

## Agenda item 3.ii – Appendix 1

<b>Report to:</b>	Board of Directors Part 1	Date: 05 September 2024
<b>Report from:</b>	Maura Screaton Chief Nurse and Director of Infection Prevention and Control  Ian Smith Medical Director	
<b>Report compiled by;</b>	Jacqui Wynn Lead for Quality Improvement and Transformation	
<b>Principal Objective/ Strategy and Title</b>	Surgical Site Infections (SSI) Summit and Governance arrangements update	
<b>Board Assurance Framework Entries</b>	BAF 675	
<b>Regulatory Requirement</b>	CQC Health and Social Care Executive	
<b>Equality Considerations</b>	Equality has been considered but none believed to apply	
<b>For:</b>	Discussion and Noting	

### 1. Purpose

- 1.1 This is a highlight report following the SSI Summit held 8<sup>th</sup> August 2024, to summarise the summit content and the focus of quality improvement efforts moving forwards.
- 1.2 This paper also notes the changes to the SSI Governance Structure from September 2024, which were approved at the SSI Stakeholder Group on 13.08.24.

### 2. Background

- 2.1 The SSI Stakeholder Group was first established in 2022 to deliberate over the rise in deep wound infection rates and instruct and monitor actions aimed at reducing SSIs following an increase in infection rates after the move to new Royal Papworth Hospital in May 2019.
- 2.2 An SSI dashboard was developed for oversight and monitoring of SSI rates. A further enhanced SSI governance structure was established with effect from June 2023. This included 5 task and finish groups: Clinical Practice, Communications and Engagement, Staff engagement, Environmental and Decontamination and Patient Scrutiny Review. Existing SSI improvement actions transferred to these groups along with recommendations and opportunities for quality improvement following the peer reviews undertaken by Cambridgeshire & Peterborough Integrated Care System (ICS), NHS England (NHSE) East of England Regional and NHSE National IPC team.
- 2.3 In February 2024, the governance structure was refreshed as a number of improvement actions were completed and embedded and had moved to business-as usual process.
- 2.4 The revised SSI Governance Structure from September 2023 facilitates the SSI Stakeholder Group meeting two monthly, with the SSI Clinical Practice and Environmental and Decontamination Group meeting monthly.

### 3. SSI Summit

3.1 The Summit was held in the Victor Philip Dahdaleh Heart and Lung Research Institute with circa 45 attendees in person and approximately an additional 100 joining virtually from facilitated meetings rooms within the Hospital and via Team links. This enabled maximum attendance and engagement overcoming HLRI room capacity limitations.

#### 3.2 Summit content and speakers

<b>SSI SUMMIT – 8<sup>th</sup> August 2024</b> <b>08:30 to 13:00</b> <b>HLRI Rooms 100, 101 and 102 and via MS Teams</b> <b>Chairs: Ian Smith, Medical Director and Maura Screatton, Chief Nurse</b>		
<b>Agenda</b>		
	<b>Event:</b>	<b>Presenters:</b>
1.	Welcome and opening remarks – to include patient story	Ian Smith Maura Screatton
2.	Air monitoring and ventilation	Alain Vuylsteke Paul Jameson
3.	Respecting the Theatre Environment	David Jenkins Kiran Salaunkey Kathy Randall Tracey Senyacia
4.	Break	
5.	Diabetes Control and Optimisation	Jason Ali Jackie McDermott
6.	EVH	Vincenzo De Franco Rob Gannon Hannah Carrington
7.	Summation and next steps	Ian Smith Maura Screatton
8.	Close	

3.3 The Summit opened with a story of a patient who underwent triple bypass surgery at RPH in December 2022 and subsequently developed a SSI in their surgical wound. It highlighted the ongoing impact of a SSI on a patient’s recovery and quality of life as they continue to attend RPH for hospital visits once or twice a week. The patient described the impact to their physical and mental health, their relationships including personal contact with grandchildren and the prevention of booking holidays.

### 4. Quality Improvement

4.1 Following presentations at the summit from subject matter experts and resulting group discussions, the following areas for improvement were agreed:

#### 4.2 Air Monitoring and Ventilation

4.2.1 The Trust’s ventilation authorising engineer (AE) presented a summary of findings from the ventilation audit of theatres. Reassuringly nothing was seen that was considered as a cause of

Surgical site infections. HTM compliance was reviewed, and an action plan has been developed identifying priority tasks and timelines.

#### 4.2.2 Findings with actions attributed:

- Pre filter housings on AHU's needed attention
- Some water carry over from cooling coil- this should not happen and only identified in 1 Air handling unit.
- Drainage arrangements on AHU's need improvement
- Other minor issues with plant (eg backdraft dampers sticking, signs of rust forming on intakes) - these actions have already been completed.
- Extract air volumes in suite had degraded since commissioning
- Door seals fitted to theatre doors which may not be correct
- Lack of Authorised Persons (AP's) on site and Competent Persons not all trained
- Quarterly Maintenance routine needs to be more robust

4.2.3 One of the concerns the clinical teams had voiced was whether air exchange over the patient was adequate. This was also a suggested output of the air monitoring study that was presented by Dr Vuylsteke. Microbiological sampling was taken prior to the summit including close to the surgical site during an operation, which showed very low rates of microbiological burden meaning assurance could be given about effective air exchange. Smoke testing was also completed to visualise the pattern of airflow but was inconclusive. It is proposed that this will be repeated after remedial work has been completed. There was a discussion about whether laminar flow ventilation as used in orthopaedic theatres should be considered. The audience were informed that there is now an extensive literature confirming that this system is not superior to the type of ventilation installed in our theatres.

#### 4.2.4 The following areas were raised by the clinical teams, and the AE will investigate further:

- Obtain theatre design intent from Skanska construction and identify grille manufacturers for discussion on how their grills would operate in our theatre
- Further smoke tests as required to check open door protection/air flows, especially around the scrub room door
- Investigation of issues with door closers, door latches, pressure stabiliser and agree with Skanska how to best deal with them and minimise re-occurrences on an ongoing basis
- Review process of defects reporting via the helpdesk as 'Job closed' does not always give confidence that action has been taken
- Review of Theatre ventilation out of hours
- Use of doors for access
- Further investigation in high spikes and low humidity level within Theatres rooms experienced frequently by Theatre team
- Pressure stabiliser blade review and explore maintenance to include review of any company recommended maintenance routine for their stabilisers

4.2.3 Subsequently a task and finish group has been developed and actions from the audit plan and summit will be explored with governance via the Ventilation Safety Group reporting to the SSI Environment and Decontamination Group and ICPPC committee.

4.2.4 Both the air monitoring study and the audit of ventilation efficacy suggested that increased footfall and numbers in the theatre environment increases the bioburden on the ventilation system.

### 4.3 Respecting the Theatre Environment

4.3.1 Presentations focussed on progress made so far and celebrated achievements such as the success of the new Steris contract for instruments, improvement in compliance with high impact interventions and cleaning, and prophylactic antibiotic administration audits. The evidence of

association of lower rates of SSI at weekends, prompted further discussions regarding footfall and numbers in theatres, and closer working with the medical education team to meet educational needs of medical students.

4.3.2 The following are to be the continued focus of improvements to reduce footfall:

- To commence a maximum headcount of 12 (a reduction from 14). This will be piloted for one month commencing 19th August. Issues and concerns to be escalated via the leadership team and staff experience captured and evaluated after 1 month. This reduction still allows capacity for 2 trainees in theatre (theatre staff trainees/medical students/junior doctors).
- New process for stock levels and preparedness of theatre equipment to commence 19th August. Night staff to prepare trolleys and review stock levels and replenish.
- Safety brief will now include discussion of all eventualities to ensure stock and equipment available in theatre.
- Dress code – meeting with medical education taking place 27th August to plan medical students and overseas visitors to CCA and theatre, and etiquette expectations, to include dress code, and scrubbing techniques.
- To introduce a welcome and education board in theatres (successfully established in Thoracics) with 'do's and don'ts' for trainees and visitors.
- Exploration of risk and benefit of utilisation of digital link with HLRI for use for student and visitors with theatre team and medical education to include logistics and equipment required (additional costs).

4.3.3 Progress of actions will be monitored via the STA Business meeting and reported to the SSI Clinical Practice Group.

#### **4.4 Diabetes Control and Optimisation**

4.4.1 The presentation on diabetes described the prevalence of diabetes in this cohort of cardiac patients. It also referred to poor glucose control particularly in the post operative period. This was thought to be due to out-dated guidelines, confidence of staff who were more concerned about hypo' than hyperglycaemia and lack of education and knowledge.

4.4.2 Diabetes is one of the Trust's quality account priorities for 2024/2025. A newly created Diabetes Steering Group has oversight of the following improvement actions and will be responsible for providing updates to the SSI Clinical Practice Group.

- New clinical guidelines for the management of patients with type 1 and type 2 guidelines have been completed and were approved post summit at QRMG on the 13th August.
- The launch and implementation of guidelines planned from 1st September will include education plan for the short and longer-term approaches to raise awareness of guidelines and increase knowledge and skills of clinical staff.
- Proposal for pre-optimisation of diabetic management and blood glucose control for patients with diabetes, while on a waiting list for surgery at RPH.
- Proposal for use of Consultant Diabetologist resource.

#### **4.5 Endoscopic Vein Harvesting (EVH)**

4.5.1 Presentations provided the background of the clinical efficiency of EVH versus the open technique, SSI rates in leg wound infection and a comparison with benchmarking trusts activity.

4.5.2 Currently two thirds of the surgical care practitioner staff is trained in the EVH procedure (8/12), with 2 staff in training and 2 to commence training.

4.5.3 An increase to 100% EVH activity by mid-2025 (dependant on EVH stack system purchase) is being assessed as an ambition.

4.5.4 Progress of expansion of EVH activity to be monitored by the STA Business Unit and reported to the SSI Clinical Practice Group.

## **5. Conclusion**

5.1 The SSI Summit provided an opportunity to celebrate the achievements of improvement work thus far, share information relating to findings, and facilitate questions and engagement from clinical teams and subject matter experts. The morning concluded with an agreed focus on areas for further improvement.

5.2 The improvement actions highlighted in this report will be taken forward via the respective task and finish groups and monitored via the SSI Governance structure.

## **6. Recommendation**

6.1 The Board is asked to discuss and note this report, recommendations and actions for SSI focused quality improvement, along with the SSI Governance structure revision as noted in 2.4 above.