



TAP AN ORB ABOVE TO SOLVE AN OUTBREAK

# SOLVE THE OUTBREAK

BECOME A DISEASE DETECTIVE

▲ Quick Menu ▲

**outbreak** [out-breyk]

the occurrence of illness or disease in a specific location and time period that is greater than the expected rate.



## CDC Works for You 24/7

CDC is the nation's health protection agency.

CDC epidemiologists (Disease Detectives), laboratory workers, and other dedicated professionals work 24/7 to keep Americans and people around the world safe from health, safety, and security threats.

We work to track diseases, research outbreaks, respond to emergencies of all kinds, and use what we learn from this work to strengthen America's health security.

### Saving Lives

CDC works around the world to fight disease, confront disaster, and save lives at risk from environmental hazards.

### Protecting People from Health Threats

CDC responds to health threats, prevents chronic disease and injuries, and helps communities recover from disasters.



[View this video with closed captions](#)

Learn More about CDC 24/7

Read our blog



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- Breathless in the Midwest START
- The Village of Gold START
- The Queens Killer START
- Case of the Conference Blues START
- Sugar Plantation Blues START
- Unborn Blues Child START



### Hiding in Plain Sight



Number Sick: 1128  
Hospitalizations: 357  
People Blind: 290  
Location: US (10 States)

**Start**

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## Your Mission:

You might not be able to trust your own eyes on this next outbreak.

It begins with a surprising increase in a rare eye condition. At least, it's supposed to be rare, but it seems to be becoming a lot more common!

A number of people are being infected by a tiny amoeba (single-celled living organism) that's causing permanent eye damage. Dozens of people in these states need transplants of their cornea (the transparent, outermost layer of the eye), and many are going blind!

We need your help to solve the outbreak!



You'll begin this investigation as an Investigator. To become a Lead Investigator, you'll need to:

- Review each clue in the investigation.
- Answer the questions correctly to solve the outbreak.



Many people have gone blind in one eye.



Share



Tweet

I accept this mission

## Clue #1

Dr. Lee is an ophthalmologist (eye doctor) in Athens, Georgia. He recently noticed that more of his patients were getting a rare disease called **Acanthamoeba keratitis (known as "AK")**. There wasn't a sudden rise in the number of cases; in fact, the increase was so gradual that he only realized it after several years.

He calls the Georgia Department of Public Health, and it turns out he isn't the only doctor suspecting an increase. Three other doctors have recently called about the same thing. The Department then calls the Centers for Disease Control and Prevention (CDC) and asks you to figure out **what's going on**, and fast!



Eye doctors suspect an increase in a rare infection.



Clue



Data



Definition

ANSWER THIS QUESTION

Based on the data, is the problem getting worse, getting better, or neither?

Getting worse

Getting better

Neither





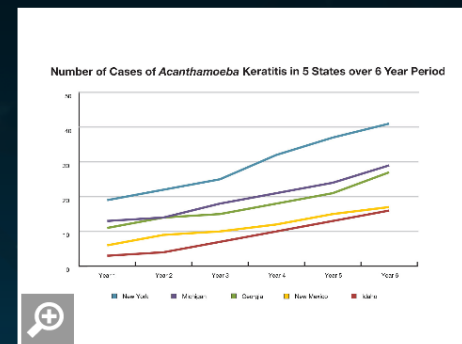
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CLUE 1 OF 5

## Data

Soon after the call from Georgia, New York's Department of Public Health calls you about the same thing. It's strange that two states nearly 1,000 miles from each other could have the same problem. You wonder if AK is increasing around the country, or if this is a false alarm. It's possible that a few doctors just happen to have sicker patients than other doctors.

You decide to gather 6 years of medical records from a sample of eye doctors in Georgia, New York, and 3 other states across the country to see if AK really is becoming more common.



You plot data from 5 states to see if AK is increasing across the country.



Clue



Data



Definition

ANSWER THIS QUESTION

Based on the data, is the problem getting worse, getting better, or neither?



Getting worse



Getting better



Neither



[x] Close

MENU

CLUE 1 OF 5

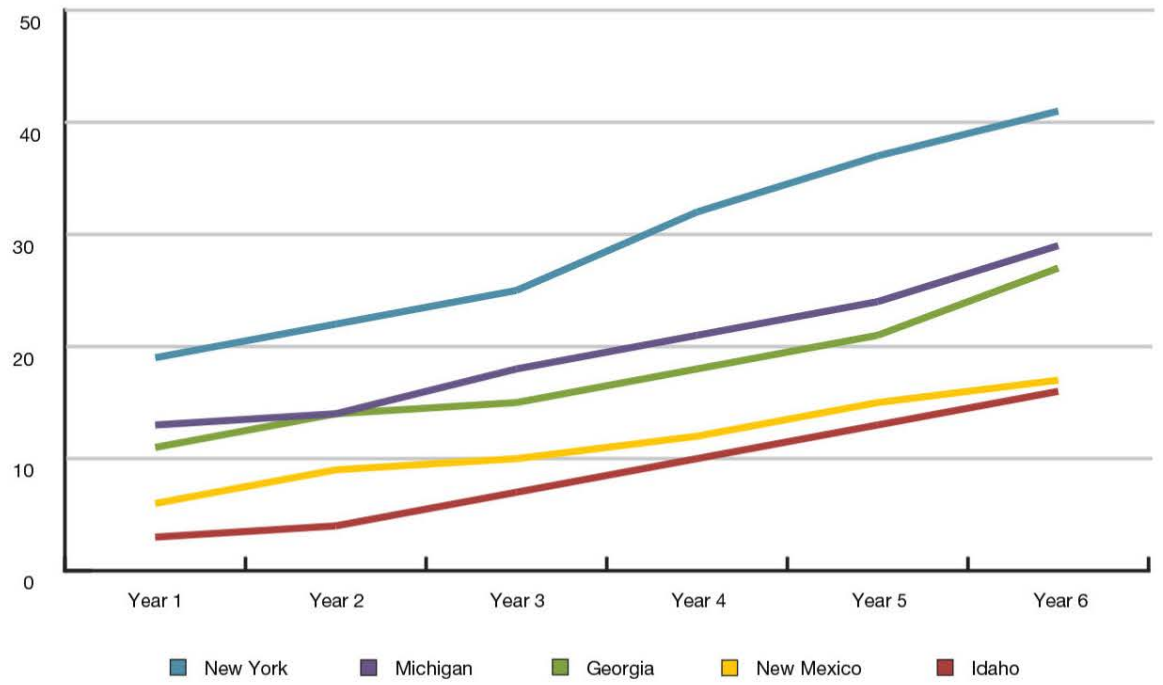
## Data

Soon Health nearly wond alarm patient You d doctor to see



Clu

### Number of Cases of *Acanthamoeba* Keratitis in 5 States over 6 Year Period



Based o



Getting worse



Getting better



Neither

- Learn
- Scores
- About
- Help





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CLUE 1 OF 5

## You're seeing the big picture!

You earned 100 points for this question.

The problem seems to be getting worse. Although some states have seen more cases than others, the data shows you that there have been more cases each year in each state for at least 6 straight years.

You'll need to act fast. A new person is coming down with it nearly every day!

[Next Clue](#)

ANSWER THIS QUESTION

Based on the data, is the problem getting worse, getting better, or neither?

Getting worse

Getting better

Neither



## Clue #2

In order to figure out why so many people are getting AK, you need to learn more. You and a team of Epidemic Intelligence Service (EIS) officers take a closer look at the medical records for all the AK case patients, this time **expanding to 10 states**. This additional work takes some time, but once you've got all the information you have a better sense of what's happening.

It turns out that 97% of the infected people wear contact lenses. For comparison, only 13% of all Americans wear contacts.



Nearly all of the people infected with AK wear contact lenses.



Clue



Cases



Data

ANSWER THIS QUESTION

What should you do next?



Warn contact lens wearers about their lenses



Warn contact lens wearers about proper use of rewetting drops



Find out if the infected people have anything *else* in common



## Cases

You take a look at the medical records for all 1,128 people with AK in 10 states. A typical example is Justin, a 19-year-old college student in Syracuse, NY, who has been wearing contacts for 2 years. He stays up late and sometimes falls asleep in his contacts. Four months ago his right eye started to feel sore, and it looked red. He started using rewetting drops, but they didn't help.

So he stopped wearing contacts for a few days. He didn't want to spend money on the doctor and was hoping the problem would just go away. Instead, it got worse: his vision became blurry.

He finally saw his doctor a month after the problem started, and the doctor told Justin he had AK. Unfortunately, the infection had gotten



Many of the people with AK are in their teens or 20s.



Clue



Cases



Data



### ANSWER THIS QUESTION

What should you do next?



Warn contact lens wearers about their lenses



Warn contact lens wearers about proper use of rewetting drops



Find out if the infected people have anything *else* in common



## Data

Of the 1,128 people with AK:

- 359 (32%) are younger than 20.
- 107 (9%) are age 20-29.
- 115 (10%) are age 30-39.
- 117 (10%) are age 40-49.
- 175 (16%) are age 50-59.
- 255 (23%) are older than 60.



More than half of the people with AK are either younger than 20 or older than 60.



Clue



Cases



Data

ANSWER THIS QUESTION

What should you do next?



Warn contact lens wearers about their lenses



Warn contact lens wearers about proper use of rewetting drops



Find out if the infected people have anything *else* in common





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CLUE 2 OF 5

## Oh no, you're not seeing clearly.

You earned 0 points for this question.

We don't have any evidence yet that the use of rewetting drops is related to the outbreak. Remember, Justin started using them *after* he developed his first symptoms of AK.

You need to find out what else the infected people have in common, and fast, before the outbreak gets worse!

[Next Clue](#)

ANSWER THIS QUESTION

What should you do next?



Warn contact lens wearers about their lenses









Warn contact lens wearers about proper use of rewetting drops



Find out if the infected people have anything *else* in common



## CLUE 2 OF 5

	Home	Return to Home screen	
<input checked="" type="checkbox"/>	Clue 1	Review Clue 1	100 points
	Clue 2	Continue	0 points
	Clue 3	Must complete Clue 2	
	Clue 4	Must complete Clue 3	
	Clue 5	Must complete Clue 4	
	Results	Must complete Clue 5	
	Restart	Restart Outbreak	

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Next Clue

## ANSWER THIS QUESTION

What should you do next?

Warn contact lens wearers about their lenses

Warn contact lens wearers about proper use of rewetting drops

Find out if the infected people have anything *else* in common

-  Learn
-  Scores
-  About
-  Help



MENU ▾



Want to know how contact lens users can prevent getting AK?

LEARN MORE ►



You earned **1,300** points

Your Score: **9,000** Points


Share

Tweet

Restart Outbreak

Solve Another Outbreak

- Stats
- Badges
- Achievements




# Your Stats

Rank: **Investigator**

Score: **9,000\***

1000 more points to achieve Lead Investigator



\* At the end of each outbreak, the points for all of the clues will be added together to determine your new Badge level. Badges are awarded on the Results screen at the end of each outbreak.


Outbreak Case	High Score
Breathless in the Midwest	1,500
The Village of Gold	1,500
The Queens Killer	1,500
Case of the Conference Blues	1,500
Sugar Plantation Blues	1,500



# Badges



- Stats
- Badges
- Achievements



**Trainee**  
0 points



**Novice**  
1,000 points



**Apprentice**  
2,500 points





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