

***Clostridium Difficile* Data in Klamath County**

In the United States, approximately 2 million people become infected with bacteria that are resistant to antibiotics and at least 23,000 people die as a direct result of these infections. Also, many other people die from other conditions that were complicated by an antibiotic-resistant infection.

The use of antibiotics is the single most important factor leading to antibiotic resistance around the world. Antibiotics are among the most commonly prescribed drugs used; however, up to 50 percent of all the antibiotics prescribed for people are not needed or are not optimally effective as prescribed. Also, the *Clostridium difficile* “hypervirulent” strain (NAP1), which can lead to more severe disease, has been associated with fluoroquinolone use.

The overprescribing and misprescribing of antibiotics has contributed to the growing challenges of *Clostridium difficile* infection (CDI). The tables below show the incidence of CDI and the breakdown in community versus healthcare facility onset in Klamath County from 2010 through 2016.

Year	Incident Cases	Rate per 100,000 population
2010	57	85.9
2011	58	87.4
2012	53	80.2
2013*	103	156.5
2014	137	209.2
2015	148	224.6
2016	135	203.2

*Change in lab practice

	2010	2011	2012	2013	2014	2015	2016	All years
CA	52.6%	46.6%	35.8%	51.5%	54.7%	35.8%	50.4%	47.2%
CO-HCFA	17.5%	17.2%	34.0%	21.4%	25.5%	35.1%	25.2%	26.2%
HCFO	29.8%	36.2%	30.2%	27.2%	19.7%	29.1%	24.4%	26.6%

Note: CA = Community Associated; CO-HCFA = Community Onset – Healthcare Facility Associated;
 HCFO = Healthcare Facility Onset

With the exception of 2015, approximately of 50 percent of all CDI cases in Klamath County occur in the community and an additional 25 percent of cases are community onset with recent exposure (within the previous 12 weeks) to a healthcare facility (e.g. emergency room). Less than 27 percent of the CDI occurred in a hospital or long term care facility. Also, 20 percent of patients experienced a recurrent infection and 4 percent of patients died within 30 days of CDI. The two most common classes of drugs associated with CDI are antibiotics (77 percent of patients received systemic antibiotics in the 12 weeks prior to CDI) and acid suppression medications (47.5 percent of patients received proton pump inhibitors and 17.6 percent of patients received H2 blockers in the 12 weeks prior to CDI).

References:

1. Lessa FC, Mu Y, et al. Burden of *Clostridium difficile* Infection in the United States. N Engl J Med **2015**; 372: 825-833.
2. See I, Mu Y, et al. NAP1 Strain Type Predicts Outcomes from *Clostridium difficile* Infection. Clin Infect Dis **2014**; 58(10): 1394-1400.