



Healthcare Associated Infections: CY2016 Progress Report

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Presentation Outline

- Overview of HAI Public Reporting Requirements
- CY2016 HAI Progress Report
 - Hospital Performance on Healthcare Associated Infections
 - Central Line Associated Blood Stream Infections (CLABSI)
 - Catheter Associated Urinary Tract Infections (CAUTI)
 - Methicillin Resistant Staphylococcus Aureus (MRSA)
 - Clostridium Difficile (C. Diff)
 - Surgical Site Infections (SSI)
 - Healthcare Personnel Influenza Vaccination
- 2015 NHSN Rebaseline Efforts
- Next Steps

HAI Public Reporting Requirements

- ▶ No changes from CMS for CY2016
- ▶ Maryland Requirements
 - ▶ Hospitals are required to report the following HAIs:
 - ▶ CLABSI
 - ▶ ICU, NICU, Select Wards
 - ▶ CAUTI
 - ▶ ICU, Select Wards
 - ▶ MRSA
 - ▶ C. Diff
 - ▶ SSI
 - ▶ HCP Influenza Vaccination
 - ▶ Requirements generally align with CMS requirements
 - ▶ Additional SSI procedures required for MD (CABG, HPRO, KPRO)

CY2016 HAI Updates: <https://healthcarequality.mhcc.maryland.gov/>



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Central Line Associated Blood Stream Infections (CLABSI) CY2016

▶ CLABSI reporting includes:

- ▶ ICUs
- ▶ NICUs
- ▶ Select Wards (medical, surgical, medical/surgical, pediatric medical, pediatric surgical, pediatric medical/surgical)

▶ Total CLABSIs

- ▶ 378 infections reported statewide
- ▶ Statewide performance **better** than national benchmark with 0.65 SIR
- ▶ 2 hospitals performed **better** than national benchmark
- ▶ Performance same as 2015 (0.65 SIR)

Central Line Associated Blood Stream Infections CY2016 (continued)

▶ ICU

- ▶ 183 infections reported statewide
- ▶ Statewide performance **better** than national benchmark with 0.64 SIR
- ▶ 7 hospitals performed **better** than national benchmark
- ▶ 2 hospitals performed **worse** than national benchmark
- ▶ Performance similar to 2015 (0.61 SIR)

▶ NICU

- ▶ 19 infections reported statewide
- ▶ Statewide performance **better** than national benchmark with 0.38 SIR
- ▶ 2 hospitals performed **better** than national benchmark
- ▶ Performance similar to 2015 (0.45 SIR)

▶ Select Wards

- ▶ 176 infections reported statewide
- ▶ Statewide performance **better** than national benchmark with 0.72 SIR
- ▶ 3 hospitals performed **better** than national benchmark
- ▶ 1 hospital performed **worse** than national benchmark
- ▶ Performance similar to 2015 (0.73 SIR)

CLABSI Trends

Performance Measure	CY2010	CY2011	CY2012	CY2013	CY2014	CY2015	CY2016	Difference (CY2010 vs CY2016)
Adult/Pediatric Intensive Care Units								
CLABSIs	323	224	155	145	151	175	183	Improvement (43.3% reduction)
Hospitals Better than National Experience	2	3	9	7	8	5	7	Improvement
Hospitals Worse than National Experience	3	2	0	0	0	0	2	Improvement
Maryland Standardized Infection Ratio (SIR)	1.06	0.75	0.53	0.47	0.5	0.61	0.64	Improvement
Maryland Performance (using SIR)	Same	Better	Better	Better	Better	Better	Better	Improvement
Maryland Adult/Ped ICU Central Line Days	158,222	152,422	149,382	157,647	151,531	146,875	144,521	
Neonatal Intensive Care Units								
CLABSIs	41	43	31	33	29	22	19	Improvement (53.6% reduction)
Hospitals Better than National Experience	2	2	1	2	2	3	2	No change
Hospitals Worse than National Experience	0	0	0	0	0	0	0	No Change
Maryland Standardized Infection Ratio (SIR)	0.50	0.64	0.46	0.52	0.51	0.45	0.38	Improvement (12% reduction)
Maryland Performance (using SIR)	Better	Better	Better	Better	Better	Better	Better	No Change
Maryland NICU Central Line Days	27,299	25,926	25,892	24,435	22,048	20,394	19,553	

CLABSI Trends (continued)

Performance Measure	CY2010	CY2011	CY2012	CY2013	CY2014	CY2015	CY2016	Difference (CY2010 vs CY2016)
Select Adult/Pediatric Wards								
CLABSIs	NA	NA	NA	NA	NA	186	176	Improvement (5.4% reduction)
Hospitals Better than National Experience	NA	NA	NA	NA	NA	6	3	No Improvement
Hospitals Worse than National Experience	NA	NA	NA	NA	NA	0	1	No Improvement
Maryland Standardized Infection Ratio (SIR)	NA	NA	NA	NA	NA	0.73	0.72	Improvement (1% reduction)
Maryland Performance (using SIR)	NA	NA	NA	NA	NA	Better	Better	No Change
Maryland Central Line Days	NA	NA	NA	NA	NA	177,104	173,964	

Catheter-Associated Urinary Tract Infections (CAUTI) CY2016

► Total CAUTIs

- 381 infections reported statewide
- Statewide performance **better** than national benchmark with 0.64 SIR
- 14 hospitals performed **better** than national benchmark (2x 2015 data)
- Performance similar to 2015 (0.62 SIR)

► ICUs Only

- 234 infections reported statewide
- Statewide performance **better** than national benchmark with 0.68 SIR
- 6 hospitals performed **better** than national benchmark
- 1 hospital performed **worse** than national benchmark
- Performance similar to 2015 (0.70 SIR)

► Select Wards

- 147 infections reported statewide
- Statewide performance **better** than national benchmark with 0.57 SIR
- 8 hospitals performed **better** than national benchmark
- Performance similar to 2015 (0.51 SIR)

CAUTI Trends

Performance Measure	CY 2014*	CY 2015**	CY2016	Difference (CY2015 vs CY2016)
All CAUTIs	NA	375	381	No Improvement (2% increase)
Maryland Standardized Infection Ratio (SIR)	NA	0.62	0.64	No Improvement (2% increase)
Maryland Performance (using SIR)	NA	Better	Better	No Change
Number of Urinary Catheter Days	NA	328,869	322,498	
Adult/Pediatric Intensive Care Units				
CAUTIs	601	242	234	Improvement (3.3% reduction)
Hospitals Better than National Experience	3	7	6	No Improvement
Hospitals Worse than National Experience	9	1	1	Improvement
Maryland Standardized Infection Ratio (SIR)	1.62	0.7	0.69	Improvement (1% reduction)
Maryland Performance (using SIR)	Worse	Better	Better	No Change
Number of Adult/Ped ICU Urinary Catheter Days	181,347	176,274	172,494	
Selec Adult/Pediatric Wards				
CAUTIs	NA	133	147	No Improvement (10.5% increase)
Hospitals Better than National Experience	NA	9	8	No Improvement
Hospitals Worse than National Experience	NA	0	0	No Change
Maryland Standardized Infection Ratio (SIR)	NA	0.51	0.57	No Improvement (6% increase)
Maryland Performance (using SIR)	NA	Better	Better	No Change
Number of Urinary Catheter Days	NA	152,595	150,004	

*CAUTI reporting requirements for CY2014 only included ICUs.

** NHSN changed the definition of CAUTI, effective January 2015, that excluded all non-bacterial pathogens. The number of CAUTIs reported in 2015 and forward may be lower than in previous years.

MRSA and C. Difficile CY2016

▶ MRSA

- ▶ 200 infections reported statewide
- ▶ Statewide performance **same** as the national benchmark with 1.14 SIR
- ▶ 1 hospital performed **better** than national benchmark
- ▶ 4 hospitals performed **worse** than national benchmark
- ▶ Performance status improved from 2015 (1.32 SIR, worse)

▶ C. Difficile

- ▶ 2,070 infections reported statewide
- ▶ Statewide performance **better** than national benchmark with 0.95 SIR
- ▶ 8 hospitals performed **better** than national benchmark
- ▶ 3 hospitals performed **worse** than national benchmark
- ▶ Performance status improved from 2015 (1.10 SIR, worse)

MRSA and C. Difficile Trends

Performance Measure	CY 2014	CY 2015	CY 2016	Difference (CY2014 vs CY2016)
Clostridium Difficile Infections (CDI)				
Clostridium Difficile Infections (CDI)	2583	2355	2070	Improvement (19.9% reduction)
Hospitals Better than National Experience	6	6	8	Improvement
Hospitals Worse than National Experience	17	13	3	Improvement
Maryland Standardized Infection Ratio (SIR)*	1.18	1.10	0.95	Improvement (23% reduction)
Maryland Performance (using SIR)	Worse	Worse	Better	Improvement
Maryland Patient Days	2,804,710	2,695,434	2,749,805	
MRSA Bacteremia Infections				
MRSA Bacteremia Infections	240	221	200	Improvement (16.7% reduction)
Hospitals Better than National Experience	0	2	1	Improvement
Hospitals Worse than National Experience	4	4	4	No change
Maryland Standardized Infection Ratio (SIR)*	1.16	1.32	1.14	Improvement (2% reduction)
Maryland Performance (using SIR)	Worse	Worse	Same	Improvement
Maryland Patient Days	2,984,529	2,930,144	2,958,703	

Surgical Site Infections CY2016

▶ Hip Replacement (HPRO)

- ▶ 59 infections reported statewide
- ▶ Statewide performance **better** than national benchmark with 0.50 SIR
- ▶ 2 hospitals performed **better** than national benchmark
- ▶ Performance similar to 2015 (0.71 SIR)

▶ Knee Replacement (KPRO)

- ▶ 47 infections reported statewide
- ▶ Statewide performance **better** than national benchmark with 0.46 SIR
- ▶ 4 hospitals performed **better** than national benchmark
- ▶ 2 hospitals performed **worse** than national benchmark
- ▶ Performance similar to 2015 (0.65 SIR)

▶ Coronary Artery Bypass Graft (CABG)

- ▶ 17 infections reported statewide
- ▶ Statewide performance **better** than national benchmark with 0.53 SIR
- ▶ No hospitals performed **better** than national benchmark
- ▶ Performance similar to 2015 (0.35 SIR)

Surgical Site Infections CY2016 (continued)

▶ Abdominal Hysterectomy (HYST)

- ▶ 30 infections reported statewide
- ▶ Statewide performance **better** than national benchmark with 0.68 SIR
- ▶ No hospitals performed **better** than national benchmark
- ▶ Performance improved from 2015 (0.96 SIR, same)

▶ Colon Surgery (COLO)

- ▶ 168 infections reported statewide
- ▶ Statewide performance **same** as national benchmark with 0.95 SIR
- ▶ 3 hospitals performed **better** than national benchmark
- ▶ 2 hospitals performed **worse** than national benchmark
- ▶ Performance similar to 2015 (0.99 SIR)

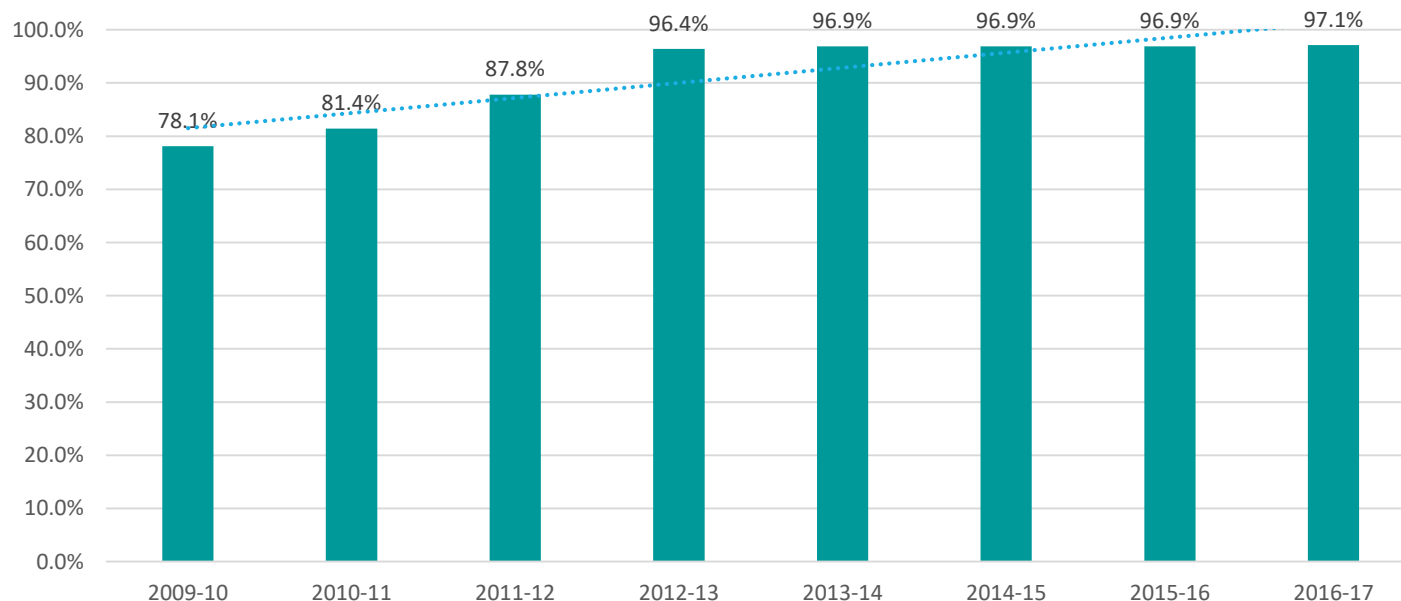
SSI Trends

Performance Measure	CY2011	CY2012	CY2013	CY2014*	CY2015	CY2016	Difference in SIR Since Reporting Began
All SSIs	186	161	129	351	343	307	Improvement (12.5% reduction since 2014)
All Procedures	22380	22845	23485	34233	36083	36585	
All SSIs SIR	1.06	0.9	0.7	0.86	0.81	0.69	Improvement (17% reduction since 2014)
CABG Infections	29	19	34	21	12	17	
CABG Procedures	2813	2478	2590	2747	2861	2734	
CABG SIR	0.87	0.68	1.12	0.64	0.35	0.53	Improvement (34% reduction)
HPRO Infections	67	63	45	58	59	45	
HPRO Procedures	7290	7862	8034	8516	9112	9054	
HPRO SIR	1.02	0.89	0.66	0.76	0.71	0.50	Improvement (52% reduction)
KPRO infections	90	79	50	50	57	47	
KPRO Procedures	12277	12505	12861	12112	13519	14271	
KPRO SIR	1.16	0.99	0.61	0.63	0.65	0.46	Improvement (70% reduction)
COLO infections	NA	NA	NA	166	171	168	
COLO Procedures	NA	NA	NA	5194	5177	5285	
COLO SIR	NA	NA	NA	0.96	0.99	0.95	Improvement (1% reduction)
HYST infections	NA	NA	NA	56	44	30	
HYST Procedures	NA	NA	NA	5664	5414	5241	
HYST SIR	NA	NA	NA	1.17	0.97	0.68	Improvement (49% reduction)

*HYST and COLO reporting began in 2014

Hospital Healthcare Personnel (HCP) Flu Vaccination

- Healthcare Personnel Flu Vaccination: 2016-2017 flu season
 - Hospitals Statewide Avg Vaccination Rate: 97.1% (81%-100% range)
 - NHSN Survey includes inpatient and outpatient employees, licensed independent practitioners, and adult students/trainees and volunteers
 - Total for state: 144,735 out of 148,947 HCP vaccinated
 - 46 of 47 hospitals have a mandatory policy



Performance Summary

▶ Performance was steady for most infection types

- ▶ Most infection types were **better** than national benchmark
- ▶ Not a lot of change in SIRs compared to CY2015

▶ Most Improved

- ▶ C. Diff – **Worse** to **Better**
- ▶ MRSA – **Worse** to **Same**
- ▶ SSI HYST – **Same** to **Better**

2017/2018 Staff Priorities

- CDC's NHSN Rebaseline efforts
 - Continue to monitor and track CDC's NHSN Rebaseline efforts
 - Most issues with the rollout appear to be fixed
 - CAUTI and CLABSI models were reconstructed
 - We will use new baselines for CY2017 reporting
 - Considering the use of Targeted Assessment for Prevention (TAP) reports to target hospitals with higher infections once the new baselines take effect
- CDC Annual Progress Report
 - Not yet available
- Antimicrobial Stewardship
 - Monitoring use of NHSN AUR (Antimicrobial Use and Resistance) Module
 - As of July 2017, at least one hospital in MD submitted on month of data; there was at least one event or denominator information
 - Include a feature story on MHCQR website

Questions?