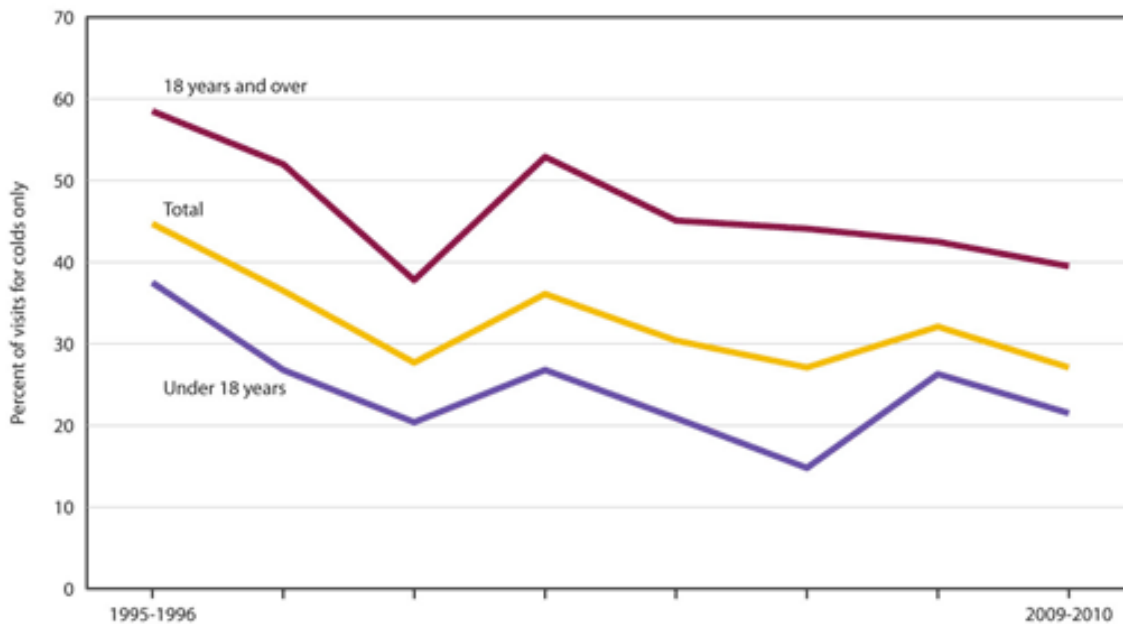


## Antibiotic Usage: How has it affected the use of antibiotic resistance?

Below is a graph from the Center of Disease Control (CDC). It shows the percentage of US patients (from 1995-1996 through 2009-2010) who were diagnosed with the common cold and given antibiotics as part of their treatment. Keep in mind that the common cold is caused by a virus, *not* bacteria.

**Antibiotics ordered or provided during emergency department, outpatient, and physician visits for cold symptom diagnoses, by age: United States, average annual, 1995–1996 through 2009–2010**



1) Describe the trend shown in the graph above.

2) How do you think that trend may have affected the rates of antibiotic resistance in the United States?

3) Antibiotics were often prescribed for minor respiratory illnesses. If doctors were unsure of the exact cause of the illness, antibiotics were prescribed in case there were bacteria present causing an infection. How might this over prescription have increased antibiotic resistance?

5) Another cause of antibiotic resistance is believed to be from patients who do not complete the full course of antibiotics. Explain why this could cause antibiotic resistance.