

Category : **Cardiovascular: Other**

A77 - Estimating the effects of single-patient use electrocardiogram monitoring as a means of infection prevention in saphenous vein grafts through a healthcare model

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Introduction:

Saphenous vein grafts (SVGs) are common during coronary artery bypass graft surgery (CABG). Surgical site infections (SSI) are rare but potentially dangerous and costly adverse events. SSI rates during these procedures were assessed for multiple UK healthcare centres and a published health-economic model was used to estimate the associated burden of these events. Single-patient use electrocardiogram (spECG) monitoring may contribute to the prevention of cross-contamination and help reduce the risk of an SSI. The cost-saving potential of spECG was also assessed.

Methods:

NHS Digital data for SVGs (K401-K404) taking place between March 2019 to February 2020 were assessed for SSIs (T814/T826/T827/T846) occurring during the index event or in the 90 days post discharge. We included 20 centres with >300 procedures. Combined outcomes data were used to update a published health-economic model of the CABG care pathway. SSI burden is reported as additional length of stay (LOS), readmissions, and cost.

Results:

A combined 11,770 SVG procedures were reported across the 20 centres. SSIs occurred in 6.1% (716) of procedures, which increased LOS from 12.2 to 30.0 days. The 351 SSI-related, post-discharge readmissions had a mean LOS of 11.6 days.

Based on the inputs above, the estimated cost of care was £8,502 per patient; closely aligned to official reports of £7,830 to £8,784.¹ Introduction of spECG was estimated to reduce the cost of care to £8,372 per patient; a saving of £130 per patient. This translates to more than a 10-fold return on investment. The main drivers for these savings were fewer SSIs, resulting in reduced LOS and fewer readmissions. Individual hospital savings depended on the SSI rate reported.

Conclusion:

The model results estimate that the routine use of spECG may reduce the cost burden of SSIs following CABG using the SVG method.

References:

1. R040X: SPECIALTY GROUP COSTS - INPATIENTS IN ALL SPECIALTIES (EXC LONG STAY), cardiac surgery data used