Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

WORKED EXAMPLE

HOSPITAL ACQUIRED *STAPHYLOCOCCUS AUREUS* BLOOD STREAM INFECTION

REVIEW TOOL- CONFIDENTIAL

(THE PURPOSE OF THIS REVIEW IS TO IDENTIFY WHAT HAPPENED, WHY IT HAPPENED AND TO IDENTIFY RECOMMENDATIONS TO REDUCE THE RISK OF SIMILAR INCIDENTS OCCURRING IN THE FUTURE. REVIEWS MUST BE CARRIED OUT IN LINE WITH THE HSE INCIDENT MANAGEMENT FRAMEWORK AND GUIDANCE: VERSION 2

PLEASE NOTE: A REVIEW MUST BE COMPLETED FOR ALL INCIDENTS OF HOSPITAL ACQUIRED *STAPHYLOCOCCUS AUREUS* BLOOD STREAM INFECTION

PART A – CASE REPORT			
(I) [CONSULTANT WITH PRIMARY RESPONSIBILITY FOR PATIENT CARE **OR NOMINEE** TO COMPLETE THIS SECTION]			
NIMS REFERENCE NUMBER	REF NUMBER X	HOSPITAL GROUP	HOSPITAL GROUP A
DATE REPORT COMPLETED	01/11/2020	NAME OF ACUTE HOSPITAL	HOSPITAL A

DETAILS OF PATIENT	PATIENT NAME AND MRN: SEAN SMITH 0123456 RESPONSIBLE CONSULTANT: DR. B.NOTHER

BRIEF CLINICAL BACKGROUND:

BIOPROSTHETIC AORTIC VALVE REPLACEMENT; ADMITTED WITH NON-CARDIAC CHEST PAIN; IV ACCESS GAINED FOR IV FLUIDS

WARD(S) [THIS ADMISSION] (LIST ALL UNIT/WARDS IN CHRONOLOGICAL ORDER)	ADMISSION DATE	TRANSFER DATE IF APPLICABLE
WARD 1A	01/10/2020	02/10/2020
WARD 1B	02/10/2020	CLICK HERE TO ENTER A DATE.

DATE OF ONSET OF THE CLINICAL SIGNS OF INFECTION ?

AT THE TIME OF ONSET OF INFECTION WAS AN INTRAVENOUS CATHETER IN SITU?	YES☒	NO☐

IF YES PLEASE SPECIFY THE TYPE OF INTRAVENOUS CATHETER BELOW:

PERIPHERAL VENOUS CATHETER	CENTRAL VENOUS CATHETER	PORTACATH	PERIPHERALLY INSERTED CENTRAL VENOUS CATHETER (P.I.C.C.)
☒	☐	☐	☐

WAS AN INTRA-ARTERIAL LINE IN SITU ?	YES☐	NO☒

RENAL DIALYSIS PATIENTS

AV FISTULA IN USE	N/A ☒	YES ☐	NO ☐
AWAITING AV FISTULA	N/A ☒	YES ☐	NO ☐
AV FISTULA NOT APPROPRIATE	N/A ☒	YES ☐	NO ☐

IF PVC SITE INSERTED, PLEASE STATE SITE: (HAND, ANTERIOR CUBITAL FOSSA, OTHER)__DORSUM LEFT WRIST____

DATE INSERTED 01/10/2020

FACILITY/LOCATION WHERE INSERTED (PLEASE TICK) ☐ ON WARD WHERE INFECTION OCCURRED

☐ ON ANOTHER WARD IN THIS HOSPITAL ☐ ANOTHER WARD IN THIS HOSPITAL

☒ IN EMERGENCY DEPT. ☐ IN RADIOLOGY DEPT. ☐ IN OPERATING THEATRE DEPT.

☐ IN ICU ☐ IN ANOTHER HOSPITAL

(2) LABORATORY INFORMATION (TO BE COMPLETED BY SURVEILLANCE SCIENTIST OR MICROBIOLOGIST)	
COLLECTION DATE OF 1ST POSITIVE BLOOD CULTURE	*05/10/2020*
ORGANISM IDENTIFIED (PLEASE TICK)	MRSA ☒ MSSA ☐
WAS AN IVC TIP RECEIVED FOR CULTURE	YES ☐ CLICK HERE TO ENTER A DATE. NO ☒
WAS S. AUREUS CULTURED FROM TIP	*YES ☐ NO ☐*

(3) CLINICAL ASSESSMENT OF LIKELY SOURCE OF INFECTION [MULTIDISCIPLINARY TEAM MEMBERS WITH RESPONSIBILITY FOR PATIENT CARE OR NOMINEE TO COMPLETE THIS SECTION]		
DID THE PATIENT HAVE ANY PREDISPOSING FACTORS FOR S. AUREUS BLOOD STREAM INFECTION IF YES PLEASE SPECIFY – BIOPROSTHETIC AORTIC VALVE REPLACEMENT 2 YEARS AGO	YES☒	NO☐
WAS THE INTRAVENOUS CATHETER ASSESSED AS THE LIKELY SOURCE OF INFECTION ? ***[IF YES ABOVE PLEASE COMPLETE Q1-Q7 BELOW, IF NO PLEASE COMPLETE Q8-Q13 BELOW]***	YES☒	NO☐
1. HOW MANY DAYS WAS THE INTRAVENOUS CATHETER IN SITU BEFORE ONSET OF THIS EPISODE OF INFECTION?	NO. OF DAYS 5	
2. WAS THE INTRAVENOUS CATHETER STILL IN PLACE AT THE TIME OF ONSET OF CLINICAL ILLNESS	YES☒	NO☐
3. WAS THE INTRAVENOUS CATHETER STILL REQUIRED FOR ADMINISTRATION OF INTRAVENOUS MEDICATION OR INTRAVENOUS FLUIDS AT THE TIME OF ONSET OF INFECTION	YES☒	NO☐
4. WAS THERE ANY EVIDENCE OF INTRAVENOUS CATHETER FAILURE (FOR EXAMPLE OBSTRUCTION, INFLAMMATION, DISCHARGE) PRIOR TO ONSET OF INFECTION	YES☐	NO☒
5. ARE IV LINE CARE BUNDLES IN USE ON THE WARD ?	YES☒	NO☐
6. WAS THE IV LINE CARE BUNDLE APPLIED AND ASSOCIATED DOCUMENTATION COMPLETED FOR THIS PATIENT ?	YES☒	NO☐
7. WAS THE INTRAVENOUS CATHETER REMOVED AFTER INFECTION WAS DIAGNOSED	YES☒	NO☐
8. WAS A RESPIRATORY TRACT INFECTION CONSIDERED THE LIKELY SOURCE OF INFECTION?	YES☐	NO☒
9. WAS A SURGICAL SITE INFECTION CONSIDERED THE LIKELY SOURCE OF INFECTION?	YES☐	NO☒
10. WAS A SKIN AND SOFT TISSUE OTHER THAN SURGICAL SITE INFECTION CONSIDERED THE LIKELY SOURCE OF INFECTION?	YES☐	NO☒
11. WAS A URINARY TRACT CONSIDERED THE LIKELY SOURCE OF INFECTION?	YES☐	NO☒
12. WAS ANOTHER INFECTION CONSIDERED THE LIKELY SOURCE OF INFECTION? – PLEASE SPECIFY	YES☐	NO☒
13. WAS THE SOURCE OF INFECTION UNIDENTIFIED	YES☐	NO☒

Assessing Impact of *S. aureus* Blood Stream Infection [multidisciplinary team members with responsibility for patient care or nominee to complete this section]		
Did the patient survive (Assessed at time of discharge/transfer or at 30 days from onset)	Yes☒	No☐
If patient survived Was patient discharge delayed	Yes☒	No☐
If patient deceased was S. aureus blood stream infection identified on the death certificate as a primary or contributory cause of death	Yes☐	No☐

(4) Factors relating to the Environment & Equipment [ward manager and IPC Team to complete]		
Were there any deficiencies with the ward/unit Environment & Equipment infrastructure likely to have contributed to this episode of infection ?	Yes☐	No☒
If yes please give a brief indication of issues		

(5) Factors relating to Staffing [ward manager to complete]		
Have there been any issues in relation to staffing/skill mix in week prior to onset of this episode of infection that are likely to have contributed to the episode of infection?	Yes ☒	No ☐
If Yes please give brief indication of issues: Permanent nursing staffing below recommended establishment; serial use of agency staff; vacant lead role on ward; COVID19 management on ward affecting staffing availability (confirmed cases, contacts)		

(6) Factors relating to Policies and procedures [infection prevention and control team to complete]		
Does the service have relevant local infection control policy in place?	Yes ☒	No ☐
If yes, is this accessible to all relevant staff?	Yes ☒	No ☐
Is this policy in line with current HSE Guidelines on Healthcare Associated Infections?	Yes ☒	No ☐
(7) Factors relating to Staff Training and Education [Ward Manager and Consultant or nominee to complete]		
Is hand hygiene training up to date for all nursing and support staff working in the area [ward manager]	Yes ☐	No ☒
Is hand hygiene training up to date for all medical staff working in the area [Consultant or nominee]	Yes ☐	No ☒
Is training on application of intravenous line care bundles up to date for all nursing staff	Yes ☐	No ☒
(8) factors relating to Communication [Consultant with primary responsibility for patient care or nominee To complete]		
Is there evidence that the patient/ Relevant person was informed that the patient had a *S. aureus* blood stream infection	Yes ☒	No ☐
Is there evidence that the patient was informed that this was a hospital acquired infection and given information on the likely source of infection (for example an intravenous catheter)	Yes ☒	No ☐

PART B – REVIEW [CONSULTANT WITH PRIMARY RESPONSIBILITY FOR PATIENT CARE OR NOMINEE TO COMPLETE THIS SECTION]

(9) PLEASE INDICATE THE DECISION IN RELATION TO THE LEVEL OF REVIEW TO BE CONDUCTED

COMPREHENSIVE [PLEASE REFER TO HSE IMF]	YES ☒	NO ☐
CONCISE [PLEASE REFER TO HSE IMF]	YES ☐	NO ☐

WHAT IS THE STATEMENT OF FINDINGS REGARDING CAUSE OF THE INFECTION ?

(*FINDINGS ARE GENERALLY EXPRESSED AS STATEMENT OF FINDINGS WHICH DESCRIBE THE RELATIONSHIPS BETWEEN THE CONTRIBUTING FACTORS AND THE INCIDENT AND /OR OUTCOME. THE STATEMENT FOCUSES ON THE CONTRIBUTING FACTORS AND SHOULD BE AS SPECIFIC AS POSSIBLE. THE SUGGESTED STATEMENT FORMAT IS AS FOLLOWS: THE CONTRIBUTING FACTOR(S), WITHIN THE CONTEXT OF THE INCIDENT, INCREASED/DECREASED THE LIKELIHOOD THAT THIS OUTCOME WOULD OCCUR).*

EVIDENCE THAT IV LINE SITE MAY NOT HAVE BEEN CAREFULLY EVALUATED AS REQUIRED BY HOSPITAL POLICY. IV LINE WAS IN USE AND IN AN APPROPRIATE ANATOMICAL LOCATION. IV LINE WAS ACCESSED SEVERAL TIMES EACH DAY BY DIFFERENT STAFF. IV LINE HAD BEEN IN PLACE FOR 5 DAYS. THE PVC DOCUMENTATION IS COMPLETED, AND NO PHLEBITIS WAS DOCUMENTED. HOWEVER ON EXAMINATION AT TIME OF BLOOD CULTURE RESULT, PHLEBITIS WAS EVIDENT. THIS HAS RAISED THE CONCERN THAT ALTHOUGH THE BUNDLES ARE IN USE AND ARE COMPLETED, THAT THE IV SITE WAS NOT INSPECTED AND THE FORM UPDATED TO REFLECT THE PRESENCE OF PHLEBITIS.

STAFFING, LEADERSHIP AND TRAINING ISSUES IDENTIFIED INCREASED THE LIKELIHOOD THAT THE RELEVANT IPC PRACTICE AND CARE AND DOCUMENTATION OF CARE WOULD BE BELOW EXPECTED STANDARDS.

(10) WERE THERE ANY INCIDENTAL FINDINGS? (IF YES PLEASE PROVIDE DETAIL)

(11) RECOMMENDATIONS

1	HOSPITAL TO PRIORITISE SUPPORT FOR WARD NURSING TEAM RE CONSISTENT STAFFING AND PLAN FOR SUBSTANTIVE WARD MANAGER REPLACEMENT
2	FOCUSSED IPC TEAM SUPPORT FOR WARD TEAM ON IMPLEMENTATION OF PVC CAR BUNDLE APPROACH AND CARE
3	EXPLORE ESTABLISHMENT OF IV LINE CARE TEAM

(12) INFORMATION CONTAINED WITHIN THIS DOCUMENT HAS BEEN SHARED WITH:

PATIENT/ GUARDIAN	YES☒	NO☐
RELEVANT PERSON (SUBJECT TO PATIENTS CONSENT UNLESS THE PATIENT IS MINOR OR UNABLE TO CONSENT)	YES☒	NO☐
HOSPITAL STAFF & HOSPITAL MANAGER (IF YES PLEASE PROVIDE DETAILS OF TYPE OF STAFF HERE) WARD MEDICAL AND NURSING TEAM; QUALITY AND SAFETY COMMITTEE; GENERAL MANAGER	YES ☒	NO☐

CONTRIBUTORS TO THIS REVIEW	YES ☒	NO☐