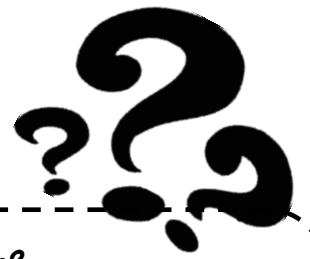


# Extension Questions!



Can you answer the questions below, relating to the 4 patients that Amy has mixed up?

Antibiotics don't cure the cold or flu, what should the doctor recommend or prescribe to the patient who has the flu to get better?

---

---

---

Meticillin is normally the drug of choice for treating a *Staphylococcal* infection, what would happen to the patient with MRSA if they had been prescribed meticillin?

---

---

---

If you had some penicillin left over in your cupboard from a previous sore throat, would you take them later to treat a cut on your leg that got infected? Explain your answer.

---

---

---

The patient with the staph wound infection doesn't want to take the prescribed meticillin for their wound infection.

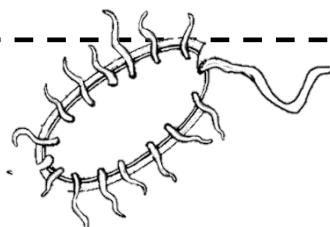
*'I took more than half of those pills the doc gave me before and it went away for a while but came back worse!'*

Can you explain why this happened?

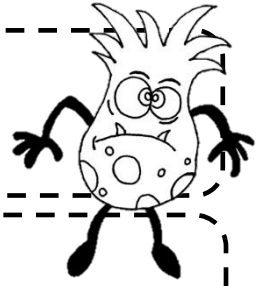
---

---

---



# Test that patient!



Amy is on a summer work placement at the local hospital laboratory. Her job is to read test results and fill in paperwork for the doctor.

Unfortunately Amy has mixed up the test results of 4 patients!

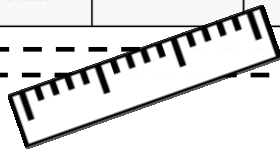
Can you help Amy?

She has grown the infectious organism (pathogen) from each patient on agar plates. In your group, you all have an agar plate with the organism from the same patient.

Add a small amount of each antibiotic to the wells on this plate, wait 5 minutes, then measure the zone of inhibition for each antibiotic. Average the results of all group members to get a more accurate result.

Patient name:	Antibiotic	Zone of inhibition diameter (mm)					Average
		Your result	Other group members				
			1	2	3	4	
Diagnosis:	Penicillin						
	Meticillin						
Recommended antibiotic:	Erythromycin						
	Vancomycin						
	Amoxicillin						

Can you diagnose your patient?



Of the 4 patients Amy got mixed up, one has flu (influenza virus), one has strep throat (*Streptococcus*), one has MRSA (*Methicillin-resistant Staphylococcus aureus*) and one has a staph wound infection (*Staphylococcus aureus*).

Can you work out which disease your patient has, based on their resistance to the antibiotics above? Write your diagnosis in the space above, and which antibiotic you would recommend to treat them.



Class Results: Write down other groups' results to work out what disease every patient has!

Patient	Zone of inhibition diameter (mm)					Diagnosis	Recommended antibiotic
	Penicillin	Meticillin	Erythromycin	Vancomycin	Amoxicillin		
Anne Jones							
Tom Harris							
Jean Smith							
Raj Nedoma							

If you have any extra time, try the questions on the back!!!