

ANNUAL EVALUATION AND APPRAISAL FOR CY2022

Evaluation of the Infection Control Program CY2022 based on Surveillance, Prevention and Control Practices

Overview of Program

The Infection Prevention and Control Program at Broward Health Coral Springs (BHCS) is directed by the Clinical Specialist of Epidemiology, under the leadership of the Medical Director of Infection Prevention and Control and Antibiotic Stewardship programs. The Clinical Specialist of Epidemiology reports to the Regional Director of Quality, Epidemiology and Risk Management and thereon to the Medical Executive Council and Board. The Infection Control Committee consists of an Infectious Diseases Physician, who is also the Medical Director of the Infection Prevention and Control Program and serves as the Chairperson of the Committee. The Infection Control Committee is a multidisciplinary committee with representation from, but not limited to, the Medical Staff, Executive Leadership, Nursing, Pharmacy, Laboratory, Surgical Services, Environmental Services, Facilities Management, Employee Health, Ancillary staff, Nutritional Services, and other departments of the hospital. The Committee meets on a quarterly basis. In addition, the Clinical Specialist of Epidemiology attends other hospital department meetings to present and review results of surveillance activities and provides infection control education to all employees in Patient Safety Quality Committee meetings, New Hire Orientation, in-services, staff meetings, Grand Rounds, and Healthstream education.

BHCS is a 250 bed multiservice hospital. Adult Medical/Surgical Services, Maternal/Child Services, NICU, PICU, Primary Stroke Care, Cardiac Services and Outpatient Services including Wound Care, Women's Health, and Rehabilitation are the predominant service lines offered. The Clinical Specialist of Epidemiology monitors and provides coverage for all services, both inpatient and outpatient, at BHCS.

This Program Evaluation is based in part on outcomes achieved during calendar year 2022. Outcomes are identified through review of performance measurement data, information resulting from Broward Health Coral Springs (BHCS) committees, team meetings and multidisciplinary rounds as well as interviews and discussions conducted with staff and leaders throughout BHCS and in collaboration with other Broward Health facilities.

The Infection Prevention and Control Program is an organization wide program that provides for surveillance, prevention, and control of infections in patients, employees, students, LIPs, physicians, and all visitors to the organization. The Infection Control Plan addresses epidemiologically important issues of infections among patients, employees, and non-employees, as well as exposure to communicable disease, device related infections, surgical site infections, healthcare associated infections hospital wide, epidemiologically important and antibiotic resistant organisms, and the reporting of communicable disease to the public health authorities. The plan is comprehensive, appropriate to the size and complexity of the medical center and is reviewed on a continual basis. It addresses all aspects of Infection Prevention and Control activities and education, includes assessment and prioritization of infection risks, and provides recommendations for the implementation of strategies to reduce or eliminate prioritized risks. Specifically,

- Prospective surveillance is completed by Epidemiology for identification of infections.
- Rates are monitored for trends above the benchmark which would require immediate investigation and/or intense analysis, identification of opportunities for improvement and implementation of corrective action items.
- RCA meetings are held with leaders and staff to identify opportunities and improvements.
- Monthly reports are submitted to Patient Safety Quality Council Committee meeting where infections are discussed and opportunities for improvement are presented.

- Infections, results of ongoing surveillance, and Performance Monitoring Reports (PMR) are also presented at the quarterly Infection Control Committee meeting.
- Priority is given to device related infections based on risk assessment and analysis of collected data, which is evaluated on an ongoing basis to provide immediate intervention when indicated to reduce or prevent infection.
- Priority is also given to Surgical Site Infections based on the risk assessment and analysis of the collected data.
- Epidemiology continually monitors and communicate findings with the appropriate stakeholders on an ongoing basis.

HOUSE WIDE INFECTIONS FOR CY2022

Indicator	Definition	Target	CY20	CY21	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	
Central Line Related BSI, laboratory confirmed ALL NHSM Reportable units	# of Infections Line days X 1000	0.41	4	4								1					1	
			6617	8881	710	582	471	410	419	652	452	375	507	425	488	615	6,106	
			0.60	0.45									2.67					
Device Utilization Ratio - Central Line	# devices # patient days	0.13	6617	8881	710	582	471	410	419	652	452	375	507	425	488	615	6,106	
			42376	62789	6,319	5,196	5,122	5,079	5,419	5,567	5,517	5,496	5,404	5,199	5,069	5,610	59,672	
			0.16	0.14	0.11	0.11	0.09	0.08	0.08	0.12	0.08	0.07	0.09	0.08	0.10	0.11	0.10	
Catheter Associated UTI ALL NHSM Reportable units	# of CA-UTIs # of Foley days x 1000	0.55	3	4		1												2
			5241	6601	539	382	317	354	368	454	365	316	310	317	400	485	4,508	
			0.57	0.61		2.62												
Hospital Onset C-Difficile Infection	# new cases + C-diff # of Patient Days x 10000	1.00	9	7	2									1			1	4
			42376	62789	5,800	4,769	4,702	4,534	5,032	5,039	4,962	5,073	4,934	4,735	4,626	5,466	59,672	
			2.12	1.11	3.45									2.112		1.829	0.670	
Hospital Onset MRSA Bacteremia	# of Pts with HA-MRSA Bac # of Patient Days x 1000	0.03		2														
			48568	68558	6,319	5,196	5,122	5,079	5,419	5,567	5,517	5,504	5,404	5,199	5,069	5,610	65,005	
				0.03														

INDICATOR	Definition	Target	CY20	CY21	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
SSI Rate, Class 1*	# of Class 1 Infections # of Class 1 surgeries x 100	0.14	3	2	0	0	0	0	0	0	0	0	1	0	0	0	1
			1,251	1,258	75	64	86	86	122	136	118	114	125	108	107	87	1,228
			0.24	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSI Rate, Class 2*	# of Class 2 Infections # of Class 2 surgeries x 100	0.15	5	4	0	1	0	0	1	0	1	0	0	0	0	0	3
			2,265	2,395	203	226	291	238	204	218	193	245	240	223	251	259	2,791
			0.22	0.17	0.00	0.44	0.00	0.00	0.49	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.11
C-section	# of Infections # of surgeries x 100	0.42	2	6	2	2	0	0	1	0	0	2	0	1	1	0	9
			1,226	1,185	90	101	116	100	100	124	100	94	80	69	92	81	1,147
			0.16	0.47	2.22	1.98	0.00	0.00	1.00	0.00	0.00	2.13	0.00	1.45	1.09	0.00	0.78
Pacer/AICD in Cardiac Cath Lab	# of Infections # of surgeries x 100	0.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			17	51	5	2	2	7	7	2	4	8	8	8	9	10	72
			5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Hips	# of Infections # of surgeries x 100	0.00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
			55	46	0	2	4	13	7	3	6	4	5	7	1	2	54
			0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	1.85
Total Knees	# of Infections # of surgeries x 100	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			36	11	0	0	0	1	0	0	0	1	0	0	0	2	4
			0.00	0.00	-	-	-	0.00	-	-	-	0.00	-	-	-	0.00	0.00
CMS VBP Colon SSI (rate)	# of Infections # of surgeries x 100	0.71	5	1	0	0	0	0	0	0	0	1	2	0	1	0	4
			145	126	10	13	22	14	17	11	12	18	11	10	16	11	170
			3.45	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	18.18	0.00	6.25	0.00	2.35
CMS VBP Abdominal Hysterectomies	# of Infections # of surgeries x 100	0.00	8	0	0	0	0	1	0	1	0	2	0	1	1	0	6
			176	187	8	9	21	20	26	20	12	13	17	14	15	17	192
			4.55	0.00	0.00	0.00	0.00	5.00	0.00	5.00	0.00	15.38	0.00	7.14	6.67	0.00	3.13

Zero Tolerance, Goal of Zero Infections and the Bundle Approach

The Infection Prevention and Control Program has adopted the philosophy of “Zero Tolerance and Goal of Zero” towards healthcare-associated infection. Zero tolerance refers to the ideology that we will work to eliminate every “preventable” healthcare-associated infection. To help achieve this goal, the hospital utilizes the “bundle” approach to help prevent device-related and surgical infections. A bundle is a group of interventions related to a disease process, that when grouped together, result in better outcomes than when implemented individually. Evidence based research has shown that a bundle approach can help to reduce infections.

Benchmarking

BHCS benchmarks infection surveillance numbers utilizing the NHSN (National Healthcare Safety Network, CDC) statistics. The Centers for Disease Control and Prevention provides the national standard measures for healthcare-acquired infections, and CMS requires facilities to utilize the NHSN as our tool for national healthcare data reporting.

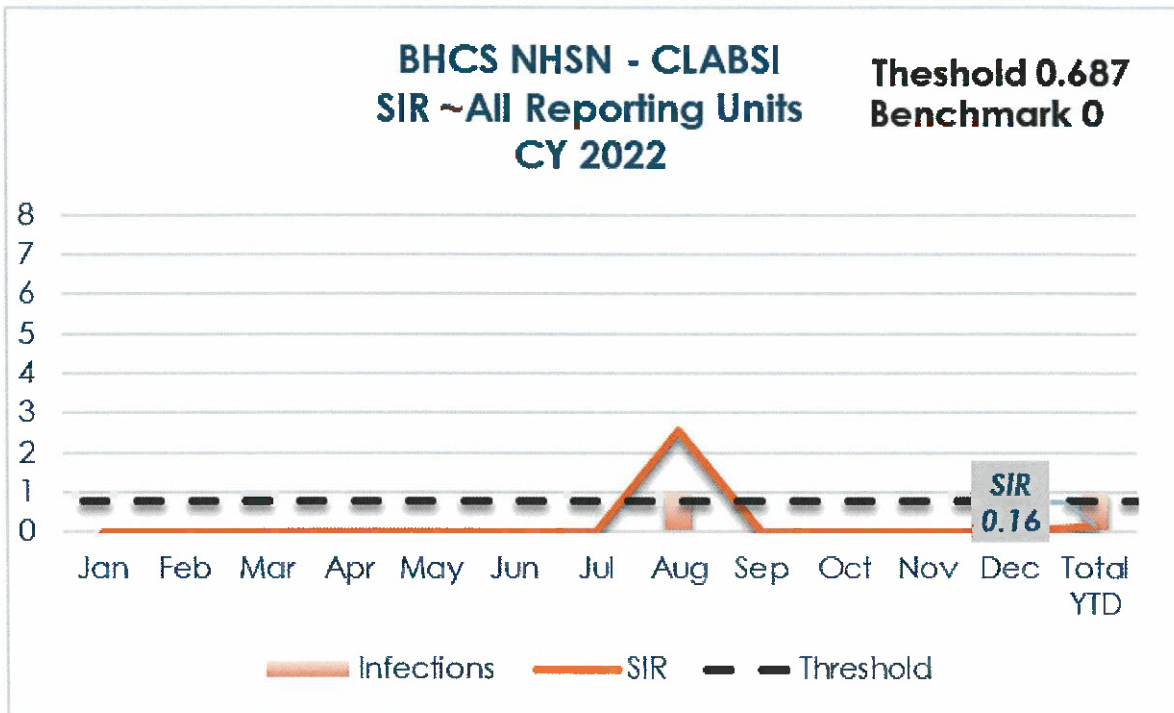
BHCS currently reports through the NHSN: CLABSI, CAUTI, surgical site infections in selected COLO and HYST procedures, lab identified C. difficile and MRSA bacteremia, influenza vaccination rates and employee COVID vaccination rates.

Device- Associated Infections

Central Line Associated Blood Stream Infections (CLABSI)

CLABSI CY2022

	Target	CY20	CY21	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	
ICU	0.73	4	3														
		2,548	3,716	319	231	205	179	189	270	212	172	156	195	241	253	2622	
		1.57	0.81														
3E	0.47		1								1					1	
		1,683	1,927	119	119	123	71	68	161	79	73	103	86	110	104	1216	
			0.52									13.70					0.82
3S		840	1,003	46	106	75	59	76	69	57	54	69	62	51	126	850	
4EAST PCU	0.87	1	2			1										1	
		1,860	2,071	213	170	173	152	219	229	145	90	190	175	185	183	2124	
		0.54	0.97			5.78											0.47
4V		286	835	115	92	68	100	86	147	93	73	131	76	79	128	1188	
4NT		349	471	50	98	112	78	61	82	59	58	84	102	49	69	902	
							1										1
							12.82										1.11
NICU		69	183	3	4				5	3		3		7	4	29	
PICU																	
3V PEDS		26	1				1					1	2			4	
ICUO		376	745	108	30					8	3	44	4			197	
BHCS	0.49	5	6			1	1				1					3	
		8,039	10,952	973	850	756	640	699	963	656	523	781	702	722	867	9,132	
		0.62	0.55			1.32	1.56					1.91					0.33



Analysis:

HAI CLABSI infection rate for 2022 was 0.33, which was a decreased from 0.50 in 2021.

BHCS had 3 CLABSIs in 2022 (2 were on non NHSN reportable units) which was the same as 2021. We had one CLABSI on our medical unit which is no change from 2021. We continue to maintain action plans for ongoing efforts to reduce infection through staff awareness, education and meetings to identify any opportunities for improved care.

Our SIR for 2022 was 0.16. which is less than our SIR for 2021 which was 0.43 per NHSN.

Decrease in infection rate from 2022 to 2021 was 34%.

Decreased in overall central line days from 2022 to 2021 was 17%

Decreased in SIR rate from 2020 to 2021 was 63%

NICU

The CLABSI rate in the NICU population for 2022 was 0 per 1000 central line days.

Pediatrics

The CLABSI rate in the pediatric population was 0 per 1000 central line days for 2022.

Action Plans

- Continue to monitor central lines for necessity, educate nursing staff and the medical staff, when appropriate.
- Improved awareness and communication which included bedside shift report.

- Daily rounding includes ongoing interventions, central line necessity, education and central line bundle compliance during surveillance.
- Daily central line dressing assessment
- Daily chlorhexidine bathing for all inpatients that have a central line.
- Continue surveillance and enforcement of the central line bundle compliance during rounding.
- Partnership with Clinical Education for collaboration of rounding and just in time education
- Always strive for Zero Infection
- Point Prevalence studies completed with Device Company with feedback provided to stake holders and leadership.
- CLABSI mandatory education provided to all staff via Healthstream on annual basis and for all new hires
- Education provided regarding CLABSI bundles and importance of following.
- Intense analysis of every CLABSI within two weeks of identification of infection, including the nurse manager, CNO and Regional Director of Quality, Risk and Epidemiology. Opportunities for improvement are identified and shared at Patient Safety Quality Committee meetings.
- Update Fast Facts for CLABSI Prevention as needed and distributed to NM for sharing at huddles.
- Updated and continue to utilize Vascular Access Guidelines for nurses to assist with appropriate line placement and type of therapy each line is best.
- Review of all CLABSI prevention plan and discussion with NM to be sure that staff are adhering to best practices:
 - Buy in from PCP and consultants
 - Continue to assess need for central line and possibly change to midline or peripheral line
 - MDR need to include lines and need for them
 - Share data with nursing staff: in the lounges, med room, etc. review CLABSI and reason, document number of central lines every day on the unit, review number of days each patient has central line, list reason for central line. List on white board.
 - CMO discusses with primary care physician and other consultants the need for a central line and possibly changing to midline or peripheral line.
 - Ensure Curo caps on all ports
 - Continue to remove central line prior to leaving the ICU if no longer needed.
 - Stop review sheet prior to transfer to another nursing unit (ICU to floor)
 - Monitor the number of midline insertions and PICC line insertions on daily basis.

9-15-22



Adult Vascular Access Guidelines

*Assess your patient for Type of Line needed

Collaborate with PICC team and physician to determine if the patient can have a Midline /Extended Dwell instead of a Central Line/PICC line.

Peripheral IV

- IV fluids
- IV medications

Midline/Extended Dwell

- Poor venous access
- Medication therapy lasting less than 29 days

Central Line/PICC

- TPN
- Vasopressor, if needed for > 8 hours
- Medication therapy for > 29 days of therapy

Central Line/PICC **must** be used for **red** medications

PIV, EXTENDED DWELL and MIDLINES may be used for **yellow** medications

- If emergent
- Only if necessary
- For short term use (<72 hours)
- When placed in a large vein at a proximal site (avoid small veins, the ACF, hand or wrist)
- Avoid extravasation

NONCYTOTOXIC VESICANT/IRRITANT LIST

Red List

Calcium chloride*	Dextrose concentration \geq 10%
Mannitol*	Sodium chloride \geq 3% - when $>30\text{mL/hr}$
Vasopressin*	TPN when $>1100\text{mOsm/L}$

Yellow List

Closely monitor the IV site during medication administration/infusion

Amiodarone - concentrations \leq 2 mg/mL for infusions >1 hour	Etomidate
Arginine	Nicardipine - must change site Q12H
Dantrolene	Norepinephrine
Dextrose Concentration $<10\%$	Phenylephrine
Diazepam	Potassium Chloride Maximum rate 10mEq/hr
Dobutamine	Promethazine
Dopamine	Sodium Chloride $> 3\%$ when rate $< 30 \text{ mL/hr}$
Epinephrine	TPN / PPN when $< 1100\text{mOsm/L}$
Esmolol	

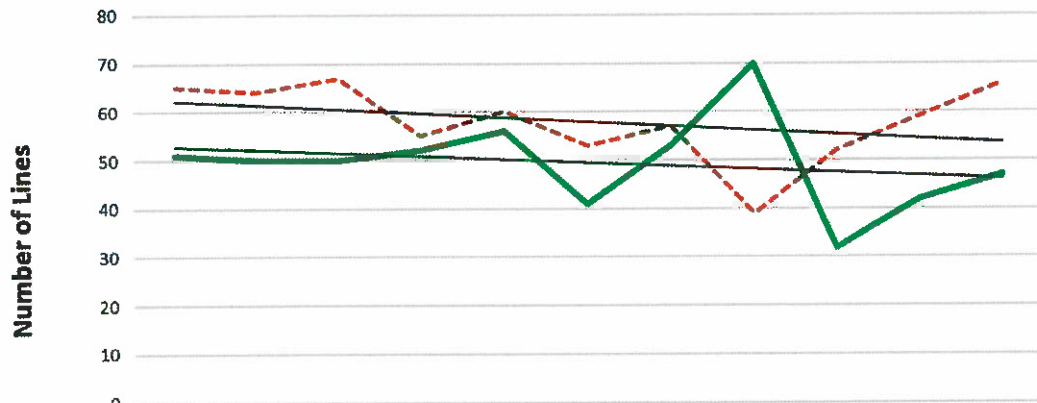
*central line preferred

References: Development of an Evidence-based List of Noncytotoxic Vesicant Medications and Solutions. Infusion Nurses Society 2017. J Infus Nurs. Jan/Feb 2017.

IV Administration of Vesicants/Irritants				
Drug	PICC/Central Line	Midline	PIV/Extended Dwell	Comments
Acyclovir	✓	✓	✓	Irritant at > 7mg/mL
Aminophylline	✓	✓	✓	Avoid extravasation
Amiodarone	✓	A,B	A	Peripheral: use concentrations ≤2 mg/mL for infusions >1 hour Administer with in-line filter
Arginine	✓	A	A	Vesicant-like properties
Calcium chloride	✓	✓	X	Central or deep vein preferred
Calcium gluconate	✓	✓	✓	
Chlorothalidate	✓	✓	✓	Avoid extravasation
Dantrolene	✓	A	A	Large bore or central line preferred
Dextrose	✓	A	A, B	≥10% central only for thrombosis concerns May use 2.5% & 50% in emergent situations
Diazepam	✓	✓	A	Do not administer through small veins, dorsum of hand or wrist.
Digoxin	✓	✓	✓	Avoid extravasation
Dobutamine	✓	✓	A	If central line is not available, may administer through a peripheral IV catheter placed in a large vein at a proximal site (avoid ACF, hand, wrist) for a short duration (<72 hours)
Dopamine	✓	A	A	If central line is not available, may administer through a peripheral IV catheter placed in a large vein at a proximal site (avoid ACF, hand, wrist) for a short duration (<72 hours)
Epinephrine	✓	A	A	If central line is not available, may administer through a peripheral IV catheter placed in a large vein at a proximal site (avoid ACF, hand, wrist) for a short duration (<72 hours)
Esmolol	✓	✓	A	Do not administer through small veins, dorsum of hand or wrist.
Etomidate	✓	✓	A	Administer IV push over 30 to 60 seconds. Solution is highly irritating; avoid administration into small vessels; in some cases, preadministration of lidocaine may be considered
Mannitol	✓	A,B	B	Concentrations >5% are vesicants
Nafcillin	✓	✓	✓	Avoid extravasation
Nicardipine	✓	✓	A	If peripheral, change site Q12H
Norepinephrine	✓	A,B	A	If central line is not available, may administer through a peripheral IV catheter placed in a large vein at a proximal site (avoid ACF, hand, wrist) for a short duration (<72 hours); ≥ 16 mg central line only
Pentamidine	✓	✓	✓	Vesicant-like properties
Phenobarbital	✓	✓	✓	Avoid extravasation
Phenylephrine	✓	A	A	If central line is not available, may administer through a peripheral IV catheter placed in a large vein at a proximal site (avoid ACF, hand, wrist) for a short duration (<72 hours)
Potassium Chloride	✓	B	A	Peripheral: The maximum rate of administration is 10 mEq/hour. Central: 20 to 40 mEq per 100 mL at a maximum rate of 40 mEq/hour required and ECG monitoring
Promethazine	✓	✓	A	IM route preferred. Max concentration 25 mg/mL Max rate 25 mg/minute
Sodium Bicarbonate 8.4%	✓	✓	✓	Avoid extravasation
Sodium chloride >3%	✓	A,B	A,B	Peripheral: < 30 mL; Central line required when >30mL Vesicant-like properties >1%
TPN / PPN	✓	B	A, B	Peripheral: < 1100mOsm/L Central line required when >1100mOsm/L
Vancomycin	✓	✓	✓	Avoid extravasation
Vasopressin	✓	A	B	

Key	
A	Central line preferred; May use PIV or Extended Dwell if emergent; only if necessary or for short term use; Monitor site closely during medication administration/infusion
B	Dose/concentration/duration dependent

Midlines v PICCS CY2022



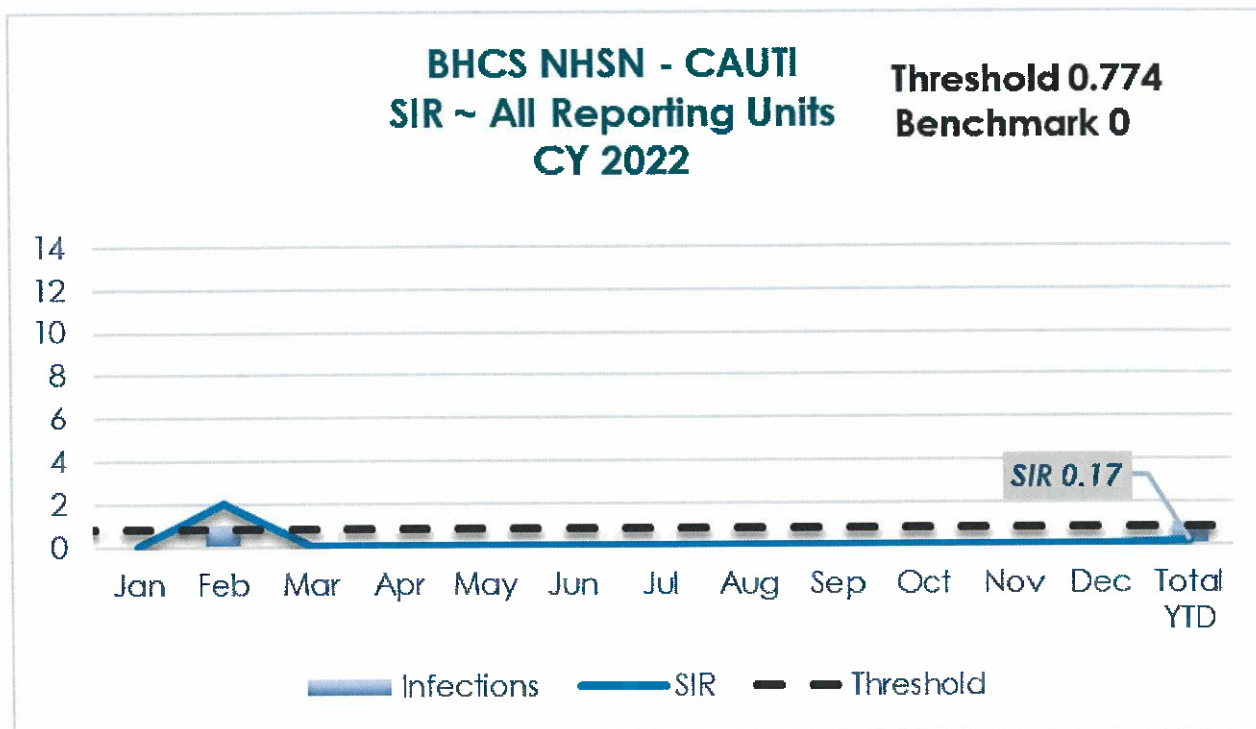
	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22
Midline	51	50	50	52	56	41	53	70	32	42	47
PICC	65	64	67	55	60	53	57	39	52	59	66

Midline PICC Linear (Midline) Linear (PICC)

Catheter Associated Urinary Tract Infections (CAUTI)

CAUTI CY2022

	Target Rate	CY20	CY21	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
ICU	0.53	2	2		1											1
		2,709	3,424	251	159	134	172	160	236	173	163	147	190	249	268	2302
		0.74	0.58		6.29											
SE	1.03	1	1													
		743	870	64	76	47	44	61	63	47	38	46	24	46	48	606
		1.35	1.15													
SS	0.76		1													
		1,345	1,188	83	82	36	109	103	95	95	58	68	92	72	123	1,076
			0.84													
4EAST PCU	1.58		2						1			1				2
		897	1,137	154	83	123	76	90	95	69	82	140	87	62	87	1,148
			1.76						10.53			7.14				
4W																
		286	337	53	45	39	29	44	60	45	40	21	8	33	47	464
4N	*****											1				1
		156	131	20	8	34	28	37	24	26	18	40	47	21	30	333
			-										25.00			
PICU																
		2	4		1	1							1			3
				-			-	-	-	-	-	-	-	-	-	-
3W PEDS																
					1							1				2
		-		-		-	-	-	-	-	-	-	-	-	-	
Mother r Baby																
		3070	674	57	51	55	57	55	65	58	55	55	43	57	51	659
ICUD																
		330	647	88	16						5	17	27	2		155
						-	-	-	-	-					-	-
BHCS	0.64	3	6		1				1			2				4
		9538	8412	770	524	529	515	550	638	518	471	545	494	540	654	6,748
		0.31	0.71		1.91				1.57			3.67				



Analysis:

HAI CAUTI infection rate for 2022 was 0.59, which was a decrease from 0.71 in 2021.

BHCS had 4 CAUTIs in 2022 (3 were on non NHSN reportable units) which is a decrease from 6 CAUTIs 2021. We had 1 CAUTI in our ICU for 2022 which is a decrease from 2021, when the ICU had 2 CAUTIs. We also had a decrease in urinary catheter days from 6601 to 4608. We instituted many action plans. Continued efforts to reduce infection are through staff awareness and education and meetings to identify any opportunities for improved care.

Our SIR for 2022 was 0.34, which was less than our SIR for 2021 which was 0.48 per NHSN.

Decrease in infection rate from 2021 to 2022 is 17%

Decrease in SIR rate from 2021 to 2022 is 29%.

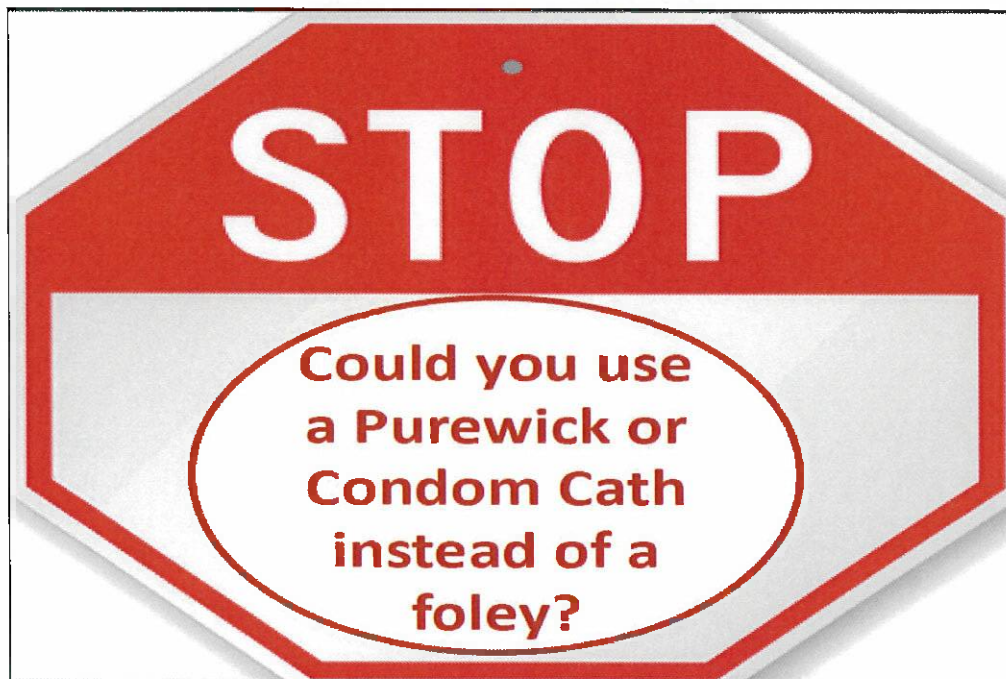
Decrease in urinary catheter days from CY2022 to CY2021 by 20%.

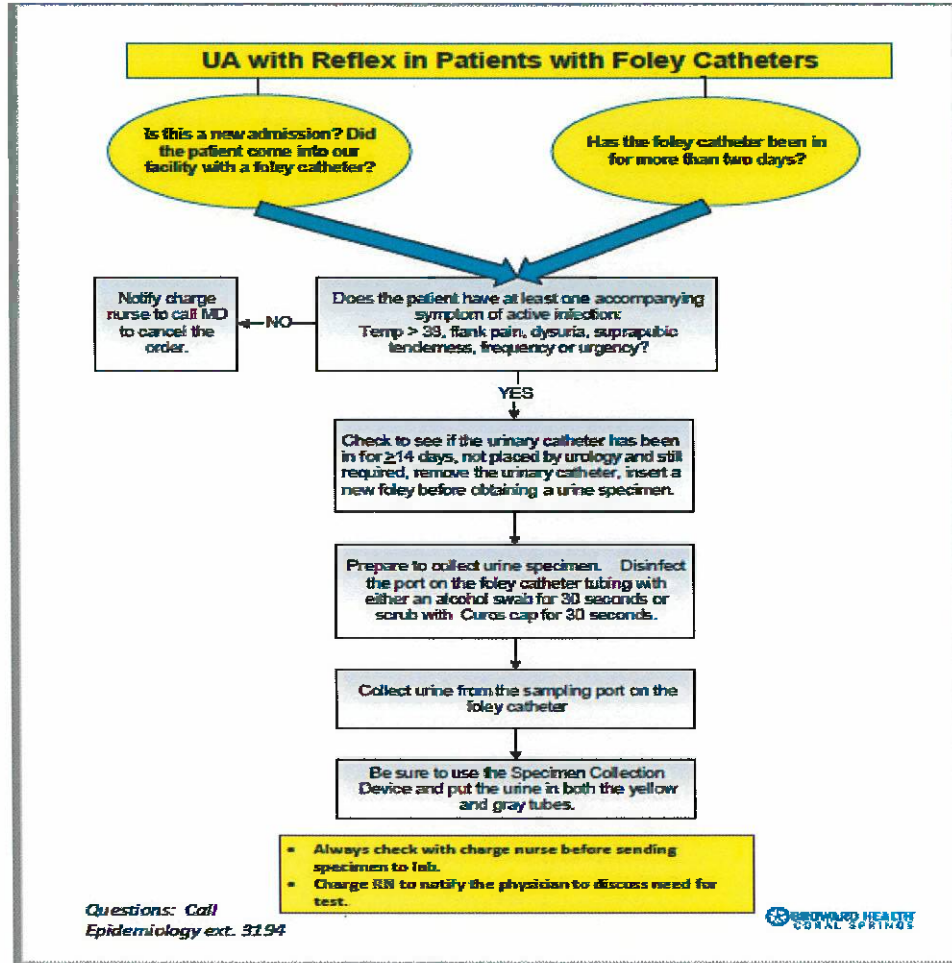
Action Plans

- Continue to monitor urinary catheter for necessity, educate nursing staff and the medical staff, when appropriate.
- Continue to utilize the HOUDINI protocol for indications for urinary catheter.
- Daily assessment of the urinary catheter included line necessity and discontinuation of the urinary catheter utilizing the HOUDINI protocol.
- Improved awareness and communication which includes bedside shift report.

- Daily rounding includes ongoing interventions, urinary catheter necessity, education and urinary catheter bundle compliance during surveillance.
- Continue surveillance and enforcement of the urinary catheter bundle compliance during rounding.
- Partnership with Clinical Education for collaboration of rounding and just in time education
- Always strive for Zero Infection
- Point Prevalence studies completed with Device Company with feedback to be provided to stake holders and leadership.
- CAUTI mandatory education provided to all staff via Healthstream on an annual basis and for all new hires
- Education provided regarding CAUTI bundles and importance of following.
- Intense analysis of every CAUTI within two weeks of identification of infection, including the nurse manager, CNO and Regional Director of Quality, Risk and Epidemiology. Opportunities for improvement are identified and shared at Patient Safety Quality Committee meetings.
- Updated Fast Facts for CAUTI Prevention, as needed and distributed to NM for sharing at huddles.
- Continue to stock urinary insertion kits to all 14 French, instead of 16 French. Will still have 16 French in Materials Management for specific patient needs.
- Review of all CAUTI prevention plan and discussion with NM to be sure that staff are adhering to best practices:
 - HOUDINI policy
 - Opportunities noted in the past with insertion.
 - Use smallest bore possible
 - Need protocol regarding retention
 - Buy in from nephrologist and urologist
 - Use closed system, if system opened, then replace catheter
 - Two nurse foley insertion, if available.
 - Continue to assess need for foley
 - MDR need to include lines and need for them
 - Share data with nursing staff: in the lounges, med room, etc. review CAUTI and reason, document number of Foleys every day on the unit, review number of days each patient has indwelling, list reason for foley. List on white board.
 - Need to have CMO discuss with Nephrologist, primary care physicians and other consultants the benefits of Purewick and daily weights to monitor I&O
 - Need specific reason to order urinalysis with reflex to culture: (new or worsening fever, rigors, altered mental status, malaise or lethargy with no identified cause, flank pain, CVA tenderness, acute hematuria, pelvic discomfort, and when foley removed: dysuria, urgent or frequent urination or suprapubic pain or tenderness.
 - Ensure that collection devices clean and for specific patient
 - Ensure that spigot wiped with alcohol after drainage each time
 - Will plan for automatic alerts for physician regarding removal at day 2, pending availability of IT.
 - Will plan for automatic alerts for physician regarding removal q5 days, pending availability of IT.
 - Will plan to include pop up question prior to urine analysis: does your patient have a follow catheter for greater than 14 days? If yes, then order to remove, reinsert and then obtain urinalysis with reflex, pending availability of IT.

- Will plan for count of foley catheter similar to vent days on IView, pending availability of IT.
 - Removal of foley prior to leaving the ICU as strict I&O will not occur on nursing unit and patients are not on Levophed, etc.
 - Stop review sheet prior to transfer to another nursing unit (ICU to floor)
-
- CAUTI prevention education provided to all nursing unit utilizing Wheel of Bugs, questions regarding CAUTI prevention and provided educational flyers.
 - Continue to have Material Management place Stop sign on foley kits prior to stocking on unit.
 - Utilization of UA with reflex in adult patients with foley catheter algorithm for use
 - Implementation of Urine specimen ticket to test on our two telemetry units that that the 3 CAUTIs. If successful, will roll out to all adult nursing units.
 - Memo from the CMO to Medical staff regarding when to appropriately test for urinary tract infection.







This is only for adult patients with a foley catheter or who had one d/c the day before.

Please check off prior to sending UA with reflex to urine culture in your patient with a foley catheter.

Does your patient have one or more of the following symptoms indicative of a urinary tract infection?

- Temp > than 100.4 or 38.0 Celsius
- Suprapubic tenderness
- CVA/flank pain

Please be sure that your patient has symptoms of a urinary tract infection prior to obtaining a urine specimen or unnecessary antibiotic treatment of asymptomatic bacteriuria may occur, which is contrary to our antimicrobial stewardship program and can be harmful to patients. Discuss with physician if you patient does not meet the above criteria before obtaining the urine specimen.

Primary nurse: _____

Print name of charge nurse, ANM, NM: _____

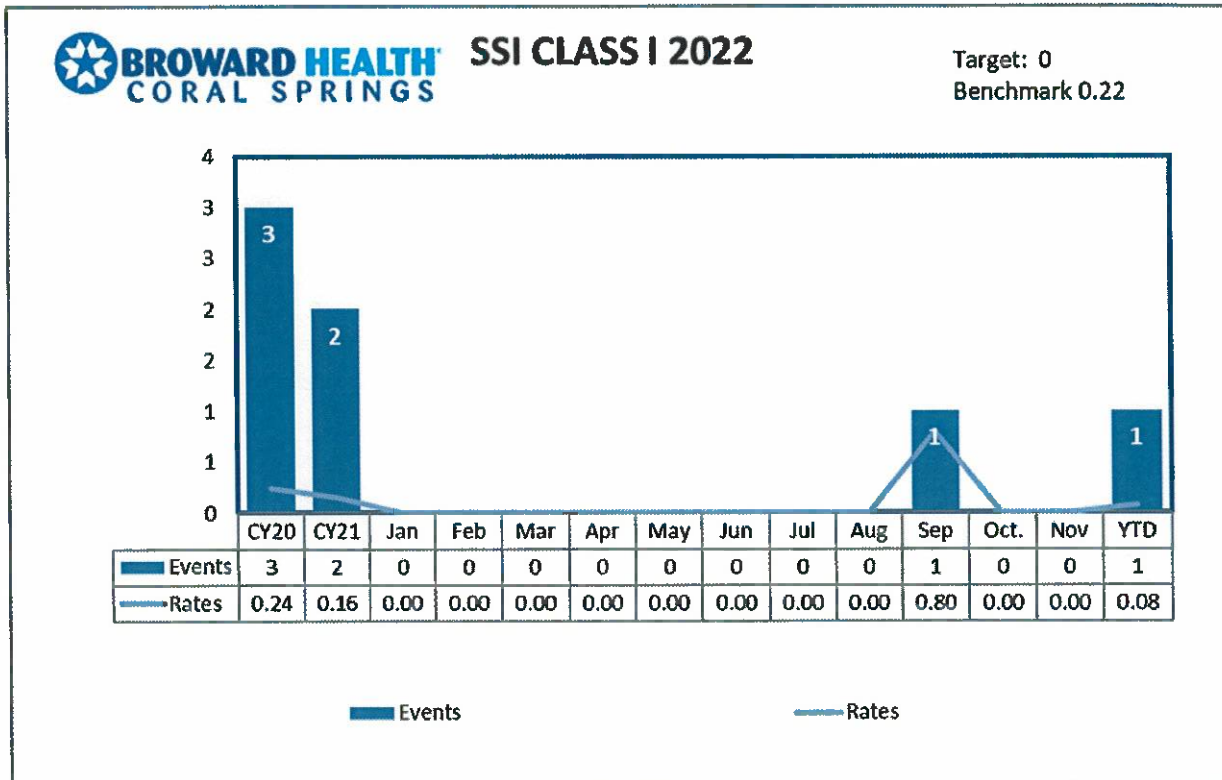
Thank you.

Please give to your Nurse Manager.

PATIENT STICKER

Surgical Infections Report

Surgical Site Infections Class I CY2022



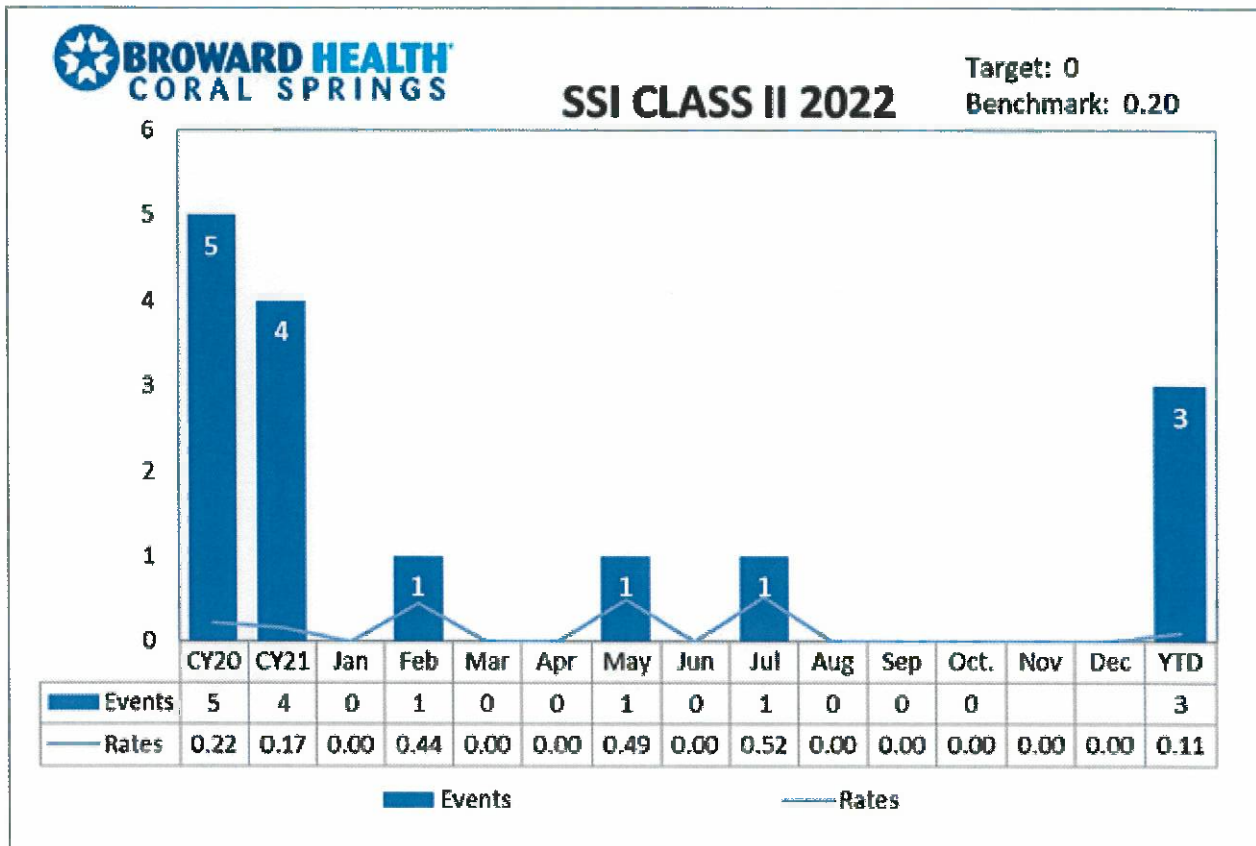
Analysis

Total Class I infections: 1/1,228 infections. Rate: 0.08%

Analysis

- Reduction in infection rate from CY2021 to CY2022 was 50%.
- A SIR rate is not provided by NHSN.

Surgical Site Infections II CY2022

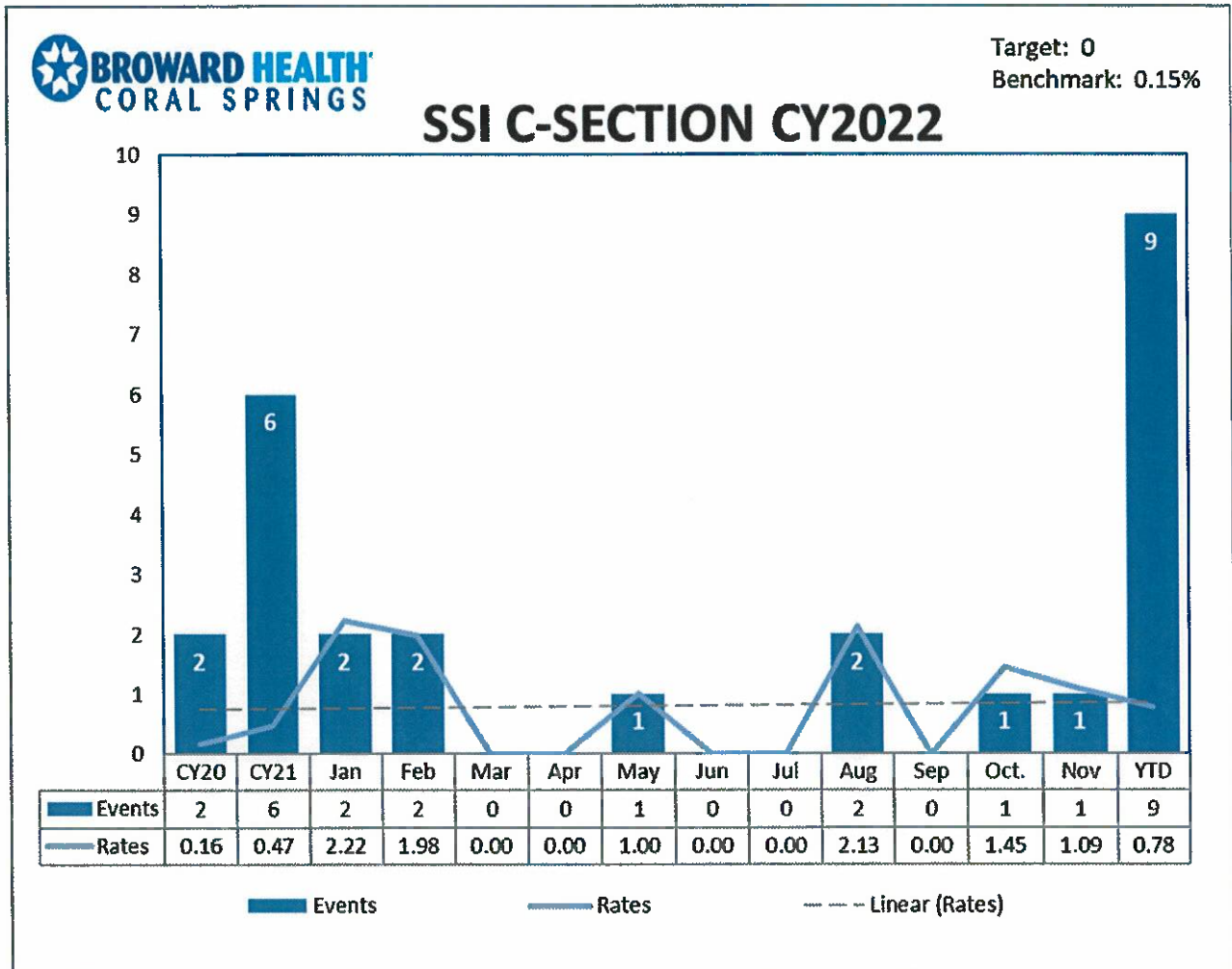


Analysis

Total Class II infections: 3/2,791. Rate: 0.11%

- Reduction in infection rate from CY2021 to CY2022 was 35%.
- A SIR rate is not provided by NHSN.

C-section Surgical Site Infections

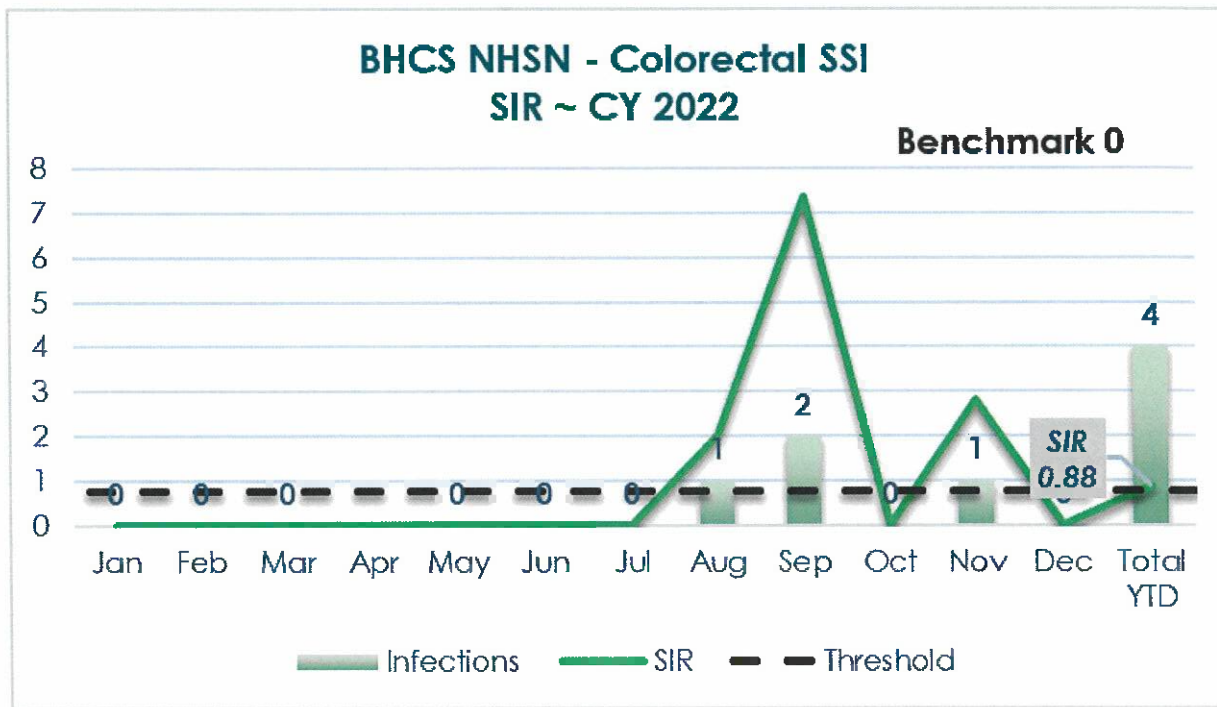


Analysis

C-Section Infections: 9/1,147. Rate of 0.78

- Increase in infection rate from CY2021 to CY2022 was 66%.
- A SIR rate is not provided by NHSN.

Colon Surgical Site Infection: 4/170. Rate of 2.35.



Analysis

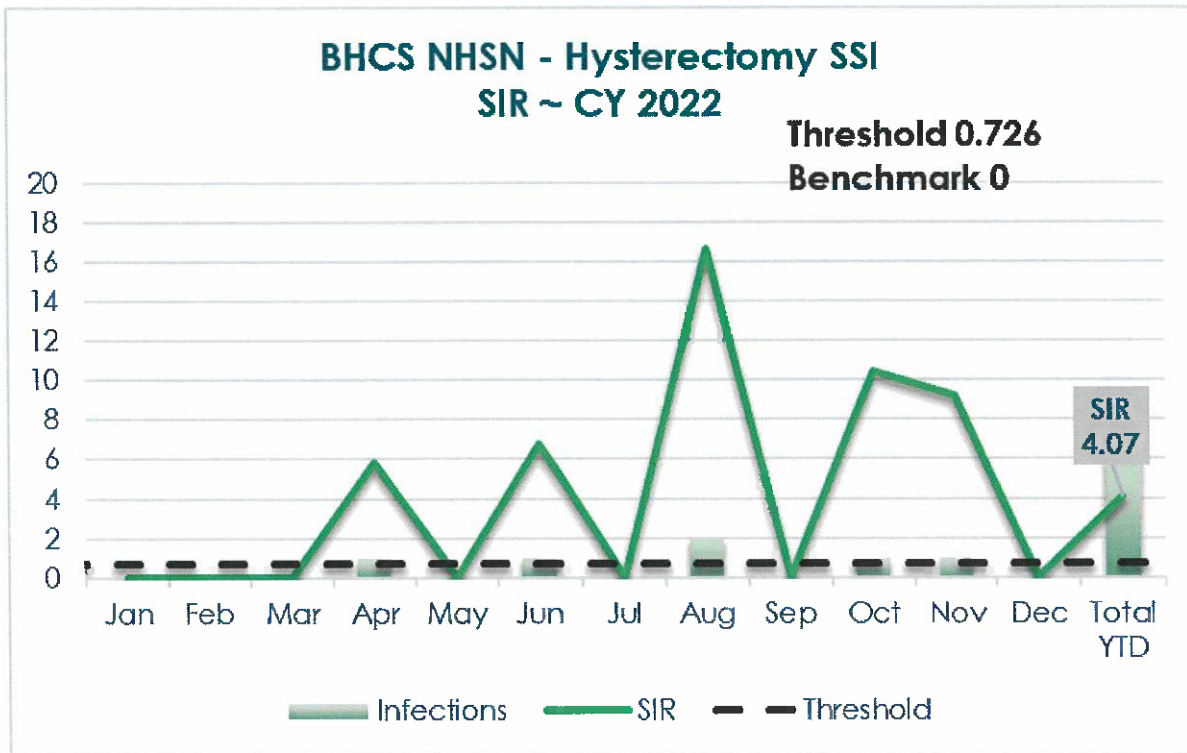
Increase in infection rate from 2021 to 2022 was 1.97%

Increase in SIR rate from 2021 to 2022 was 184%

For CY2022, the colon surgical site infection rate was 2.35%. This number represents 4 infections out of 170 colon surgical procedures.

The NHSN SIR for CY2022 was 0.88 which is an increase from 0.31 in CY2021. The SIR is below 1, which indicated that there were less infections identified than predicated based on the NHSN definition. This is a standardized infection ratio which is risk adjusted based on national data.

Hysterectomy Surgical Site Infection: 6/192. Rate 3.13.



Analysis

Increase in infection rate from 2021 to 2022 as there were no infections in 2021.

Increase in SIR rate from 2021 to 2022 as there were no infections in 2021.

For CY2022, the hysterectomy surgical site infection rate was 3.13%. This number represents 6 infections out of 192 hysterectomy surgical procedures.

The NHSN SIR for CY2022 was 4.54 which is an increase from 0.00 in CY2021. The SIR is above 1, which indicated that there were more infections identified than predicated based on the NHSN definition. This is a standardized infection ratio which is risk adjusted based on national data.

There were no SSIs related to total hip or total knee procedures.

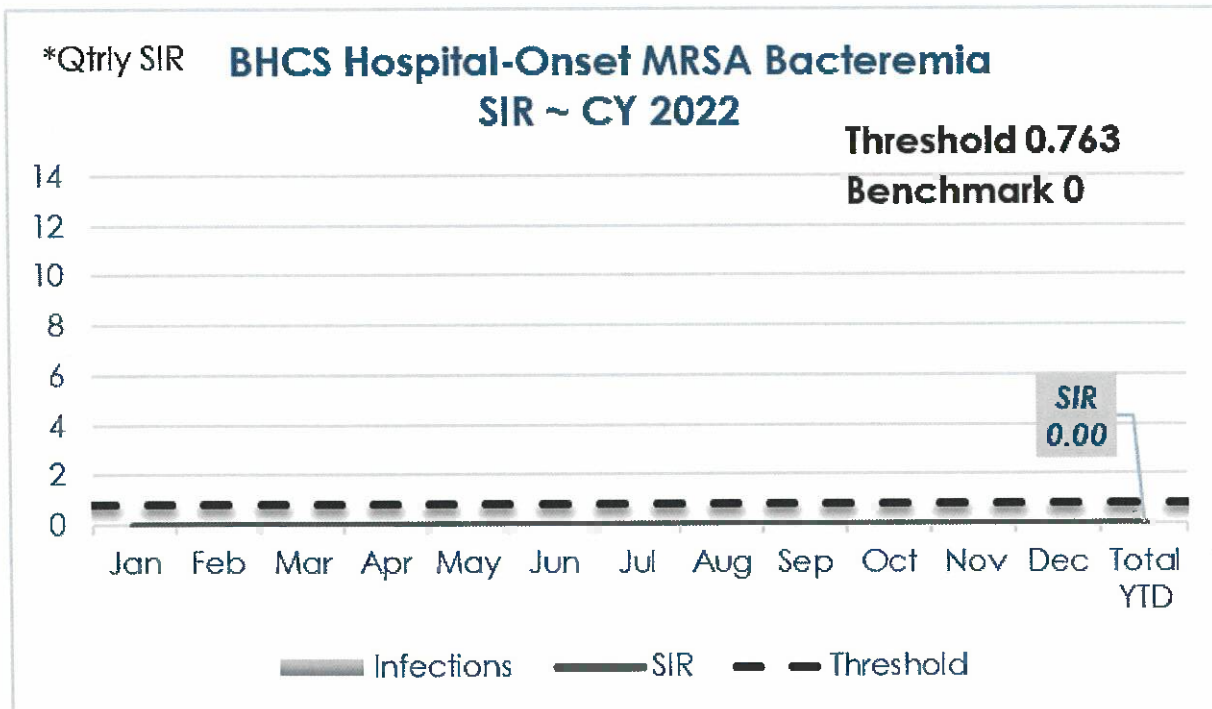
Action Plans for All Surgical Site Infections

- Continue to monitor all class I, II, colon, hysterectomy and C-section surgical procedures for development of surgical site infection. In addition, total knee and total hip surgical procedures are also monitored. This is for standardization of internal reporting mandated by Broward Health.
- Continue to report surgical infections to Patient Safety and Quality Council Committee meeting, Department of Surgery Committee meeting and Infection Control Committee meeting.
- Ongoing education of surgical staff on proper wound classification.
- Continue to review wound classification for accuracy.
- BHCS utilizes all evidence-based guidelines for best practices.
- Preoperative education prior to surgery is provided to all patients regarding the importance of preoperative bathing with either soap or water or an antiseptic which is to be completed at home the night before surgery and the morning of surgery before coming to the hospital.
- CHG foam is provided to all patients that attend preoperative education classes. This information was communicated to the medical staff.
- Meetings with Surgical Services Director, Nurse Manager of the Operating and Nurse Manager of Surgical Unit for identification of opportunities of improvement with review of every surgical site infection to ensure that all surgical site infection prevention bundles are implemented.
- Re-establishment of Surgical Site Prevention meeting with gap analysis. Meeting held with key stake holders including frontline staff of the OR.
- Continue to perform surveillance to identify all surgical site infections.
- Continue rounds in Surgical Services Department, including sterile processing department.
- Ensure staff are utilizing additional medical equipment to assist with cleaning and disinfection, which included a borescope, lighted magnifiers, a new case cart system.
- Additional education was provided by DaVinci
- Rounding in GI suite, radiology and cardiology departments to ensure that high level disinfection processes are followed.

- Meetings held with Medical Director of Infection Control and with Chairman of the Department of Surgery to review every surgical site infection to identify opportunities for improvement.
- Meetings held, if needed, with Chairman of OB/GYN to identify opportunities for improvement specifically due to the increased number of hysterectomy infections.
- Meetings held, if needed, with Chairman of Surgery to identify opportunities for improvement specifically due to the increased number of colon infections.
- Ensure evidence-based practices are being utilized by adhering to AAMI and AORN updated guidelines.
- Ensure adherence to BH Hand Hygiene Plan.

Multi-drug Resistant Organisms (MDRO) and C. Difficile Infections

MDRO Infections



BHCS Tracks and trends all Resistant Organisms (i.e. MRSA, VRE, CRE, and ESBL) cultured from patients to determine if they are community acquired versus hospital acquired. We also track and trend all MRSA bacteremia as per the NHSN guidelines.

Analysis

Hospital-onset MRSA Bacteremia rate for 2022 is 0, which is less than 2021 which was 0.03.

Our SIR for 2022 was 0.00, which is below 1, less than what was expected per NHSN. This is a standardized infection ratio which is risk adjusted based on national data.

Analysis

HAI MRSA Bacteremia rate was 0.00, which was a decrease from 0.03 in 2021.

Our SIR for 2022 was 0.00 which is a decrease from 0.7 in 2021. We did not have any MRSA bacteremia in the hospital for the entire year

Decrease in infection rate from 2021 to 2022 is 100%.

Increase in patient days from 2021 to 2022 is 3%

Decrease in SIR rate from 2021 to 2022 is 100%.

For CY2022, our infection rate for organisms that were culture positive for MDRO was 0.02%. This number represents 1 infection out of 64,997 patient days.

For CY2022, our infection rate for MRSA Bacteremia was 0.0%. For CY2021, our infection rate for MRSA Bacteremia was 0.03%. This number represented 2 infections out of 62,841 patient days.

Candida auris

HAI C. auris rate for CY 2021 was 0.05 which is the first time that BHCS had an infection with C. auris. In addition, a community-acquired C. auris was also identified for a rate of 0.02.

In CY2022, we had 4 HAI infections, for a rate of 0.06 and 2 community-acquired C. auris for a rate of 0.03.

Numerous initiatives were implemented which continued through 2022:

- Notification of NM and ICU/CCU team during rounding. Patient immediately placed on enhanced contact isolation.
- 11/16: implemented additional enhanced in room cleaning. Staff in ICU/CCU to only use orange (bleach) wipes for all touch points both in the patient room and outside in the general nursing areas
- UV disinfection after cleaning and disinfection with Virasept (sporicidal).
- 11/30: removal of all purple wipes from ICU/CCU. EVS to perform UV disinfection for every ICU/CCU discharge and email report to epidemiology.
- Respiratory therapist to wipe down the ventilator/BiPAP machines once per shift during use in the patient room, following the manufactures instruction for cleaning on the specific machines

- During ICU/CCU huddles/staff meetings with respiratory staff and nursing, manager will reinforce the importance of hand hygiene, not gloving use outside of the patient room and proper donning and doffing of PPE
- Emails sent to EVS manager with CNO and COO on all communication email
- Challenges identified with UV disinfection. Meeting held with CNO, COO and EVS manager regarding PLC. PLC will look to identify on tracking board.
- 12/15: tracking identification of UV disinfection on spreadsheet and shared with team. Cleaning and disinfection extremely important to perform with Virasept.
- PPS recommended by DOH.
- 12/27/21: PPS screening performed.
- 1/12/22: PPS all negative.
- DOH recommended one more time (if possible); however, discussion held regarding COVID surge, time constraints on ICU/CCU staff and epidemiology. PPS not repeated.

CY2022

- 2/4: identification in sputum. Notified DOH.
- 2/14: patient transferred to telemetry unit. Epidemiology rounding on telemetry regarding C. auris, enhanced precautions, all equipment in patient room. Education provided to staff with handouts.
- 2/14: Additional door signage created for the patient room for visitors, staff and EVS.
- 2/14: Discussion with CNO & DON regarding terminal cleaning, notification of nursing supervisors, and PLC continuing to work on blocking room while patient is still in house. Added information on nursing supervisor report and to remain on report until patients discharged.
- 2/15: Discussion and follow up email with ICU/CCU NM: continue to only use orange (bleach) wipes, include respiratory therapist and have them wipe down their equipment (vent/BiPAP) once per shift, reinforce importance of hand hygiene, PPE.
- Patient Safety Quality Committee: discussion of C. auris.
- Email to ancillary managers regarding C. auris to offer educational huddle. Informational flyer provided to managers.
- 2/15: Epidemiologist rounding with EVS manager to list all medical devices and equipment and identify who is responsible for cleaning and disinfecting. Spreadsheet completed and email sent to ICU/CCU leadership. EVS to clean and disinfect unit daily. Recommendations made to declutter unit.
- 2/16: black light validation completed by epidemiologist. 34% and then 55% on second room. Education was provided to EVS with first results and with second result.
- Email sent re black light validation with recommendation for education and competency.
- Ensure that all disposable left in room prior to terminal cleaning will be discarded.
- Email sent to Rehab and Radiology regarding C. auris, copy of slide, and reinforce of PPE. Requested to attend staff meeting/huddle.
- Requested disposable toilet brush for ICU/CCU, being done only for enhanced contact isolation rooms
- Discharge terminal cleaning from any C. auris patient will include discarding of all gloves boxes in the room.
- NM telemetry unit: notification of all charge nurses the checklist for C. auris patient.
- 2/21: PPS screening performed.
- Continue rounding and observing staff with PPE: gown and glove use
- 2/21: epidemiologist identification that Virasept was not being used according to the IFUs. (being diluted). Spoke with EVS director on 2/21 to implement correct usage.
- Shared information regarding C. auris with VP Quality the infection control measures put into place and documents emailed.

- 2/22: implementation of EVS new measures: after cleaning and disinfection, following by UV disinfection, room to remain closed with large post-it across door in order to prevent staff from entering clean room.
- 2/25: leadership approval for DOH to do ICAR.
- 2/28: PPS results with identification of two more patients.
- 3/1: discussion with ID physician in order to notify patients regarding positive screening results. Once identified, patient to remain on enhanced isolation, even upon return to hospital as per hospital policy. All ICU/CCU patients placed on enhanced contact isolation. Case management aware.
- EVS obtained Clorox Healthcare Spore Defense Cleaner and can use in electrostatic sprayer. Contact time is 3 minutes for *C. auris* and 5 minutes for *C. diff* so education will be for 5 minutes contact wet time.
- 3/2: Dialysis unit was cleaned and electrostatic sprayed with Spore defense. Followed by ICU/CCU and all equipment.
- 3/2: power point presentation for nursing staff. Huddles performed on day and night shift. Power presentation slides left in both units in charge book for nurses to reference. Power point presentation also shared with intensivists.
- 3/8: stopped with enhanced contact isolation on all patients. Non-compliance noted.
- 3/9: Epidemiology presented *C. auris* presentation during Critical Care Committee meeting
- Epidemiology presented formal power point presentation all respiratory staff, both day and night shift.
- 3/14: PPS performed.
- 3/16: Epidemiology presented formal power point presentation all rehab staff, included PPE donning and doffing.
- 3/17: PPS results: all negative.
- *C. auris* presentation during Infection Control Committee meeting
- 3/28: PPS performed.
- 4/1: PPS results and one more patient identified. This patient was considered low risk, no medical devices and admitted from home. Short LOS and discharged prior to results. CMO notified and will call patient. Patient was identified to be in the ICU for less than 48 hours.
- 4/4: Conference with CNO, COO, DON, EVS Director, ICU/CCU NM regarding *C. auris* next steps
- Patient was also transferred to telemetry unit into a semi-private room. NM to work on transferring to another room and room was cleaned according to Infection Control measures.
- Scheduled meeting with FL DOH HAI MDRO Task Force to review all infection control measures and next steps.

On 5/3/22, meeting with Florida DOH HAI Task Force to discuss infection control measures and identification of *C. auris* in low risk patients in the community. At their request, I provided the power point presentation that I utilized when educating hospital staff and physicians regarding *C. auris*. I also attached my time line of infection control measures that were implemented with identification of our initial patients and continued with additional infection control measures as time went on. They stated that they wanted to share this information with the CDC as a success story and model example! Please remember that my power point presentation has pictures that were copied from the internet without references, etc. The HAI Task Force also asked permission to share my contact information with other epidemiologists in the state that may benefit from discussing their concerns/challenges with me.

Action Plans for All MDRO Infections

- Continue to implement hand hygiene, at the bedside, for all visitors to the NICU.
Implementation of permanent signs for outside of all NICU patient rooms.

- Continue to maintain NICU eye care, which includes documentation in the EMR and date and time on eye shield used during phototherapy.
- Continue of use of nonsterile gloves for all contact with NICU babies.
- Early identification of patients colonized or infected with resistant organisms or other infectious organisms and immediate transmission based isolation of these patients reduced and prevented further transmission.
- Daily surveillance of cultures from patients admitted with or developing infection.
- Individual patient positive MDRO results were entered into an ALERT data base system which is activated to display with subsequent patient visits. The ALERT screen enabled hospital staff to imitate transmission based precautions as indicated from the screen information.
- Daily monitoring of ED visit log, admission log, disease alert log and isolation log. These measures assist with identifying previously colonized or infected patients with resistant organisms to allow Epidemiologist to limit unprotected exposure to pathogens by taking immediate action with appropriate transmission based precautions.
- Focused isolation rounds to ensure strict adherence to all transmission based precautions.
- The CDC isolation precautions are uploaded to the general Broward Health intranet website as a resource for access for all staff.
- Education provided at New Hire Orientation with focus on transmission based precautions and patient to patient transmission.
- Participation in Antimicrobial Stewardship Program
- Enforcing strict hand washing with soap and water when exiting rooms with patients on Enhanced Contact Isolation
- Adherence to high touch surface cleaning with hypochlorite based solution for those patients that are on enhanced contact isolation precautions.
- Continue to monitor Transmissions-Based Precautions and Standard Precautions, Hand Hygiene education, MDRO admission alerts, and frequent communication between clinical and nursing departments and Epidemiology.
- Ongoing education to all staff regarding importance of hand hygiene.
- Adherence to BH Hand Hygiene Plan.
- Provide education during new hire orientation, staff meetings/huddles and during rounding.
- Implemented a recognition program to identify HCWs who perform hand hygiene by providing a business card with a life saver candy and a “thank you for being a life saver”.
- Provided education during Infection Prevention and Control Week.
- Education provided to all nursing unit utilizing Wheel of Bugs, questions regarding HAI and provided education flyers from CDC.
- Provided education during the month of November, which is C. difficile awareness month.

Healthcare Worker Risks

- Provide education during new hire orientation, staff meetings/huddles and during rounding with focus on disease transmission and prevention.

- Implemented a recognition program to identify HCWs who perform hand hygiene by providing a business card with a life saver candy and a “thank you for being a life saver”.
- Provided education during Infection Prevention and Control Week.
- Isolation Precautions compliance is monitored on a monthly basis by Epidemiology and presented at the Infection Control Committee meeting. Compliance with PPE is over 99%.
- In-services and education provided to individual departments during their staff meetings to include Environmental Services and Nutritional Services.
- All hospital staff and LIPs are required to comply with mandatory in-service education about the prevention of health care associated infections, multi-drug resistant organisms, and prevention strategies, at hire and annually thereafter.
- All nursing staff are required to complete education about prevention of central line associated blood stream infections, catheter associated urinary tract infections, and ventilator associated pneumonia, surgical site infections, and transmission of multidrug-resistant organisms.
- Education is provided to all patients and families who are infected or colonized with a multidrug-resistant organism about health care associated infection prevention strategies.
- Surveillance plan based on prioritized risk of transmission of diseases identified in our community and from the characteristics of the population served was developed and approved by the Infection Prevention and Control Committee.
- Surveillance plan is carried out by the Epidemiology Dept on an ongoing basis resulting in prevention of disease transmission to patients, hospital staff, LIPs, students, volunteers and visitors.
- Epidemiology identifies risks for acquisition and transmission of infectious agents on an ongoing basis (MDROs, C. difficile, TB, Influenza) and annual risk assessments.
- There is a high incidence of TB in Broward County which requires constant surveillance to identify suspect cases. This is included in the risk analysis of reported data as high risk and requires close monitoring to prevent transmission.
- Continue to actively track and trend the traffic of patients for any increase influx of patients and/or need to implement the Pandemic Plan.
- Epidemiology performed daily ongoing surveillance through the monitoring of ED logs, microbiology candidate reports and rounding helped identify influx of infectious patients.
- The ESSENCE reporting system that identifies syndromic trends through the ER is used to coordinate surveillance with the Broward County Department of Health.
- A database for TB reporting to the Health Dept. was utilized to maintain a record of communication.
- Early identification of patients colonized or infected with resistant organisms, TB, influenza or other infectious organisms and immediate transmission based isolation of these patients reduced and prevented further transmission.
- Individual patient positive MDRO results were entered into an ALERT data base system which is activated to display with subsequent patient visits. The ALERT screen enabled hospital staff to imitate transmission based precautions as indicated from the screen information.

- Increased surveillance, monitoring, tracking and trending of COVID-19 related infections for patients and staff.
- Increased rounding and on the spot education provided specifically based on the COVID-19 pandemic.

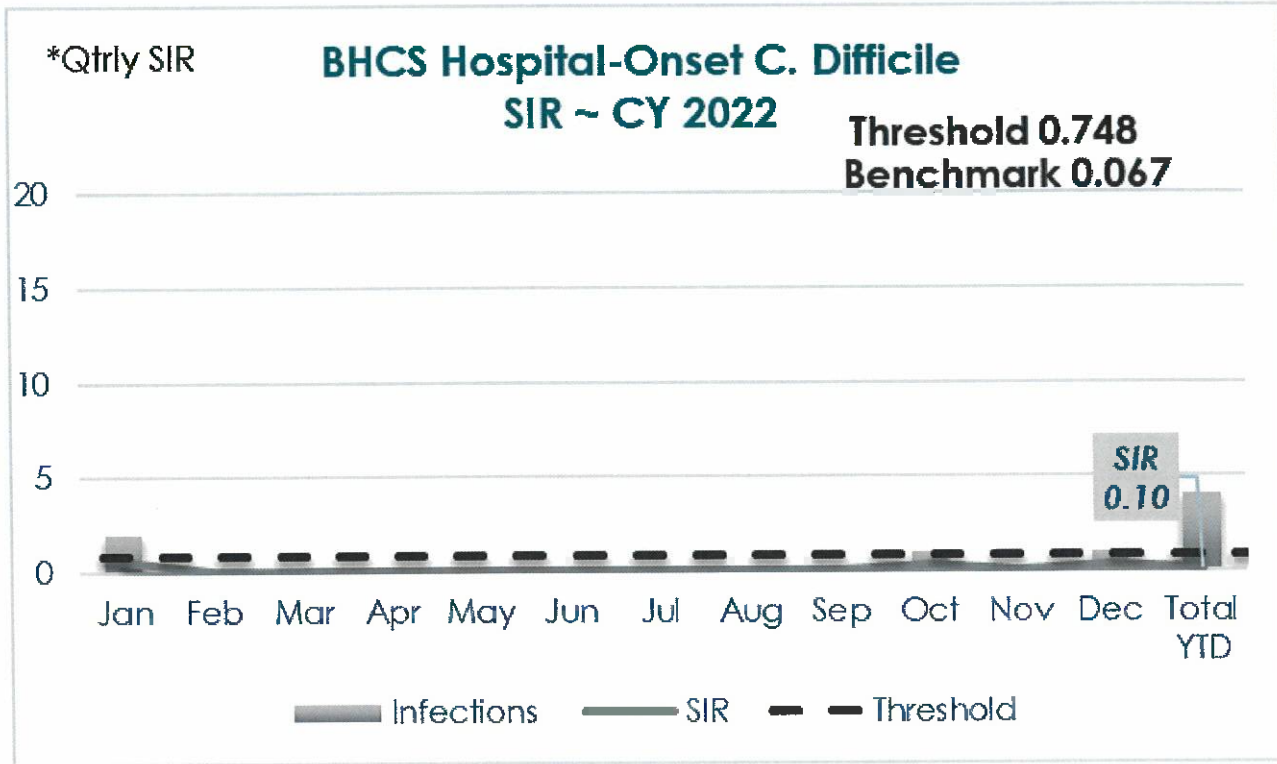
Isolation Precautions Compliance

Indicator	Definitions	CY21	ACTUAL PERFORMANCE												YTD	
			Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Avg	
Target																
Precaution supplies readily available outside patient room	# of Isolation boxes in use transmission based precautions	100%	4,196	474	217	195	165	311	298	297	328	292	246	281	384	3,488
			of	of	of	of	of	of	of	of	of	of	of	of	of	of
			4,196	474	217	195	165	311	298	297	328	292	246	281	384	3,488
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Precaution sign on door matches order	# of Precaution signs on door matches order transmission based precautions	100%	4,182	63	217	195	165	311	298	297	328	292	246	281	383	3,076
			of	of	of	of	of	of	of	of	of	of	of	of	of	of
			4,196	474	217	195	165	311	298	297	328	292	246	281	384	3,488
		99.7%	13.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	99.7%	88.2%	
Precaution label on front of chart	# of Precaution labels on front of charts transmission based precautions	100%	4,152	472	216	195	166	308	297	296	326	289	243	280	381	3,468
			of	of	of	of	of	of	of	of	of	of	of	of	of	of
			4,196	474	217	195	165	311	298	297	328	292	246	281	384	3,488
		99.0%	99.6%	99.5%	100.0%	100.0%	99.0%	99.7%	99.7%	99.4%	99.0%	98.8%	99.6%	99.2%	99.4%	
Appropriate PPE used by HCW	# of employee observations # of opportunities	100%	4,195	474	217	195	165	311	298	297	328	292	246	281	384	3,488
			of	of	of	of	of	of	of	of	of	of	of	of	of	of
			4,196	474	217	195	165	311	298	297	328	292	246	281	384	3,488
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Isolation Order in PowerChart	# observations # of opportunities	100%	4,196	474	217	195	165	311	298	297	328	292	246	281	384	3,488
			of	of	of	of	of	of	of	of	of	of	of	of	of	of
			4,196	474	217	195	165	311	298	297	328	292	246	281	384	3,488
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

The number of patients placed on isolation precautions have decreased. In CY2021, 4,196 patients were placed on isolation. In CY2022, that number has decreased to 3,488. Our patients on transmission based isolation precautions decreased by 17%.

On 10/12/22, mandatory mask mandate was lifted.

C. Difficile



Hospital Onset C. difficile is tracked as per the NHSN guidelines and tracked for rates as well as by unit to identify locations for potential issues with patient to patient transmission.

Analysis:

Hospital-onset C. difficile rate is based on 10,000 patient days.

Hospital acquired C. difficile case rate is 0.67 for CY2022 for a total of 4 infections/59,672 patient days.

This is a reduction from a rate of 1.51 for CY2021 for a total of 7 infections/62, 841 patient days.

Our SIR for 2022 was 0.10, which is below 1, less than what was expected per NHSN.

Reduction in infection rate from 2022 to 2021 is 56%.

Our improvements were noted in our ICU, 3 East, and our Pediatric unit. We decreased by one case in our ICU, there were none in 3 East and none in our Pediatric unit. We still had 1 C. diff infection in our ICU, 2 on 3 South, and 1 on 4 West.

We have continued efforts to reduce infection are through staff awareness, education, strict enforcement of enhanced contact precautions and hand-hygiene. Strict adherence to Enhanced Contact Precautions guidelines has resulted in 0 cases of patient to patient transmission.

Action Plans

- Question on ED triage regarding loose stools in order to identify a patient with a risk for C. difficile early on admission to limit risk of hospital transmission.
- Automatic C. diff order from the ED placed by the system, if the patient describes diarrhea in their assessment.
- Automatic discontinuation of C. diff order if specimen has not been collected in 24 hours to limit the identification of C. diff colonization.
- Indication required for Proton Pump Inhibitor order
- Indication required for antibiotic treatment and duration.
- Education with nursing staff regarding indications for C. diff.
- Partnership with pharmacy on the antimicrobial stewardship program.
- Intense analysis of every C. diff HAI is reviewed within two weeks of identification of infection, including the nurse manager, CNO, Regional Director of Quality, Risk and Epidemiology and Clinical Coordinator of Pharmacy. Opportunities for improvement are identified and shared at Patient Safety Quality Committee meetings.
- A pending C. diff report is automatically generated every morning. All pending orders for C. diff are reviewed and nurse managers are notified during the daily morning huddle report. Opportunities for intervention have been identified with the implementation of this report.
- C. diff education provided to all nursing unit utilizing Wheel of Bugs, questions regarding C. diff, provided updated algorithm, education flyers from CDC.
- Continued use of stop sign in clean supply room near specimen containers to alert staff.
- Continued use of C. diff education algorithm to
 - RN discussion with charge nurse, ANM/NM or Clinical Specialist prior to collection of stool specimen.
 - Use chain of command including charge nurse, ANM/NM/Epi when needed.
 - Daily huddle to include patients with diarrhea and number of days since admission.
- Creation of C. diff education for all of Broward Health through Healthstream.
- Implementation of Bristol Stool form
- Memo from the CMO to the Medical Staff regarding C. diff testing.
- Periodic updates for the BHCS CNO Newsletter with information regarding C. diff.
- Implementation of C. diff Ticket to Test form prior to collection of specimen:

Before obtaining a C. diff Specimen



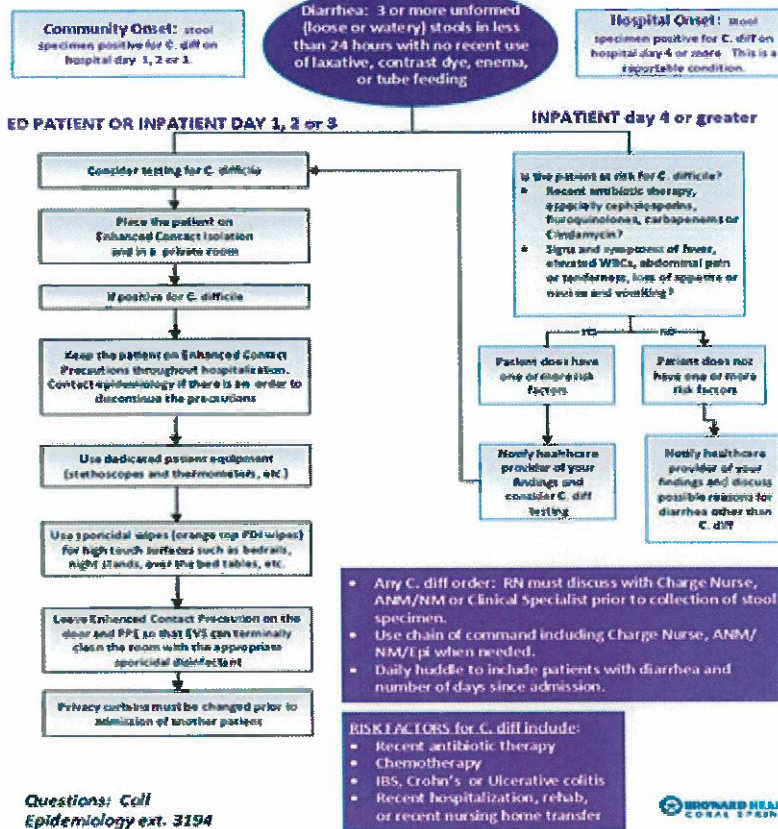
→ ***Does the patient have:***

- **↑WBC**
- **Abdominal Pain**
- **≥3 Loose Stools in a 24 hour period**
- **Risk Factors**

→ **RISK FACTORS for C. diff include:**

- **Recent antibiotic therapy**
- **Chemotherapy**
- **IBS, Crohn's or Ulcerative colitis**
- **Recent hospitalization, rehab, or recent nursing home transfer**

C. difficile Education



Questions: Call Epidemiology ext. 3194



Date: ____/____/____ Time: ____:____

Diarrhea on day 1 (Day of admission) or day 2.
(Note: Day 1 ends at midnight)

If diarrhea present on arrival, send stool specimen immediately.

C – DIFF TESTING CRITERIA (DAYS 3 +)

≥ 3 Documented Liquid Stools in Past 24 Hrs.

Pt. has not taken laxative/stool softener in last 48 hrs.

Pt. has fever (> 38.0°C / 100.4°F), abdominal pain or unexplained leukocytosis (WBC > 12,000).

If all criteria, Day 3+, are not checked, DO NOT send stool specimen to lab.








Patient Demographic Sticker

RN Collectors Name: _____

Charge Nurse: _____

Lab to Return Ticket-to-Test to Epidemiology

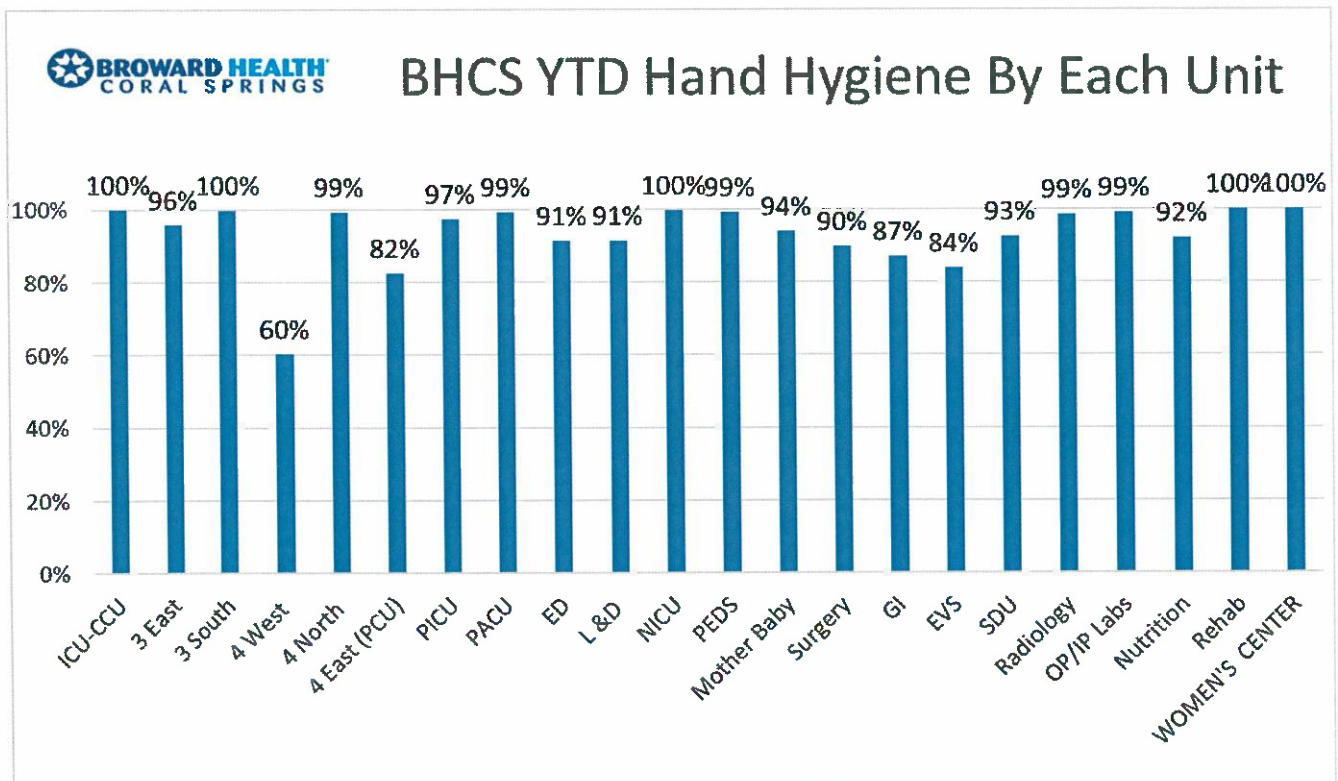
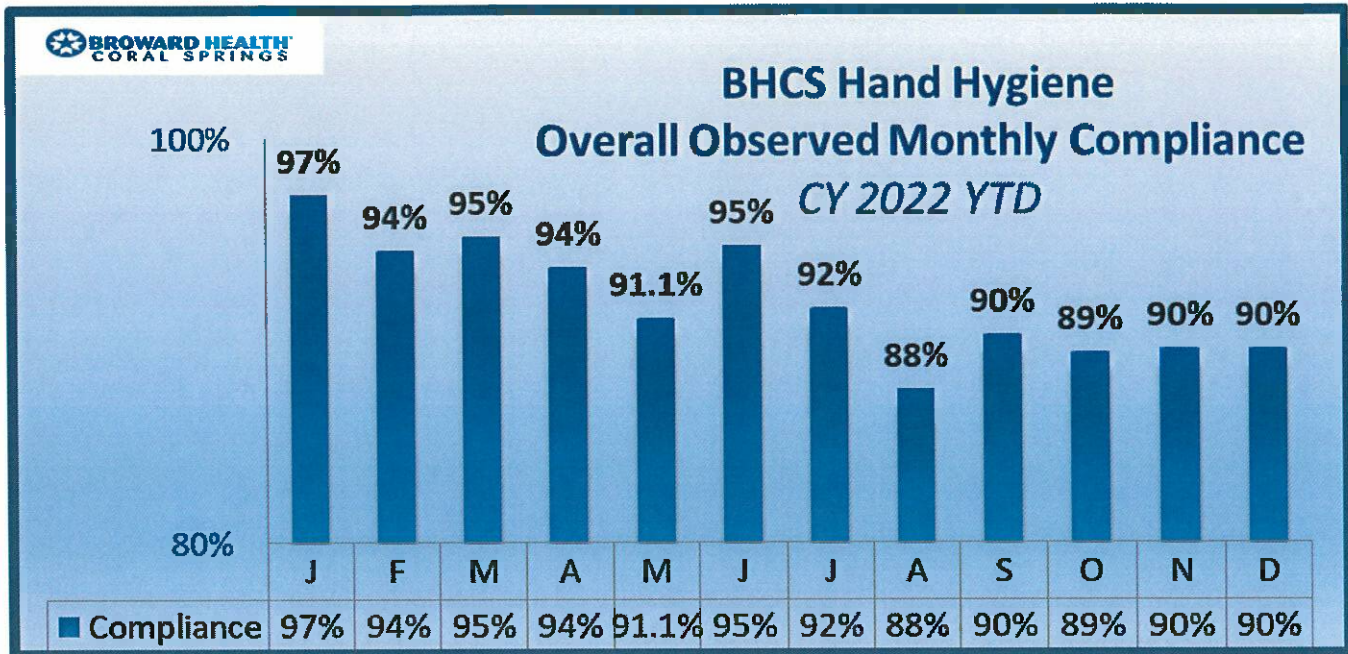
The Bristol Stool Form Scale

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on its surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges (passed easily)
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces ENTIRELY LIQUID

Distributed with the kind permission of Dr K. W. Heaton, formerly reader in Medicine at the University of Bristol. Reproduced as a service to the medical profession by Norgine Ltd. ©2017 Norgine group of companies.

UK:CDR0116/0853. Date of preparation: January 2018

Hand Hygiene Compliance



Communicable Diseases

The Clinical Specialist of Epidemiology reports all required reportable diseases to the Broward County Health Department. Sexually transmitted diseases comprise the predominance of the reporting: Gonorrhea and Chlamydia are the most frequently reported STDs.

Antibodies to Hepatitis C virus, and various gastrointestinal diseases such as Salmonella and Shigella were the top reported communicable diseases other than STDs.

Due to the COVID-19 pandemic, there has been unprecedented reporting to the Broward County Department of Health. Currently, all positive COVID-19 patients are reported to the Department of Health. In addition, all expirations are also reported. Of great importance to the Department of Health is the notification of patients who presented to the emergency department that came from assisted living facilities, skilled nursing homes, or other group settings.

There have been additional reporting requirements to the Broward County Department of Health which have included Monkeypox, RSV, and CRPA due to the increased numbers of these positive results in the nation and world.

Education

- Annual infection control education completed for all departments at BHCS via Healthstream. Attendance lists are on file in the Education office.
- Education provided at New Hire Orientation, during the height pandemic in-person was suspended.
- Formal in services as well as Just in Time education provided by Clinical Specialist of Epidemiology throughout CY2022 focused on Hand hygiene, multidrug resistant organisms, C. difficile, CAUTI bundle practices, and isolation precautions.
- Presentations at various hospital unit staff meetings conducted throughout the year.
- Epidemiology is available for consultation 24 hours a day, seven days a week.
- Support and enhance public relations through community interactions and educational programs on BHCS campus and at various community centers throughout the county.

Trials / New Products

- All products that are introduced to Broward Health Coral Springs must first go through the Value Analysis Committee for approval which includes updates on trials of the product to ensure proper function and safety.
- When indicated, presentations are first given to the Regional Epidemiologists prior to being presented at Value Analysis Committee.

Evaluation















The BHCS Infection Control Risk Assessment for CY2022 was presented to the Infection Control Committee for review, recommendations and approval.

- The annual appraisal CY2022 was presented for approval to the Infection Control Committee and will be presented to the Medical Executive Committee.
- The goals of the program are revised whenever risks significantly change or when assessment of the intervention failure is identified.
- The National Patient Safety Goals included in the Plan are also evaluated on an ongoing basis and effectiveness documented.
- The Infection Control Committee meets quarterly. The Committee structure includes the Committee chair, who is the Medical Director of the Infection Control Program, staff physicians, administration, nursing, pharmacy, lab, nutritional services, environmental services, surgery, safety, facilities and other departments as needed.
- PMR and other reports are indicated are provided to the Patient Safety Quality Council Committee meeting on a monthly basis.
- Continuing education opportunities are encouraged and financially supported by leadership on an ongoing basis.
- All areas surveyed for construction were found to be fully ICRA compliant during CY 2022 and if there were any deficiencies noted, these were corrected immediately or work was stopped.
- All of the prioritized risks were reviewed and evaluated. Goals of the IPC program will be revised for the coming calendar year based on the effectiveness of the interventions identified in the previous plan.
- Epidemiology monitored sterilization and high level disinfection processes within the hospital. Ongoing review of the monitoring reports submitted by all departments are also presented at the Environment of Care Committee meeting and Infection Control Committee meeting.
- The Clinical Specialist of Epidemiology maintains membership of national and local chapters of their professional organizations, to include APIC and AORN, in order to receive education and competency related to Epidemiology/ Infection Prevention and Control on an ongoing basis.

CY2022 Epidemiology Accomplishments

Education

- Nursing Grand Rounds on Health Associated Infections
- Need2Know Education Flyers created on the following topics

 N2K Glucometers	12/6/2022 1:17 PM	Microsoft Word 9...
 N2K RSV	10/26/2022 1:15 PM	Microsoft Word 9...
 N2K Preop Skin Cleansing 10-3-22	9/21/2022 2:02 PM	Microsoft Word 9...
 N2K CRE C. auris 9-2-22	9/2/2022 9:04 AM	Microsoft Word 9...
 N2K Monkeypox 8-1-22	8/8/2022 10:19 AM	Adobe Acrobat D...
 N2K Monkeypox and EVS	8/4/2022 9:20 AM	Microsoft PowerP...
 N2K Monkeypox 8-1-22	8/1/2022 12:55 PM	Microsoft Word 9...
 Flushing protocols for Midlines and Centra...	7/28/2022 3:16 PM	Microsoft Word 9...
 Bristol Stool chart for C. diff	7/21/2022 4:11 PM	Adobe Acrobat D...
 Bristol Stool chart for C. diff	7/21/2022 4:07 PM	Microsoft Word D...
 N2K Monkeypox	5/25/2022 8:38 AM	Adobe Acrobat D...
 N2K Monkeypox	5/25/2022 8:36 AM	Microsoft Word 9...
 N2K C. diff awareness	3/1/2022 11:34 AM	Microsoft Word 9...
 N2K Transmission-based Precautions 2-9-22	2/10/2022 3:41 PM	Microsoft Word 9...

- CDC education on NHSN definitions by Epidemiology nurse.
- Continuous education through webinars, attendance at meetings and online education
- Creation of Infection Control Resources Binder for all nursing and ancillary units,

Hand Hygiene 2022

- Continued to utilize a recognition program to identify HCWs who perform hand hygiene by providing a business card with a life saver candy and a “thank you for being a life saver”
- Stress importance at New Hire Orientation
- Just in time education provided whenever opportunity arises
- Participation in multiple committee meetings discussing the importance of hand hygiene.

- Monthly presentation of hand hygiene compliance at Patient Safety Quality Committee meeting.

CAUTI

- Created urine culture algorithm for adult catheterized patients for nursing to utilize.
- Trial on 2 adult nursing units with Ticket-to-Test and if successful, will roll out to entire adult units.
- Created memo for medical staff regarding urine culture orders in adult patients.
- Continued education on NHSN and surveillance definitions
- Rounding on maintenance and care related to urinary catheters as well as reminders for removal
- House wide collection of line days
- Striving for zero infections
- Pericare/foley care and CAUTI prevention provided to all staff
- Continue to ensure that all urinary catheters inserted with urimeters to prevent breaking closed system
- Point Prevalence rounding with Device Representative. Results presented to stake holders and leadership for evaluation
- Prevalence rounding by Epidemiology
- Intense drill down and analysis of every infection with key stake holders

CLABSI

- Updated Fast Facts for CLABSI Prevention for nursing
- Vascular Access Line Use Flyer for nursing education regarding lines
- Continue education on NHSN and surveillance definitions
- CHG bathing techniques were monitored and re-education was provided to all nursing staff
- Created mandatory online education was provided through Healthstream.
- Continued use of disinfectant caps on all IV tubing access ports on all adult inpatient nursing units
- Rounding on the unit questioning the necessity of lines and observing dressings has contributed to the overall decline in CLABSI rates
- CLABSI rate graphs provided monthly at Patient Safety Quality Council meetings.
- Discussion of CLABSI in at Patient Safety Quality Council meetings.
- Prevalence rounding by Epidemiology
- Intense drill down and analysis of every infection with key stake holders

SSI

- Continued use of updated BHCS Antimicrobial Surgical Prophylaxis Guidelines, with assistance from pharmacy, for use in surgery
- Education on NHSN and surveillance definitions
- Daily surveillance of cultures to identify any surgical site infections
- Attendance at Multidisciplinary Rounding for all patients who are part of the Joint Commission Disease Specific Minimally Invasive program, initially on hold due to pandemic
- Presentation of all surgical site infections at the Surgical Site Infection Prevention Committee meeting with focus on risk factors and adherence to evidence-based practice to reduce infections
- SSI rate graphs provided monthly at Patient Safety Quality Council meetings, Department of Surgery and OB/GYN Perinatal Committee meetings
- Discussion of SSI at Patient Safety Quality Council meetings
- Continued weight-based dosing for pre op antibiotics as per evidence based practice.
- Intense drill down and analysis of every infection with key stake holders
- Review of all SSIs with Medical Director of Infection Control and Department Chair of Surgery
- Focus group meeting to discuss increase in hysterectomy infections and changes made, including additional education from DaVinci regarding reprocessing of instrumentation.
- Review of updated AMMI guidelines and development of implementation team to ensure that BHCS is following all new evidenced-based guidelines.
- Continued rounds in OR and L&D OR to assess cleanliness.
- Continued focused rounds in SPD to identify opportunities for improvement and recommendations made for borescope to reduce SSIs, lighted magnifier in order to visualize instruments when putting trays together.
- Continued rounding to ensure use of quality strips for washer machine. Ensured implementation of quality checks for Ultrasonic Cleaner as recommended for best practices for cleaning DaVinci instruments.
- Ensure recommendations are followed regarding documentation of control and biological checks for Sterrad sterilization.

VAE

- Education in NHSN and surveillance definitions.
- Surveillance through rounding (both Epi and managers) observing for compliance to VAE bundles.

MDRO and C. Difficile

- Updated C. diff algorithm to include chain of command to follow prior to collection of stool specimen
- Created stop sign with symptoms of C. diff and attached to all par carts near specimen containers to provide additional education to nursing
- EVS in-services
- Nutritional Services in-services
- Use of Medmined data mining system to capture any trends related to MDRO's and CDI
- Recognizing the importance of antimicrobial stewardship in decreasing the rates of MDROs, the Epidemiology Department continues to work with Pharmacy
- Continued to implement Transmissions-Based Precautions and Standard Precautions
- Hand Hygiene education
- MDRO admission alerts, and frequent communication between clinical and nursing departments and Epidemiology

General Infection Prevention Initiatives

- Continued use of Respiratory Viral Panel/Biofire technology to decrease antibiotic use when viruses are identified
- Maintains excellent relationships with all epidemiologists at hospitals in tri-county area in order to share information regarding Infection Prevention and Control and reporting of infections.
- Attendance at Association for Professional in Infection Control and Epidemiology (APIC) Chapter meeting for continuing education and network with Miami/Dade, Broward and West Palm Beach counties for updates on infection prevention and control. Participated in weekly calls with local APIC chapter for information sharing with tri-county hospitals specifically regarding COVID protocols.
- Always available to nursing supervisors, NM, staff and physicians, even when not on call in order to maintain good communication and patient safety.
- Bylaws Chairperson for Broward County APIC chapter.
- Assisted with development of additional infection prevention protocols for Women's Services. Ensured proper technique during set up, breakdown and transfer of vaginal delivery instruments.
- Rounding in Surgical Services with education provided in SPD for evidence-based practices and following AORN and AMMI guidelines. Education provided to SSAs regarding room turnover. Rounds in OR assess terminal cleaning in order to reduce SSIs.
- Focused rounds in SPD to identify opportunities for improvement and recommendations made for borescope in an effort to reduce SSIs, lighted magnifier in order to visualize instruments when putting trays together.
- Additional education provided regarding quality strips for washer and recommended to display instructions. Identification of requirement to perform quality indicators on

Ultrasonic machine for cleaning DaVinci instruments. Recommendations regarding documentation of control and biological checks for Sterrad sterilization.

- Rounding individually and with CNO in SPD continued on weekly, then monthly basis to ensure compliance with standards.
- Identification of back order of Sure step foley catheter trays and replacement by Materials Management Corporate with foley and insertion separate trays which can be high risk for infection. Spoke directly with company rep to identify back order and replacements that are available. Forwarded information to VP of Quality and able to obtain Sure step foley insertion tray with different size foley, due to back order and able to use these trays system wide with a lower risk for infection.
- Worked closely with Corporate IT to create a daily am C. diff and C. AFB report regarding pending studies in order to review and potentially ensure that patients are on appropriate isolation.
- Presented at EBCC to place all patients pending a respiratory viral panel on both airborne and contact isolation while pending results as this testing also includes COVID PCR.
- Presented at EBCC to place all patients pending Monkeypox specimen on both airborne and enhanced contact isolation while pending results.
- Presented at EBCC to automatically order CRE and C. auris tests based on risk assessment performed by triage nurse and for these patients to be placed on enhanced contact isolation while pending results.
- Identification of need for additional education for Emergency Department with focus on Rabies, the current dangers and importance of vaccination ASAP. Coordinated Zoom meeting with Dr. Danielle Stanek from the Florida Department of Health, Zoonotic Division.
- Assisted with Teddy Bear Clinic with hand hygiene station to instruct all Parkside Elementary students.
- Just in time education with EVS regarding donning and doffing of PPE and specific communicable disease EVS practices (Monkeypox).
- Worked closely with Corporate IT to create a daily am email alert for all patients with pending Monkeypox order so that patients could be followed appropriately by both epidemiology and ED in order to ensure that patients are on appropriate isolation while in the community as testing was initially performed at outside lab and notification of results would take 4-5 days.
- Collaboration with BHMC ED NM and Dr Boyer to redesign BHCS Monkeypox PowerPoint to include vaccine information and isolation precaution for patients when at home, and inclusion of Nurse Connect.

- Collaboration with outside vendor to easily identify those patients positive with Monkeypox. Collaboration with IT and laboratory to have positive Monkeypox generate as a positive result on the Infection Control Isolate report.
- Creation of C. diff educational presentation for all of BH and uploaded to Healthstream by Clinical Education. Creation of C. diff memo for CMO for presentation for all of medical staff. Shared Monkeypox presentation with hospitalist staff and presented at ED physician staff meeting. Shared High Impact Pathogen algorithm with BH ED managers and Dr. Boyer which will now be used by all of BH. Creation of Monkeypox education power point and requested by Clinical Education to upload to Healthstream for education for all of BH.
- Updated Infection Control Resource Clinical Reference Guide for BH system.

Clinical Specialist of Epidemiology: Celine Keenan 2/17/23

CNO, COO, or CFO: W. Cannon

Infection Control Committee Chairman: M. S. Thompson

Date: 2/24/23