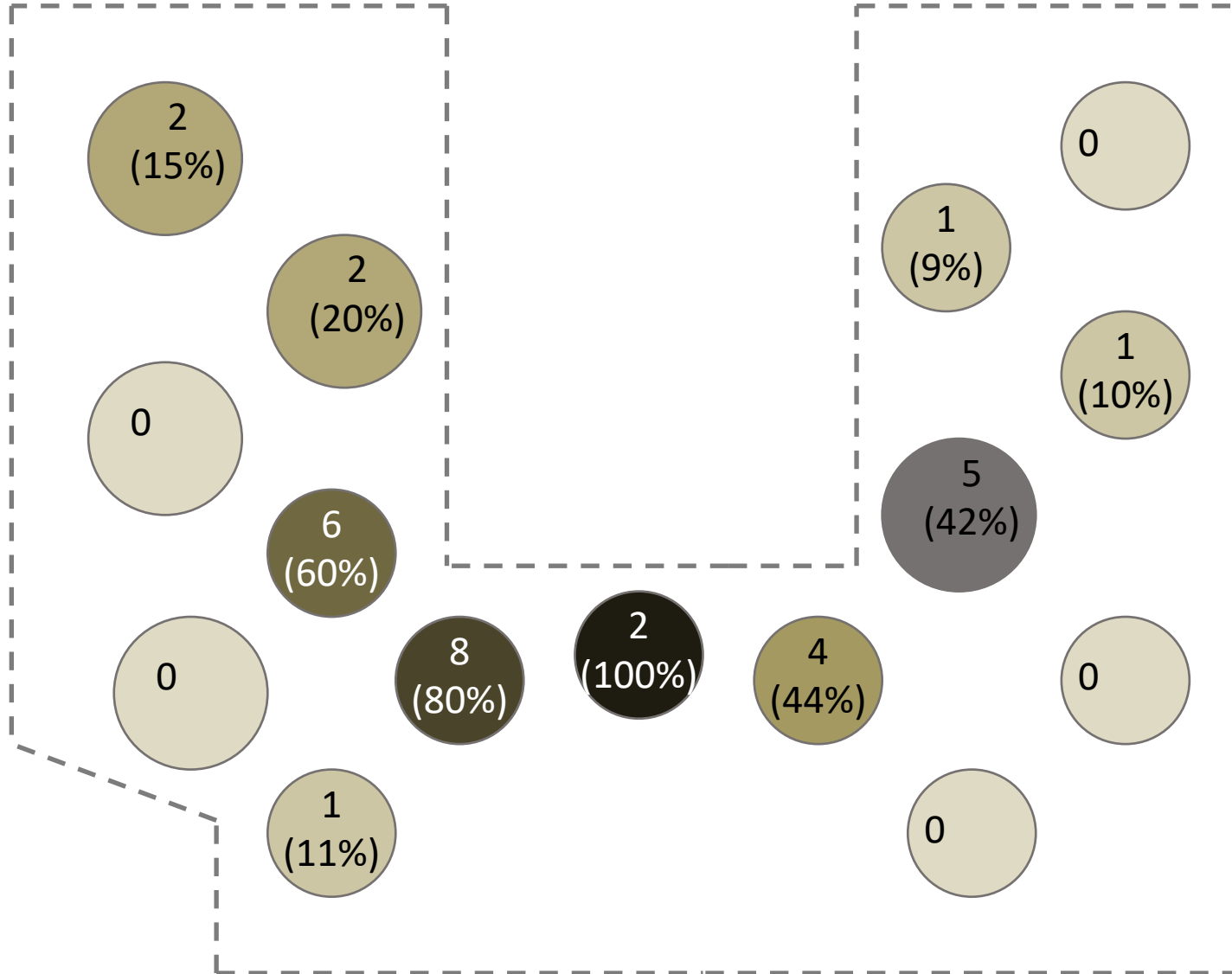
17 known to have been unwell on Sunday morning

6 people had to go to the Emergency Department

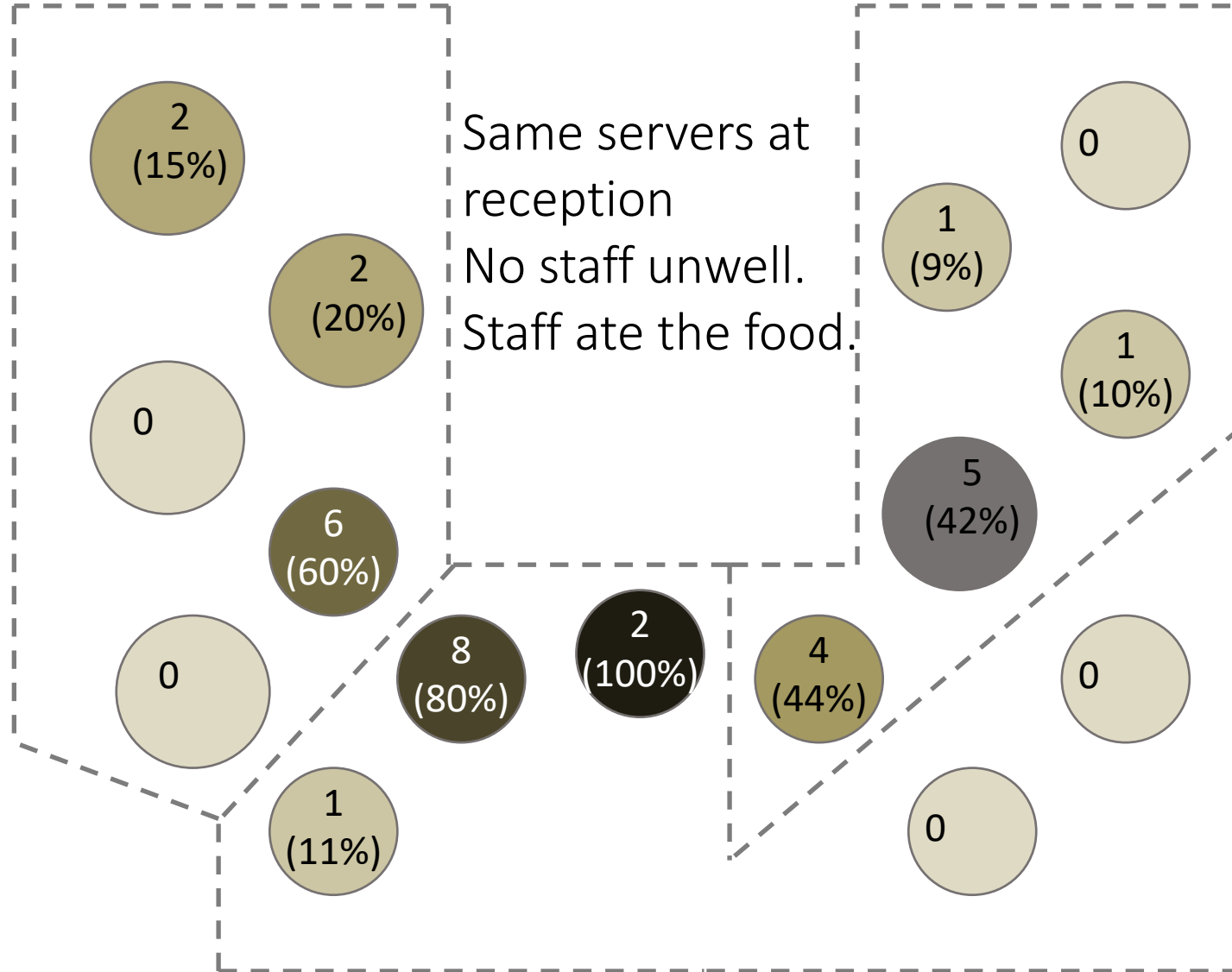
Mostly from certain tables at the wedding

Bride and groom both unwell but made it to the airport for their honeymoon

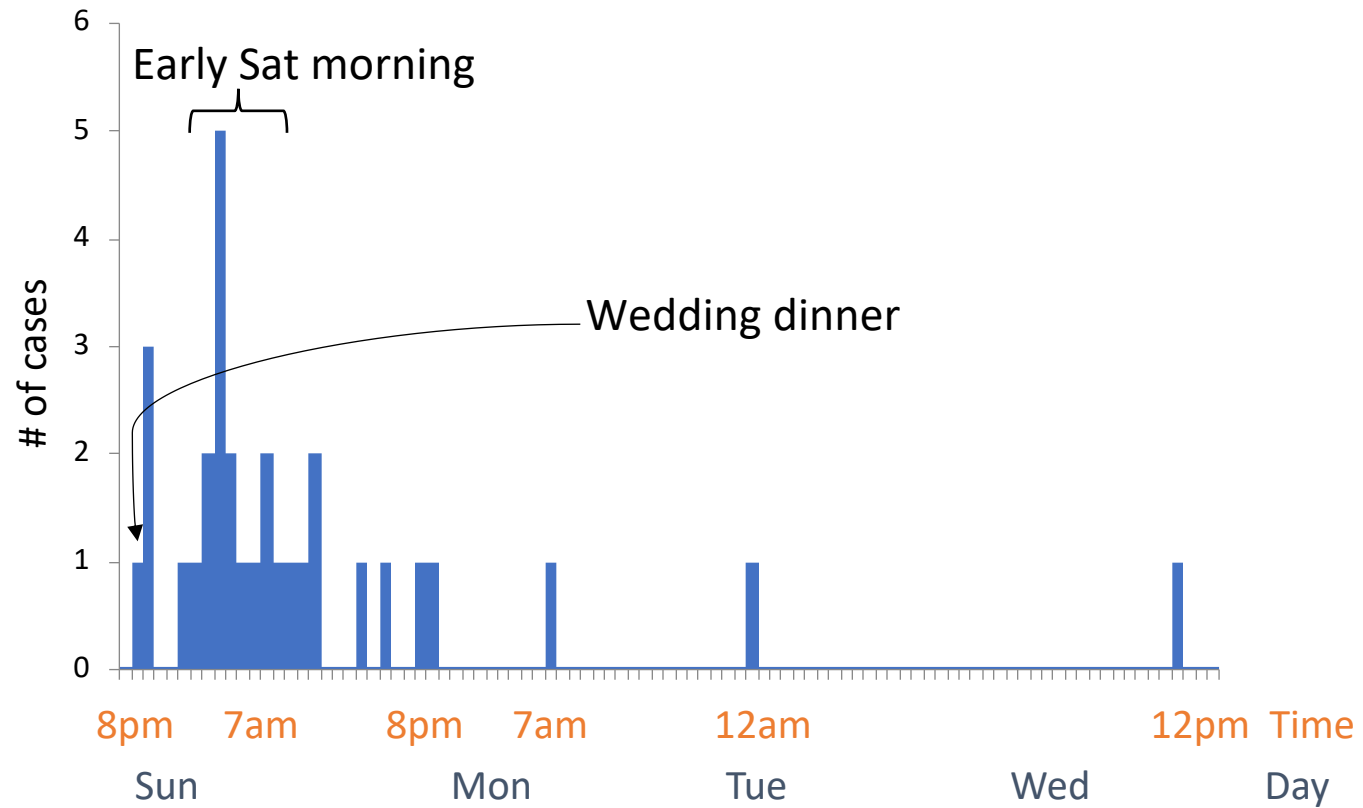
The Table Plan



The Serving Teams



The Epidemic Curve



Norovirus

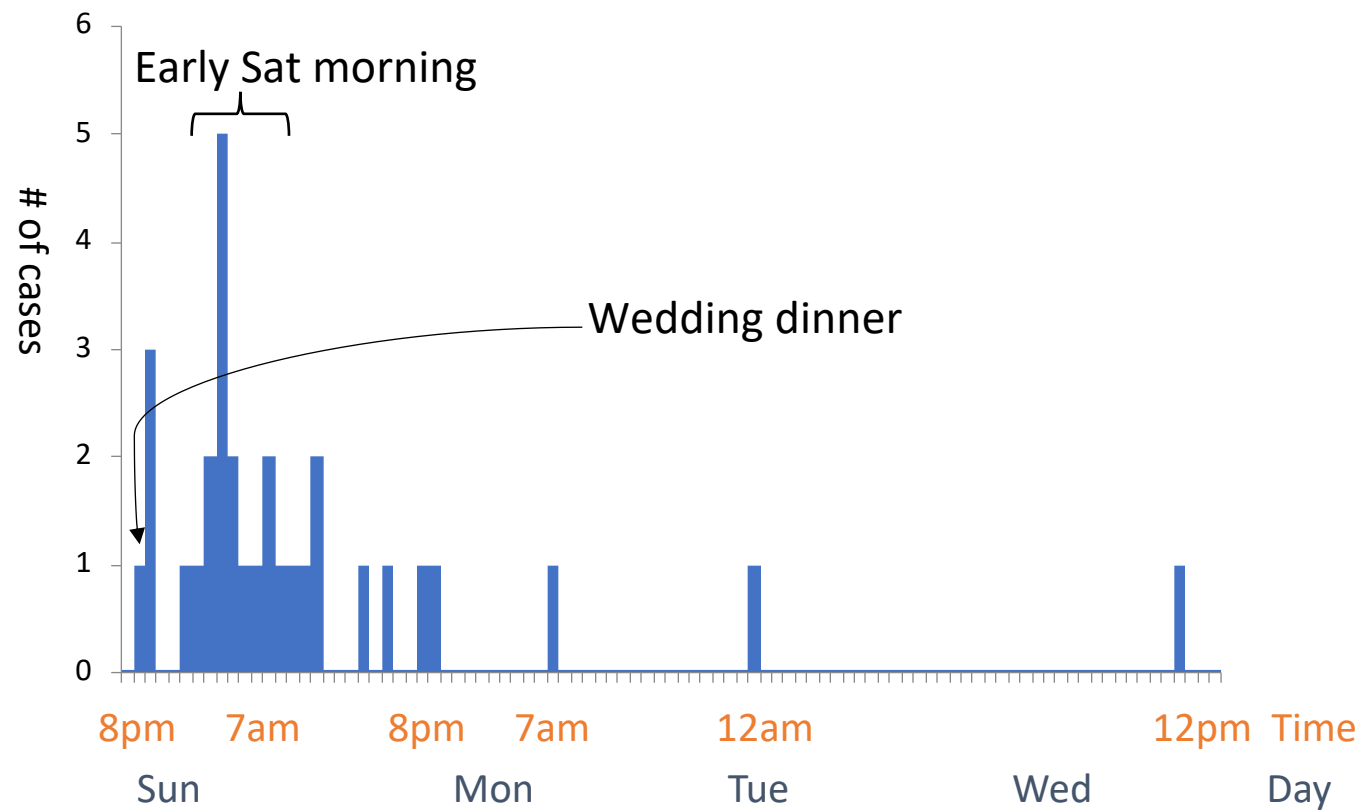
Sudden onset of severe diarrhea and vomiting

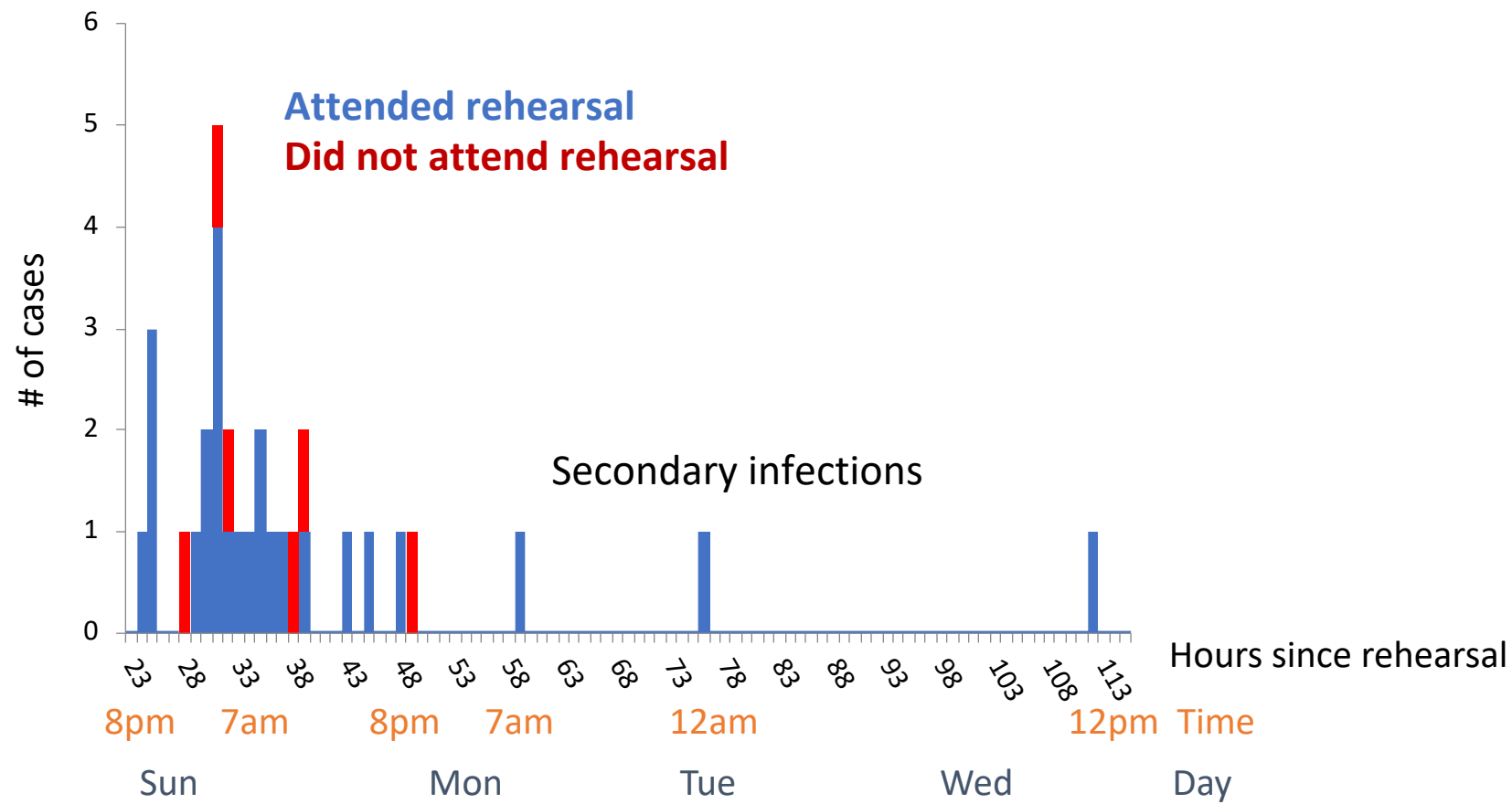
Extremely unbelievably amazingly infectious

Incubation period normally 28-34 hours (90% of cases). Minimum 12 hours

Lives outside body for long time

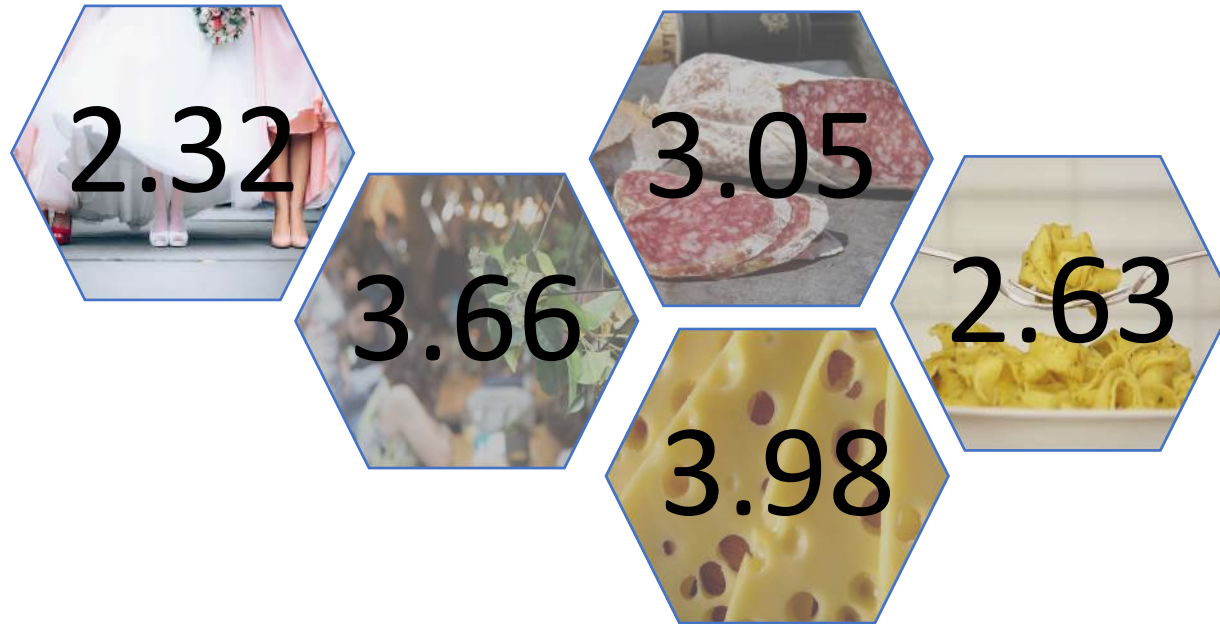
Takes out entire cruise ships





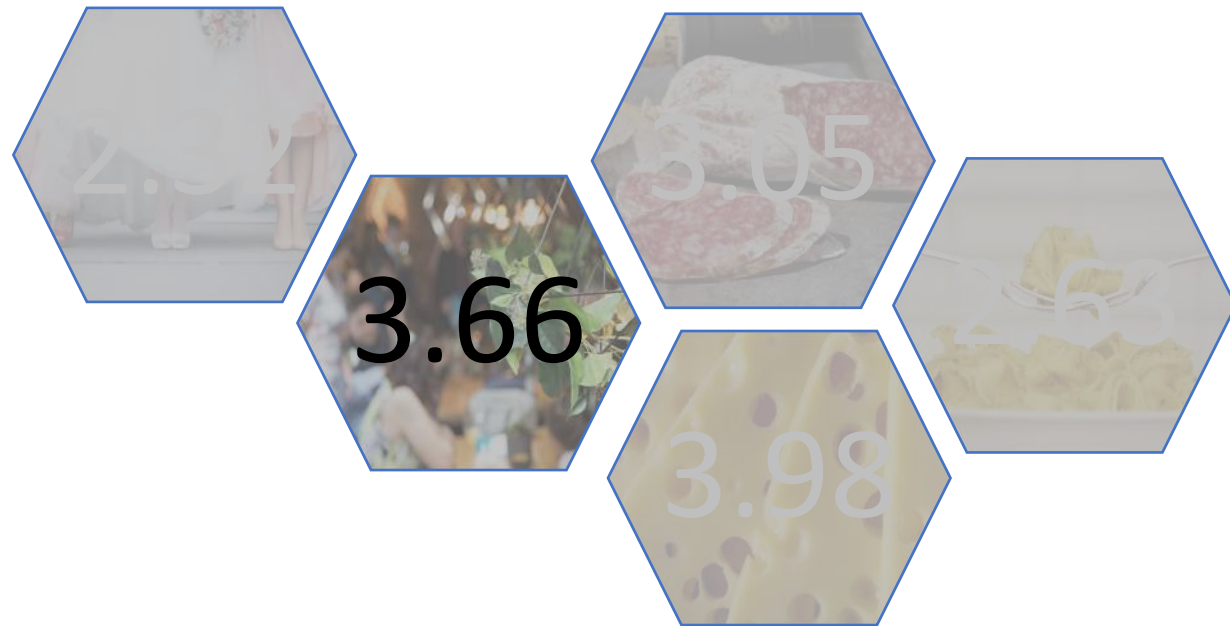
Stats

Relative risk = $\frac{\text{risk of getting sick if you were exposed to something}}{\text{risk of getting sick if you weren't exposed to it (but could have been)}}$



Stats

Relative risk = $\frac{\text{risk of getting sick if you were exposed to something}}{\text{risk of getting sick if you weren't exposed to it (but could have been)}}$





Rehearsal restaurant informed early

Voluntarily closed and professionally cleaned

**All food handlers tested and excluded from work
pending results**

All negative

HEPATITIS A ELSEWHERE IN USA



- San Diego:
 - Over 500 people sick
 - 20 Deaths
- Michigan and Kentucky
 - over 1000 cases each

How Hepatitis A is spread



Symptoms

Fever, tiredness, flu like symptoms



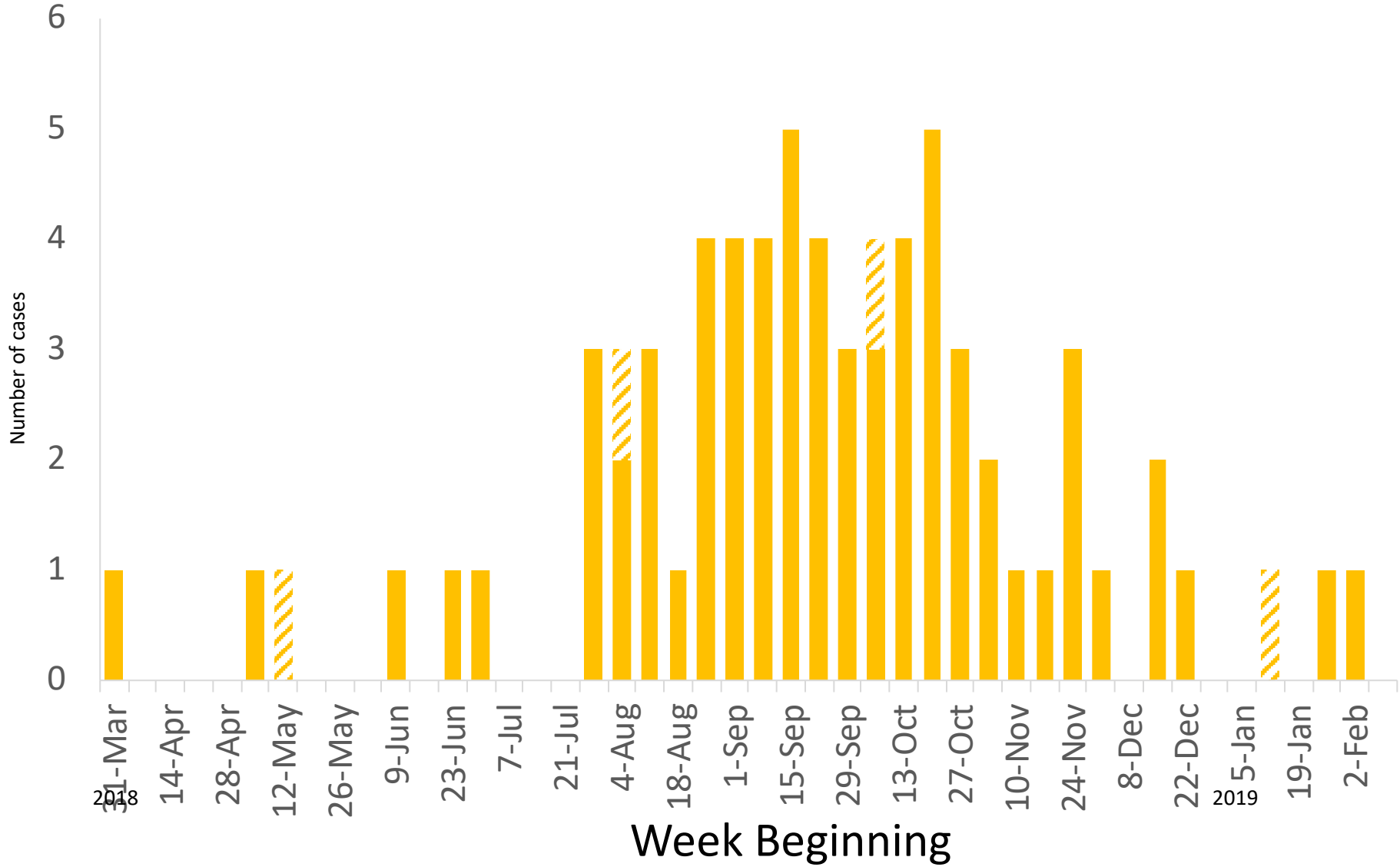
Nausea, vomiting, stomach pain, loss of appetite



Yellowing of eyes or skin, dark urine, grey stool



Weekly Diagnoses of Hepatitis A - Boston, 2018-2019






















Incubation period


















15 to 50 days - Average of 28 days

INFECTIOUS PERIOD

2 WEEKS BEFORE SYMPTOM
ONSET THROUGH 1 WEEK AFTER

**EXCLUSIONS FOR
FOODHANDLERS GET
MESSY!**

2018 JULY						
SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4 	5 	6 	7 
8 	9 	10 	11 	12 	13 	14 
15 	16 	17 	18 	19 	20 	21 
22 	23 	24 	25 	26 	27 	28 
29 	30 	31 				

2018 AUGUST						
SUN	MON	TUE	WED	THU	FRI	SAT
			1 	2 	3 	4 
5 	6 	7 	8 	9 	10 	11 
12 	13 	14 	15 	16 	17 	18 
19 	20 	21 	22 	23 	24 	25 
26 	27 	28 	29 	30 	31	

Prevent Hepatitis A



**Keep
Calm
AND
Get
Vaccinated**

**WASH
YOUR
HANDS**



CLEAN



Airborne transmission – in air for 2 hours after patient leaves

**Exclusions
are very
disruptive!**

Infectious period

4 days before rash to 4 days after rash

Incubation period

5 to 21 days (conservative)

R_0 – If no one was immune how many people would catch disease from 1 case

Norovirus – 3.7

Influenza – 2

Hepatitis A – 2.5

Measles - 16

Norovirus cluster:
Restaurant closed for 1
day for full deep clean

Hepatitis A Restaurants:
All staff excluded from
work just prior to the
weekend unless
immune

Measles Restaurant:
All staff excluded from
work just prior to the
weekend until they
show proof of
immunity



**POLICE
STATIONS
BURNED TO
THE
GROUND:**

0