

Can 2 become 1?

Novel innovative approach and solution to address GIRFT and Public Health England Surgical Site Infection (SSI) rates using existing technology

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Infection Prevention and Control Team
'Our Vision is to provide safe, high quality care to our communities'



Kettering General Hospital
NHS Foundation Trust

Aim:

Quality of data input is challenging and it is important not to under or over-report true Surgical site Infection (SSI) rates. In KGH, we developed an innovative method using existing software (ICNet) to extract data from theatre and lab systems and now extended to cover most of the modules required by GIRFT to measure SSI rates. GIRFT audit is Junior Doctor led and using ICNet will enable uniform accurate data collection for all SSI.

Method:

KGH Infection Prevention and Control team (IPC) use ICNet (web-based) on a daily basis to do alert organism surveillance. (Figure 1). Pinned reports for GIRFT SSI are created as a dashboard (Figure 2).

Figure 1: Method of development of bespoke reporting system on ICNet

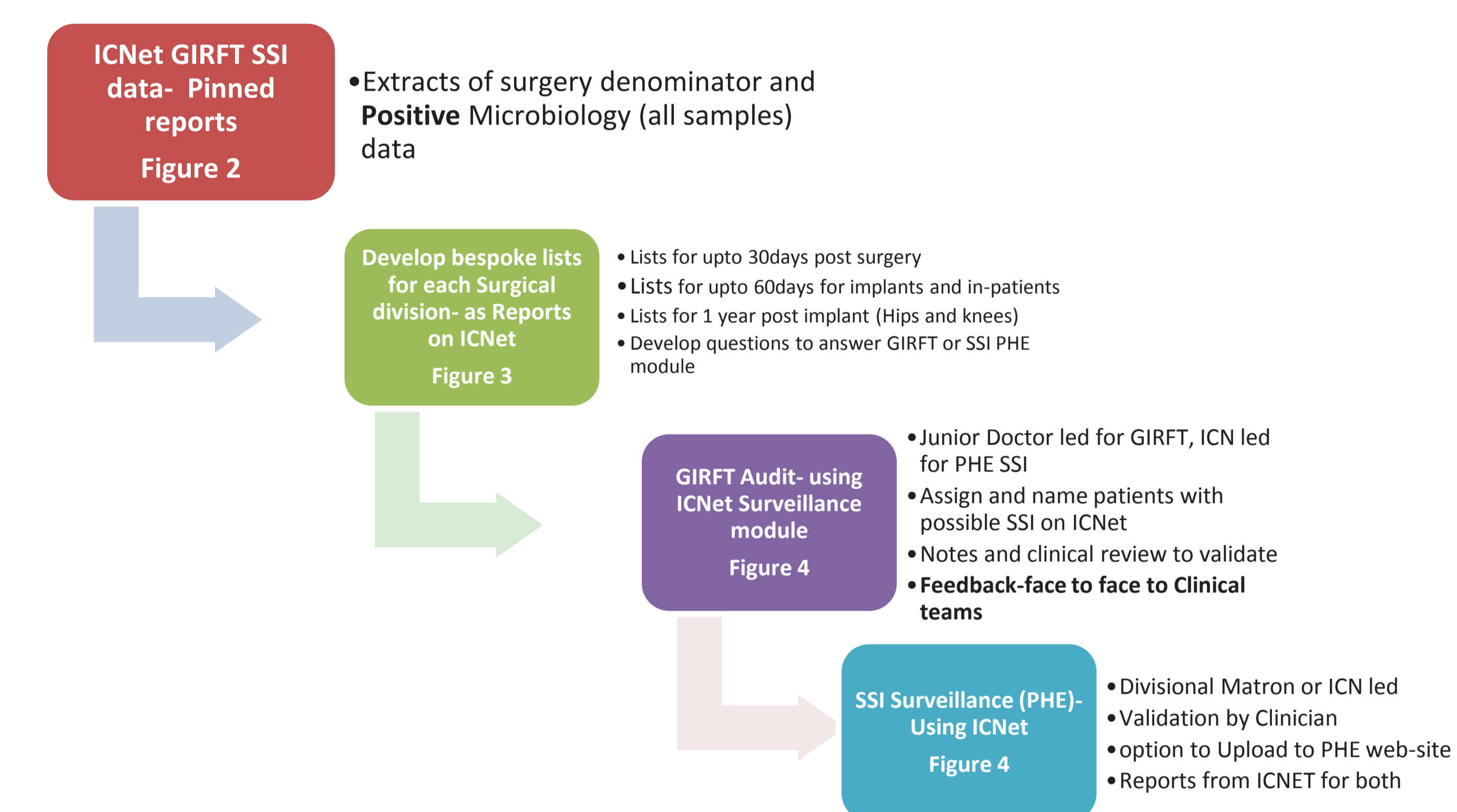


Figure 2 : ICNet- GIRFT Surgical Site Infection (SSI) Surveillance pinned reports

Report name	Report owner	Report type	Timescale	Action
Delivery with +ve Micro within 30 days of procedure	Sonia Mellor	Surgeries	Year, Current	
GIRFT - Breast	ICNet Admin	Surgeries	Quarter, Last completed	
GIRFT - ENT	ICNet Admin	Surgeries	Quarter, Last completed	
GIRFT - General Surgery	ICNet Admin	Surgeries	Quarter, Last completed	
GIRFT - Obs & Gynae	ICNet Admin	Surgeries	Quarter, Last completed	
GIRFT - Ophthalmology	ICNet Admin	Surgeries	Quarter, Last completed	
GIRFT - Positive Samples Post Surgery - ALL	ICNet Admin	Surgeries	Month, Last completed	
GIRFT - Urology	ICNet Admin	Surgeries	Quarter, Last completed	
GIRFT Report - All Categories	ICNet Admin	Surgeries	Month, Current	
Monthly THR, TKR, NOF	Katrina Rufeca	Surgeries	Year, Current	

Creating list:

A bespoke list extracting positive results was created for each Surgery, i.e. SSI within 30 days or 90 days (without and with implants), including theatre details required for routine SSI surveillance and extended details required for GIRFT (Figures 3a, 3b and 3c). Junior Doctors (JD) and IPC Nurses use this list to analyse and discuss infections using bed-side laptops. GIRFT SSI data is collated and discussed in Orthopaedic Infection MDT. A master list on ICNet Surveillance module (Figure 4) indicates those with SSI.

Figure 3: Bespoke lists created for each surgery using GIRFT and PHE surveillance codes. Database contains SSI data and some GIRFT data.

Age	Ward	Date of operation	Category	Procedure code	Procedure	Clinician	ASA score	Duration	GIRFT ORTH 365	GIRFT XPs ONLY	Date of SSI diagnosis (dd/mm/yy)	Type of Infection	Was antimicrobial prophylaxis given preoperatively?	Was antibiotic prophylaxis given in the hour prior to first incision?
74y			Knee replacement	W40.1	Primary total prosthetic replacement of knee joint using cement		3	01:05	✓					
69y			Knee replacement	W40.1	Primary total prosthetic replacement of knee joint using cement		2	01:30	✓					

Figure 3b: GIRFT SSI list (continued...)

Was antimicrobial prophylaxis given preoperatively?	Was antibiotic prophylaxis given in the hour prior to first incision?	Was antibiotic prophylaxis given during surgery?	Was surgery conducted in a laminar flow theatre?	Were prophylactic antibiotics given post-operatively?	Length of antibiotic course (days)	Was follow-up arranged post-op?	If yes, specify type	If yes, specify total length of follow-up planned (months)	Was culture obtained from fluid/tissue/swab?	Causative micro-organism (Gram positive/negative)	Causative micro-organism (specify name)	If antibiotic resistance detected, specify type

Figure 3c: GIRFT SSI list (continued...)

Gram (negative)	Causative micro-organism (specify name)	if antibiotic resistance detected, specify type	Were antibiotics given?	Name of Antibiotics given	Length of antibiotic course (days)	Reoperation performed?	Where implant was present, did infection result in removal of implant?	Sepsis?	Positive blood culture?	Delayed discharge?	Length of stay of primary admission (days)	Unplanned re-admission?	Length of stay from re-admission (days)	Mortality?

Figure 4: Master GIRFT list on ICNet Surveillance module

Name	Hospital PID	Age	Operation date	Days	Current Location	SSI
		44y	23-Oct-2018	16	Discharged	
		59y	17-Oct-2018	22	Discharged	
TEST, Dummy	1001001	22y	08-Nov-2018	0	Discharged	✓
TEST, Tracey	2132	118y	07-Nov-2018	1		✓

Validation of SSI: Information on all SSI (orthopaedic and breast) is discussed at fortnightly Infection MDT, and SSI in other categories is checked with IPC, notes and Consultant in-charge to enable accurate reporting. Notes and clinical review will be completed by JDs on all positive patients when commencing GIRFT audit.

Results and Conclusions: ICNET has allowed easy access for accurate SSI data to be analysed in real-time by IPC team and Junior Doctors, allowing clinicians to access data at bed-side. Bespoke lists created for GIRFT provide easy, accurate and standardised method for collection and analysis of SSI in all surgical specialties.

Next steps: Embed GIRFT audit in key specialties as prospective method of data collection to support Infection MDT in all surgical specialties.

Declaration of interest: None. Our thanks to ICNet team for setting up GIRFT audit details for KGH.

References:

- https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/577418/Surgical_site_infections_NHS_hospitals_2015_to_2016.pdf
- <https://www.nice.org.uk/guidance/qs49/resources/surgical-site-infection-pdf-2098675107781>
- <http://gettingitrightfirsttime.co.uk/wp-content/uploads/2018/07/GIRFT-National-Report-Mar15-Web.pdf>