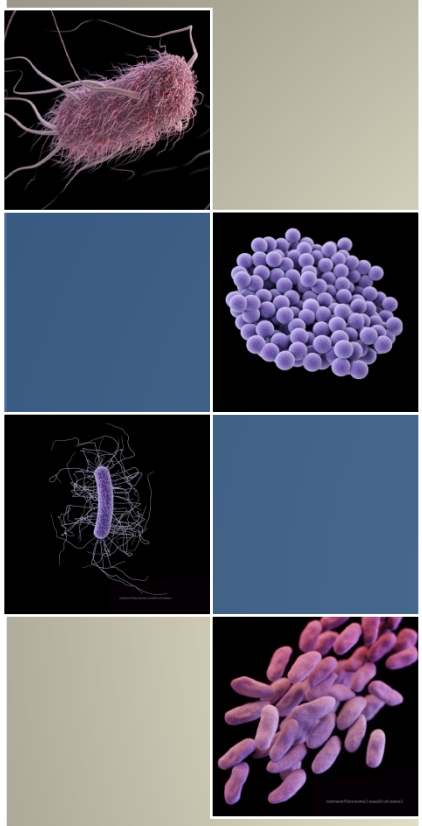
2016



Virginia Healthcare-Associated Infections Report

For a Healthcare Consumer Audience

January 1, 2016 – December 31, 2016

Virginia Department of Health
Healthcare-Associated Infections and
Antimicrobial Resistance Program
September 2018

VDH VIRGINIA DEPARTMENT OF HEALTH

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Cover Images: U.S. Centers for Disease Control and Prevention – Medical Illustrator, James Archer 2013

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ABBREVIATIONS

CAUTI – Catheter-associated urinary tract infection

CDC – Centers for Disease Control and Prevention

CLABSI – Central line-associated bloodstream infection

CMS – Centers for Medicare and Medicaid Services

COLO – Colon procedure

HAI – Healthcare-associated infection

HHS – United States Department of Health and Human Services

HYST – Abdominal hysterectomy procedure

ICU – Intensive care unit

LabID – Laboratory-identified

MRSA – Methicillin-resistant *Staphylococcus aureus*

NHSN – National Healthcare Safety Network

NICU – Neonatal intensive care unit

SSI – Surgical site infection

VA – Virginia

VDH – Virginia Department of Health

EXECUTIVE SUMMARY

Healthcare-associated infections (HAIs) are a public health concern that continue to pose a threat to patient safety. According to the Centers for Disease Control and Prevention (CDC), an estimated 722,000 HAIs occurred nationally in 2011, affecting approximately 1 in 25 hospital patients. As of 2015, all HAI data reported to the Centers for Medicare and Medicaid Services (CMS) Hospital Inpatient Quality Reporting Program are required to be shared with the Virginia Department of Health (VDH). This annual report summarizes the performance of Virginia's acute care hospitals on HAIs in 2016, and healthcare worker flu vaccination for the 2016-2017 flu season.

Key Findings

In 2016, Virginia acute care hospitals reported:

- **Fewer** central line-associated bloodstream infections (CLABSIs) than predicted based on the national experience from 2015.
- **About the same** number of catheter-associated urinary tract infections (CAUTIs) as predicted based on the national experience from 2015.
- **About the same** number of surgical site infections (SSIs) following abdominal hysterectomies and **about the same** number of SSIs following colon surgeries in adult patients (≥18 years) based on the national experience from 2015.
- **Fewer** hospital-onset methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia laboratory-identified events than predicted based on the national experience from 2015.
- **About the same** number of hospital-onset *Clostridium difficile* laboratory-identified events as predicted based on the national experience from 2015.
- For the 2016-2017 influenza season, **58%** of Virginia hospitals met the U.S. Department of Health and Human Services Healthy People 2020 goal of 90% vaccination of healthcare workers.

Overall, Virginia acute care hospitals have shown progress in preventing CLABSI and MRSA bacteremia laboratory-identified events in 2016 when compared to the national experience. Further action is needed to reduce other HAIs, including CAUTIs and SSIs following abdominal hysterectomies and colon surgeries for adult patients, as hospitals did not show any significant changes in 2016 from the national baseline. Prevention of *Clostridium difficile* infections also remains a priority for Virginia, as the data did not show any significant improvement for hospitals in this measure.

The Virginia HAI program continues to work with partner organizations, key stakeholders, and healthcare facilities to improve existing programs and develop new strategies to reduce the number of HAIs in Virginia hospitals, and to ultimately protect patients from harm.

For More Information

The technical version of this report can be found on the VDH website; it contains a complete list of data considerations and limitations, detailed methods, additional data tables, and references.

Summary of Healthcare-Associated Infections in Virginia

Legend								
★	Fewer infections (**better**) than predicted based on the national experience.*	=	About the **same** number of infections as predicted based on the national experience.*	✖	More infections (**worse**) than predicted based on the national experience.*	**No Conclusion**	When the number of predicted infections is less than 1, no conclusion can be made.	**N/A**	Hospital did not perform that surgical procedure or had no eligible procedures** in 2016.
*National experience contains data from 2015 for CLABSI, CAUTI, SSI, and MRSA and *C. difficile* laboratory-identified events. **Eligible procedures are those that fit the Complex Admission/Readmission SSI model. For more information, please refer to the technical report.									

Table 1. Infections in Virginia Compared to the National Experience, by Acute Care Hospital, Virginia, 2016

Hospital Name	Bloodstream Infections (CLABSIs)[a]	Urinary Tract Infections (CAUTIs)[a]	Surgical Site Infections (SSIs) from Adult Colon Surgeries	SSIs from Adult Abdominal Hysterectomies	Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia LabID Events	*Clostridium difficile* LabID Events
All Virginia Acute Care Hospitals (n=78)	★	=	=	=	★	=
Augusta Health	=	=	=	**No Conclusion**	=	=
Bon Secours DePaul Medical Center	=	=	=	**No Conclusion**	=	★
Bon Secours Mary Immaculate Hospital	=	=	**No Conclusion**	**No Conclusion**	=	=
Bon Secours Maryview Medical Center	=	=	=	**No Conclusion**	✖	★
Bon Secours Memorial Regional Medical Center	=	=	=	**No Conclusion**	=	★
Bon Secours Richmond Community Hospital	**No Conclusion**	**No Conclusion**	**N/A**	**N/A**	**No Conclusion**	★
Bon Secours St. Francis Medical Center	=	=	=	=	=	★
Bon Secours St. Mary's Hospital	★	=	=	=	=	★
Buchanan General Hospital	**No Conclusion**	=	**N/A**	**N/A**	**No Conclusion**	=

Hospital Name	Bloodstream Infections (CLABSIs)[a]	Urinary Tract Infections (CAUTIs)[a]	Surgical Site Infections (SSIs) from Adult Colon Surgeries	SSIs from Adult Abdominal Hysterectomies	Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia LabID Events	*Clostridium difficile* LabID Events
All Virginia Acute Care Hospitals (n=78)	★	=	=	=	★	=
Carilion Franklin Memorial Hospital	**No Conclusion**	**No Conclusion**	**No Conclusion**	**N/A**	**No Conclusion**	=
Carilion New River Valley Medical Center	=	★	=	**No Conclusion**	=	=
Carilion Roanoke Memorial Hospital	=	✖	=	=	★	✖
Carilion Tazewell Community Hospital	**No Conclusion**	**No Conclusion**	**N/A**	**N/A**	**No Conclusion**	**No Conclusion**
Centra Bedford Memorial Hospital	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
Centra Lynchburg General Hospital	=	=	★	**No Conclusion**	=	=
Centra Southside Community Hospital	**No Conclusion**	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
Centra Virginia Baptist Hospital	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	★
Chesapeake Regional Medical Center	=	=	=	=	=	✖
Clinch Valley Medical Center	=	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	★
Fauquier Health	=	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
HCA CJW Medical Center Chippenham Hospital	=	✖	=	**No Conclusion**	=	✖
HCA CJW Medical Center Johnston-Willis Hospital	=	✖	=	=	=	=
HCA Henrico Doctors' Hospital	=	=	=	=	=	=
HCA John Randolph Medical Center	**No Conclusion**	=	**No Conclusion**	**N/A**	**No Conclusion**	✖
HCA LewisGale Hospital Alleghany	**No Conclusion**	**No Conclusion**	**No Conclusion**	**N/A**	**No Conclusion**	=
HCA LewisGale Hospital Montgomery	=	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
HCA LewisGale Hospital Pulaski	**No Conclusion**	**No Conclusion**	**No Conclusion**	**N/A**	**No Conclusion**	✖

Hospital Name	Bloodstream Infections (CLABSIs)[a]	Urinary Tract Infections (CAUTIs)[a]	Surgical Site Infections (SSIs) from Adult Colon Surgeries	SSIs from Adult Abdominal Hysterectomies	Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia LabID Events	*Clostridium difficile* LabID Events
All Virginia Acute Care Hospitals (n=78)	★	=	=	=	★	=
HCA LewisGale Medical Center	=	=	=	=	=	✖
HCA Parham Doctors' Hospital	=	✖	**No Conclusion**	**N/A**	=	=
HCA Reston Hospital Center	=	=	=	**No Conclusion**	=	=
HCA Retreat Doctors' Hospital	=	✖	=	**No Conclusion**	**No Conclusion**	=
HCA Spotsylvania Regional Medical Center	**No Conclusion**	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
HCA StoneSprings Hospital Center	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
Inova Alexandria Hospital	=	=	✖	**No Conclusion**	=	=
Inova Fair Oaks Hospital	✖	=	=	**No Conclusion**	=	=
Inova Fairfax Medical Campus	=	=	=	=	=	★
Inova Loudoun Hospital	=	=	=	**No Conclusion**	=	★
Inova Mount Vernon Hospital	=	=	**No Conclusion**	**No Conclusion**	=	=
Mary Washington Hospital	=	★	=	**No Conclusion**	=	★
MSHA Johnston Memorial Hospital	=	=	=	**No Conclusion**	=	=
MSHA Norton Community Hospital	=	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	★
MSHA Russell County Medical Center	**No Conclusion**	**No Conclusion**	**N/A**	**N/A**	**No Conclusion**	=
MSHA Smyth County Community Hospital	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
Novant Health UVA Health System Culpeper Medical Center	**No Conclusion**	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	=

Hospital Name	Bloodstream Infections (CLABSIs)[a]	Urinary Tract Infections (CAUTIs)[a]	Surgical Site Infections (SSIs) from Adult Colon Surgeries	SSIs from Adult Abdominal Hysterectomies	Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia LabID Events	*Clostridium difficile* LabID Events
All Virginia Acute Care Hospitals (n=78)	★	=	=	=	★	=
Novant Health UVA Health System Haymarket Medical Center	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
Novant Health UVA Health System Prince William Medical Center	=	✖	=	**No Conclusion**	=	=
Riverside Doctors' Hospital Williamsburg	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
Riverside Regional Medical Center	★	=	=	=	=	=
Riverside Shore Memorial Hospital	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
Riverside Tappahannock Hospital	**No Conclusion**	**No Conclusion**	**No Conclusion**	**N/A**	**No Conclusion**	=
Riverside Walter Reed Hospital	**No Conclusion**	**No Conclusion**	**No Conclusion**	**N/A**	**No Conclusion**	=
Sentara CarePlex Hospital	=	=	=	**No Conclusion**	=	=
Sentara Halifax Regional Hospital	**No Conclusion**	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
Sentara Leigh Hospital	★	★	=	=	=	=
Sentara Martha Jefferson Hospital	=	=	=	**No Conclusion**	=	=
Sentara Norfolk General Hospital	★	=	✖	**No Conclusion**	=	=
Sentara Northern Virginia Medical Center	=	=	=	**No Conclusion**	=	=
Sentara Obici Hospital	=	=	=	**No Conclusion**	=	=
Sentara Princess Anne Hospital	=	=	=	**No Conclusion**	=	=
Sentara RMH Medical Center	=	=	=	**No Conclusion**	=	=
Sentara Virginia Beach General Hospital	★	=	=	=	=	=

Hospital Name	Bloodstream Infections (CLABSIs)[a]	Urinary Tract Infections (CAUTIs)[a]	Surgical Site Infections (SSIs) from Adult Colon Surgeries	SSIs from Adult Abdominal Hysterectomies	Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia LabID Events	*Clostridium difficile* LabID Events
All Virginia Acute Care Hospitals (n=78)	★	=	=	=	★	=
Sentara Williamsburg Regional Medical Center	=	=	=	**No Conclusion**	=	★
Southampton Memorial Hospital	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
Southern Virginia Regional Medical Center	**No Conclusion**	**No Conclusion**	**No Conclusion**	**N/A**	**No Conclusion**	=
Southside Regional Medical Center	=	=	=	**No Conclusion**	=	✖
SOVAH Health - Danville	✖	=	=	**No Conclusion**	=	★
SOVAH Health - Martinsville	✖	=	**No Conclusion**	**No Conclusion**	=	=
Stafford Hospital	=	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	★
Twin County Regional Healthcare	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
UVA Medical Center	=	=	=	=	=	✖
VCU Community Memorial Hospital	=	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
VCU Medical Center	=	★	=	✖	=	✖
Virginia Hospital Center	★	=	=	=	=	=
Warren Memorial Hospital	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	=
Wellmont Lonesome Pine Hospital	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**	**No Conclusion**
Wellmont Mountain View Regional Medical Center	**No Conclusion**	=	**No Conclusion**	**N/A**	**No Conclusion**	=
Winchester Medical Center	★	=	✖	**No Conclusion**	=	✖
Wythe County Community Hospital	**No Conclusion**	=	**No Conclusion**	**No Conclusion**	**No Conclusion**	=

[a]Aggregate data includes intensive care unit and inpatient ward (adult and pediatric medical, surgical, and medical/surgical) data.

Central Line-Associated Bloodstream Infections (CLABSIs)

A central line is a tube that is placed in a large vein to give fluids, blood, or medications, or to do certain medical tests quickly. A central line-associated bloodstream infection (CLABSI) can occur when bacteria or other germs travel along a central line and enter the blood, causing serious infection.

*In 2016, the number of CLABSIs reported in Virginia was **24% lower than predicted**, based on the national experience from 2015. Thirty-three (42%) hospitals reported zero CLABSIs from their intensive care units (ICUs) and inpatient wards in 2016.*

These results are based on CLABSI data reported from 78 Virginia acute care hospitals doing surveillance in adult and pediatric medical, surgical, and medical/surgical inpatient wards, 75 hospitals doing surveillance in adult and pediatric ICUs, and 25 hospitals doing surveillance for neonatal ICUs.

Legend							
★	Fewer infections (**better**) than predicted based on the national experience.*	=	About the **same** number of infections as predicted based on the national experience.*	✖	More infections (**worse**) than predicted based on the national experience.*	**No Conclusion**	When the number of predicted infections is less than 1, no conclusion can be made.
*National experience contains data from 2015 for CLABSIs.							

Table 2. Central Line-Associated Bloodstream Infections (CLABSIs) in Adult and Pediatric ICUs and Wards and Neonatal ICUs, Virginia Acute Care Hospitals, 2016

Location Type	No. of Facilities	Observed Infections	Predicted Infections	How do Virginia Hospitals Compare to the National Experience?*
All ICUs and Wards (total)	78	313	411.9	★Better
Adult and Pediatric ICUs (only)	75	159	203.8	★Better
Adult and Pediatric Wards (only)	78	119	165.7	★Better
Neonatal ICUs (only)	25	33	41.3	= Same

Table 3. Number of Virginia Acute Care Hospitals that Performed Better, Same, or Worse than the National Experience for CLABSIs in Adult and Pediatric ICUs and Wards and Neonatal ICUs, 2016

Location Type	Number of Hospitals in Comparison to the National Experience*			
	★Better	= Same	✖Worse	No Conclusion
All ICUs and Wards (total)	7	40	3	28
Adult and Pediatric ICUs (only)	4	28	3	40
Adult and Pediatric Wards (only)	4	32	3	39
Neonatal ICUs (only)	0	10	0	15

Catheter-Associated Urinary Tract Infections (CAUTIs)

A urinary catheter is a tube placed in the bladder to drain urine. A catheter-associated urinary tract infection (CAUTI) occurs when germs enter the urinary system through the catheter and affect the bladder (which stores the urine) and/or the kidneys (which filter the blood to make urine), resulting in an infection in the bladder or the kidney(s).

*In 2016, the number of CAUTIs reported in Virginia was **similar to what was predicted**, based on the national experience from 2015. Twenty-five (32%) hospitals reported zero CAUTIs from their ICUs and inpatient wards in 2016.*

These results are based on CAUTI data reported from 78 Virginia acute care hospitals doing surveillance in adult and pediatric medical, surgical, and medical/surgical inpatient wards and 75 hospitals doing surveillance in adult and pediatric ICUs.

Legend							
★	Fewer infections (**better**) than predicted based on the national experience.*	=	About the **same** number of infections as predicted based on the national experience.*	✖	More infections (**worse**) than predicted based on the national experience.*	**No Conclusion**	When the number of predicted infections is less than 1, no conclusion can be made.
*National experience contains data from 2015 for CAUTIs.							

Table 4. Catheter-Associated Urinary Tract Infections (CAUTIs) in Adult and Pediatric ICUs and Wards, Virginia Acute Care Hospitals, 2016

Location Type	No. of Facilities	Observed Infections	Predicted Infections	How do Virginia Hospitals Compare to the National Experience?*
All ICUs and Wards (total)	78	474	476.5	= Same
Adult and Pediatric ICUs (only)	75	303	290.3	= Same
Adult and Pediatric Wards (only)	78	168	185.5	= Same

Table 5. Number of Virginia Acute Care Hospitals that Performed Better, Same, or Worse than the National Experience for CAUTIs in Adult and Pediatric ICUs and Wards, 2016

Location Type	Number of Hospitals in Comparison to the National Experience*			
	★Better	= Same	✖Worse	No Conclusion
All ICUs and Wards (total)	4	48	6	20
Adult and Pediatric ICUs (only)	1	31	6	37
Adult and Pediatric Wards (only)	5	35	6	32

Surgical Site Infections (SSIs)

A surgical site infection (SSI) occurs after surgery in the part of the body where the surgery took place. These infections may involve only the skin, or may be more serious and involve tissue under the skin, organs, or implanted material. SSIs sometimes take days or months after surgery to develop. Surgical site infections following colon surgeries and abdominal hysterectomy procedures are shown in the following sections. Hospitals are included in the table if they had eligible procedures in 2016.

*In 2016, the number of SSIs following colon and abdominal hysterectomy procedures reported in Virginia was **similar to what was predicted**, based on the national experience from 2015.*

These results are based on data reported from 74 Virginia acute care hospitals that performed colon procedures and 65 hospitals that performed abdominal hysterectomy procedures.

Legend							
★	Fewer infections (**better**) than predicted based on the national experience.*	=	About the **same** number of infections as predicted based on the national experience.*	✖	More infections (**worse**) than predicted based on the national experience.*	**No Conclusion**	When the number of predicted infections is less than 1, no conclusion can be made.
*National experience contains data from 2015 for SSIs.							

Table 6. Surgical Site Infections (SSIs) following Colon and Abdominal Hysterectomy Procedures in Adult Patients, Virginia Acute Care Hospitals, 2016

Procedure Type (Patient Population)	No. of Facilities	Observed Infections	Predicted Infections	How do Virginia Hospitals Compare to the National Experience?*
Colon Surgery (Adult)	74	209	183.0	= Same
Abdominal Hysterectomy (Adult)	65	53	52.1	= Same

Table 7. Number of Virginia Acute Care Hospitals that Performed Better, Same, or Worse than the National Experience for SSIs following Colon and Abdominal Hysterectomy Procedures in Adult Patients, 2016

Procedure Type (Patient Population)	Number of Hospitals in Comparison to the National Experience*			
	★Better	= Same	✖Worse	No Conclusion
Colon Surgery (Adult)	1	36	3	34
Abdominal Hysterectomy (Adult)	0	13	1	51

Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia LabID Events

Methicillin-resistant *Staphylococcus aureus* (MRSA) infections are caused by bacteria that are resistant to certain types of drugs. MRSA can cause skin or wound infections. Sometimes, MRSA can enter the bloodstream, which is called MRSA bacteremia. MRSA bacteremia can cause serious illness and even death.

*In 2016, the number of MRSA bacteremia events reported in Virginia was **14% lower than predicted**, based on the national experience from 2015. Thirty-seven (47%) of Virginia hospitals reported zero MRSA bacteremia events in 2016.*

These results are based on data reported from 78 Virginia acute care hospitals doing surveillance for hospital-onset laboratory-identified MRSA bacteremia events.

Legend					
★	Fewer infections (**better**) than predicted based on the national experience.*	=	About the **same** number of infections as predicted based on the national experience.*	✖	More infections (**worse**) than predicted based on the national experience.*
No Conclusion	When the number of predicted infections is less than 1, no conclusion can be made.				
*National experience contains data from 2015 for MRSA bacteremia laboratory-identified events.					

Table 8. Methicillin-Resistant *Staphylococcus aureus* (MRSA) Bacteremia Hospital-Onset LabID Events, Virginia Acute Care Hospitals, 2016

Location	No. of Facilities	Observed Events	Predicted Events	How do Virginia Hospitals Compare to the National Experience?*
Facility-wide LabID	78	177	205.8	★Better

Table 9. Number of Virginia Acute Care Hospitals that Performed Better, Same, or Worse than the National Experience for MRSA Bacteremia LabID Events, 2016

Location	Number of Hospitals in Comparison to the National Experience*			
	★Better	= Same	✖Worse	No Conclusion
Facility-wide LabID	1	41	1	35

Clostridium difficile Hospital-Onset LabID Events

Clostridium difficile (*C. difficile*) is a type of bacteria that can cause diarrhea and other intestinal problems. These infections are often associated with prolonged antibiotic use because antibiotics can wipe out "good" bacteria in the gut, allowing the *C. difficile* bacteria to grow and cause illness. *C. difficile* infections usually occur in people who have been under medical care. Individuals at the highest risk for *C. difficile* infection include those on antibiotic medications, and those who have weakened immune systems or other chronic underlying health conditions.

*In 2016, the number of C. difficile events reported in Virginia was **similar to what was predicted**, based on the national experience from 2015. Five (6%) hospitals reported zero C. difficile events in 2016.*

These results are based on data reported from 78 Virginia acute care hospitals doing surveillance for hospital-onset laboratory-identified *C. difficile* events.

Legend							
★	Fewer infections (**better**) than predicted based on the national experience.*	=	About the **same** number of infections as predicted based on the national experience.*	✖	More infections (**worse**) than predicted based on the national experience.*	**No Conclusion**	When the number of predicted infections is less than 1, no conclusion can be made.
*National experience contains data from 2015 for *C. difficile* laboratory-identified events.							

Table 10. *Clostridium difficile* Hospital-Onset LabID Events, Virginia Acute Care Hospitals, 2016

Location	No. of Facilities	Observed Events	Predicted Events	How do Virginia Hospitals Compare to the National Experience?*
Facility-wide LabID	78	2,312	2,400.3	= Same

Table 11. Number of Virginia Acute Care Hospitals that Performed Better, Same, or Worse than the National Experience for *C. difficile* LabID Events, 2016

Location	Number of Hospitals in Comparison to the National Experience*			
	★Better	= Same	✖Worse	No Conclusion
Facility-wide LabID	15	51	10	2

Flu Vaccination Summary for Healthcare Workers

In Virginia, **45 hospitals (58%)** met or exceeded the U.S. Department of Health and Human Services (HHS) Healthy People 2020 goal (90.0%) for the 2016-2017 flu season.

*For the 2016-2017 flu season, the overall healthcare worker vaccination percentage for Virginia was **88.6%**, which was lower than the Healthy People 2020 goal.*

Legend					
★	Vaccination is higher (**better**) than the Healthy People 2020 Goal.[b]	=	Vaccination is **similar** to the Healthy People 2020 Goal.[b]	✖	Vaccination is lower (**worse**) than the Healthy People 2020 Goal.[b]

Table 12. Healthcare Worker Flu Vaccination Percentages, by Acute Care Hospital, Virginia, 2016-2017 Flu Season*

Hospital Name	Percentage (%) of All Healthcare Workers Vaccinated[a]	How Does This Hospital Compare to the Healthy People 2020 Goal?[b]
All Virginia Acute Care Hospitals (n=78)	**88.6%**	✖Worse
Augusta Health	55.9%	✖Worse
Bon Secours DePaul Medical Center	92.1%	★Better
Bon Secours Mary Immaculate Hospital	86.3%	✖Worse
Bon Secours Maryview Medical Center	76.6%	✖Worse
Bon Secours Memorial Regional Medical Center	95.5%	★Better
Bon Secours Richmond Community Hospital	95.8%	★Better
Bon Secours St. Francis Medical Center	96.6%	★Better
Bon Secours St. Mary's Hospital	97.4%	★Better
Buchanan General Hospital	92.3%	= Same
Carilion Franklin Memorial Hospital	74.4%	✖Worse
Carilion New River Valley Medical Center	74.1%	✖Worse
Carilion Roanoke Memorial Hospital	74.3%	✖Worse
Carilion Tazewell Community Hospital	73.4%	✖Worse
Centra Bedford Memorial Hospital	99.7%	★Better
Centra Lynchburg General Hospital	99.2%	★Better
Centra Southside Community Hospital	99.0%	★Better
Centra Virginia Baptist Hospital	98.8%	★Better
Chesapeake Regional Medical Center	97.3%	★Better
Clinch Valley Medical Center	98.1%	★Better

Hospital Name	Percentage (%) of All Healthcare Workers Vaccinated[a]	How Does This Hospital Compare to the Healthy People 2020 Goal?[b]
All Virginia Acute Care Hospitals (n=78)	**88.6%**	✖Worse
Fauquier Health	84.7%	✖Worse
HCA CJW Medical Center Chippenham Hospital	90.0%	= Same
HCA CJW Medical Center Johnston-Willis Hospital	93.6%	★Better
HCA Henrico Doctors' Hospital	82.2%	✖Worse
HCA John Randolph Medical Center	77.8%	✖Worse
HCA LewisGale Hospital Alleghany	84.1%	✖Worse
HCA LewisGale Hospital Montgomery	91.5%	= Same
HCA LewisGale Hospital Pulaski	96.4%	★Better
HCA LewisGale Medical Center	81.7%	✖Worse
HCA Parham Doctors' Hospital	77.5%	✖Worse
HCA Reston Hospital Center	61.4%	✖Worse
HCA Retreat Doctors' Hospital	90.1%	= Same
HCA Spotsylvania Regional Medical Center	70.6%	✖Worse
HCA StoneSprings Hospital Center	63.1%	✖Worse
Inova Alexandria Hospital	97.5%	★Better
Inova Fair Oaks Hospital	95.8%	★Better
Inova Fairfax Medical Campus	96.8%	★Better
Inova Loudoun Hospital	98.2%	★Better
Inova Mount Vernon Hospital	96.7%	★Better
Mary Washington Hospital	90.1%	= Same
MSHA Johnston Memorial Hospital	99.1%	★Better
MSHA Norton Community Hospital	97.2%	★Better
MSHA Russell County Medical Center	97.6%	★Better
MSHA Smyth County Community Hospital	98.2%	★Better
Novant Health UVA Health System Culpeper Medical Center	93.3%	★Better
Novant Health UVA Health System Haymarket Medical Center	94.9%	★Better
Novant Health UVA Health System Prince William Medical Center	97.1%	★Better
Riverside Doctors' Hospital Williamsburg	98.6%	★Better
Riverside Regional Medical Center	98.2%	★Better
Riverside Shore Memorial Hospital	97.1%	★Better

Hospital Name	Percentage (%) of All Healthcare Workers Vaccinated[a]	How Does This Hospital Compare to the Healthy People 2020 Goal?[b]
All Virginia Acute Care Hospitals (n=78)	**88.6%**	✖Worse
Riverside Tappahannock Hospital	95.1%	★Better
Riverside Walter Reed Hospital	94.3%	★Better
Sentara CarePlex Hospital	81.5%	✖Worse
Sentara Halifax Regional Hospital	84.6%	✖Worse
Sentara Leigh Hospital	72.4%	✖Worse
Sentara Martha Jefferson Hospital	90.1%	= Same
Sentara Norfolk General Hospital	77.8%	✖Worse
Sentara Northern Virginia Medical Center	79.5%	✖Worse
Sentara Obici Hospital	83.4%	✖Worse
Sentara Princess Anne Hospital	82.8%	✖Worse
Sentara RMH Medical Center	92.7%	★Better
Sentara Virginia Beach General Hospital	78.2%	✖Worse
Sentara Williamsburg Regional Medical Center	83.4%	✖Worse
Southampton Memorial Hospital	65.3%	✖Worse
Southern Virginia Regional Medical Center	70.7%	✖Worse
Southside Regional Medical Center	72.8%	✖Worse
SOVAH Health - Danville	88.2%	✖Worse
SOVAH Health - Martinsville	96.6%	★Better
Stafford Hospital	88.6%	= Same
Twin County Regional Healthcare	81.2%	✖Worse
UVA Medical Center	93.9%	★Better
VCU Community Memorial Hospital	99.2%	★Better
VCU Medical Center	92.6%	★Better
Virginia Hospital Center	97.0%	★Better
Warren Memorial Hospital	89.5%	= Same
Wellmont Lonesome Pine Hospital	98.9%	★Better
Wellmont Mountain View Regional Medical Center	99.3%	★Better
Winchester Medical Center	91.2%	★Better
Wythe County Community Hospital	86.0%	✖Worse

*The 2016-2017 influenza season was from October 1, 2016 – March 31, 2017.

[a] Healthcare workers include employees, licensed independent practitioners, and adult students/trainees and volunteers. Contract personnel are excluded from all categories.

[b] The Healthy People 2020 goal for healthcare worker flu vaccination in the United States is 90.0%.

Appendix A. What Patients Can Do To Help Prevent Infections

To prevent *all* infections:

- If you do not see your healthcare providers clean their hands before caring for you, don't be shy about asking them to do so. This is your healthcare, and you have a right to speak up!
    - Make sure you and your family members and friends keep their hands clean too!
- Ask your healthcare provider what specific steps s/he takes to prevent infections as well as what you can do to prevent infections before, during, and after your visit as it applies to your care.

To prevent central line-associated bloodstream infections (CLABSIs) and catheter-associated urinary tract infections (CAUTIs):

- If you have a central line or urinary catheter put in place, ask your doctors and nurses to explain why you need it and how long you will have it.
- Ask your healthcare providers each day if you still need it.
- If the bandage covering your central line becomes wet or dirty, tell your nurse or doctor immediately.
- Tell your nurse or doctor if the area around your central line or catheter is sore or red, or if you feel feverish.
- Follow your healthcare providers' instructions for the care of the central line or urinary catheter to keep it working as it should and keep it clean and free of germs.
- Do not let family and friends touch the central line tubing or bandage.

To prevent surgical site infections (SSIs):

IMMEDIATELY AFTER YOUR SURGERY AND DURING RECOVERY:

- Avoid touching your incision area and follow all instructions from your doctor about how to take care of your incision.
- Before and after taking care of your incision area, wash your hands or use an alcohol-based hand sanitizer and have any family member helping with your care do the same.
- If you have any signs or symptoms of an infection like redness, pain, fever, or drainage, call your doctor *as soon as possible.*
- Until the incision is completely healed, always use a different washcloth for the incision area than the one used for the rest of your body.
- Keep clean sheets on your bed and make sure the clothes that come in contact with your incision are clean.
- Keep pets away from the incision until healed.

BEFORE YOU LEAVE THE HOSPITAL OR AMBULATORY SURGERY CENTER:

- Make sure you understand how to take care of your wound and ask questions when you are unsure.
- Know who to contact if you have questions or problems after you get home.
- Keep all appointments scheduled at the time of discharge.

To prevent *Clostridium difficile* infections:

- Take antibiotics only as prescribed by your doctor and complete the course of treatment.
- Tell your doctor if you have recently been on antibiotics or if you get diarrhea within a few months of taking the antibiotics.
- Wash your hands before eating and after using the bathroom.

To prevent methicillin-resistant *Staphylococcus aureus* (MRSA) infections:

- Wash your hands often, especially before and after changing wound dressings or bandages.
- Keep wounds clean and change bandages as instructed until healed.
- Avoid sharing personal items such as towels or razors.
- Take antibiotics only as prescribed by your doctor and complete the course of treatment.

To prevent influenza or the "flu":

- Get vaccinated against the flu each year.
- Wash your hands often.
- Cover your cough with your sleeve.


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