## HIGHER RATES OF DEATH \& READMISSION

## DODGING A "ONE-TWO PUNCH"

Sometimes, taking an antibiotic to fight one kind of infection can put you at risk of falling victim to a second kind of infection - call it a "one-two punch." Clostridium difficile, often called C. diff., is bacteria that can cause mild to bad diarrhea. Left untreated, infection with $C$. diff. is linked to dehydration and more serious health issues that can affect the blood, colon, kidney or other organs and may lead to shock and even death.

## WHERE DOES C.DIFF. COME FROM?

Most $C$. diff. infections are linked to getting healthcare in a clinic, doctor's office, hospital, or nursing home. In 2015, Virginia hospitals reported that over $3 / 4$ of patients with any diagnosis of C.diff. had the infection present upon admission. The germ is found in stool and can spread through person-to-person contact or on the hands of healthcare providers, visitors, or patients who have touched a germ-ridden surface. Hand washing is the best way to prevent the spread of germs. Patients should wash their hands after using the bathroom and before eating. Alcohol-based hand sanitizer has not proven to be useful in stopping C.diff. outbreaks. Healthcare providers should clean their hands before and after taking care of a patient and use disposable gloves when caring for a C.diff. patient.

## SYMPTOMS

Symptoms of $C$. diff. may include:

- Diarrhea longer than two days
- Abdominal cramps or tenderness
- Loss of appetite
- Nausea
- Fever

C. diff. has a major impact on mortality and readmissions, whether it's a primary or secondary diagnosis. In 2015, Virginia patients with a C. diff. diagnosis were over three times more likely to die than if $C$. diff. was not present. In addition, patients were more than twice as likely to be readmitted to a hospital within 30 days if they had C. diff.



## THE RIDDLE OF ANTIBIOTICS

Most $C$. diff. infections occur in people who take antibiotics for another, sometimes very serious, sickness. Your risk for C.diff. lasts for a few months after finishing an antibiotic prescription. While fighting infections from bad germs, antibiotics also kill good germs, making it easier for $C$. diff. to give the "second punch." Careful use of antibiotics can help lower the risk of $C$. diff. infections. Doctors should order antibiotics only when needed. Don't take antibiotics unless they are prescribed for you. Make sure you finish all the medicine unless your doctor tells you to stop. Even though people may get C.diff. after antibiotic use, doctors may treat C.diff. with other antibiotics that kill C.diff. germs.

## NUMBER OF C.DIFF. CASES ON THE RISE

In Virginia, the number of cases for $C$. diff. has greatly increased over the years. The rate of $C$. diff. cases was 874 per 100,000 discharges in 2010 compared to 1,132 per 100,000 discharges in 2015. Although the number of $C$. diff. cases may be small relative to the total number of all hospital discharges, they have a significant impact in hospital mortality, lengths of stay and total charges.


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## C. DIFF. IS COSTLY

In Virginia, the total hospital charges before insurance company or government discounts for patients with a diagnosis of $C$. diff. was over $\$ 685$ million in 2015. The average hospital charges for patients with $C$. diff. was almost $\$ 70,000$, compared to $\$ 35,705$ for patients hospitalized without C. diff. Patients in Virginia hospitals diagnosed with C. diff. stayed an average of 10.6 days in 2015, more than twice as long as the average stay of 4.7 days for all other patients.


## WHAT YOU CAN DO

- Talk to your doctor if an antibiotic is ordered and make sure it is the best possible treatment for your illness.
- Take antibiotics responsibly - only those prescribed for you, and finish the course of medicine even if you are feeling better before the medicine is gone.
- Tell your doctor if you have been on antibiotics and get diarrhea within a few months.
- Wash your hands after using the bathroom and before meals. Require others around you to wash their hands, especially healthcare providers.

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Sources: CDC's MMWR Weekly Vital Signs: Preventing Clostridium difficile infections, March 9, 2012;
Clostridium difficile Infections in Hospital Stays, 2009. HCUP Statistical Brief \#124, January 2012;
Deaths from Dangerous Gut Bacteria Hit Historic Highs, NPR Shots Health Blog hosted by Robert Siegel, March 6, 2012; Virginia Department of Health: www.vdh.virginia.gov/epidemiology/surveillance/hai/cdiff.htm; VHI Patient-Level Hospital Discharge Data: www.vhi.org.

