

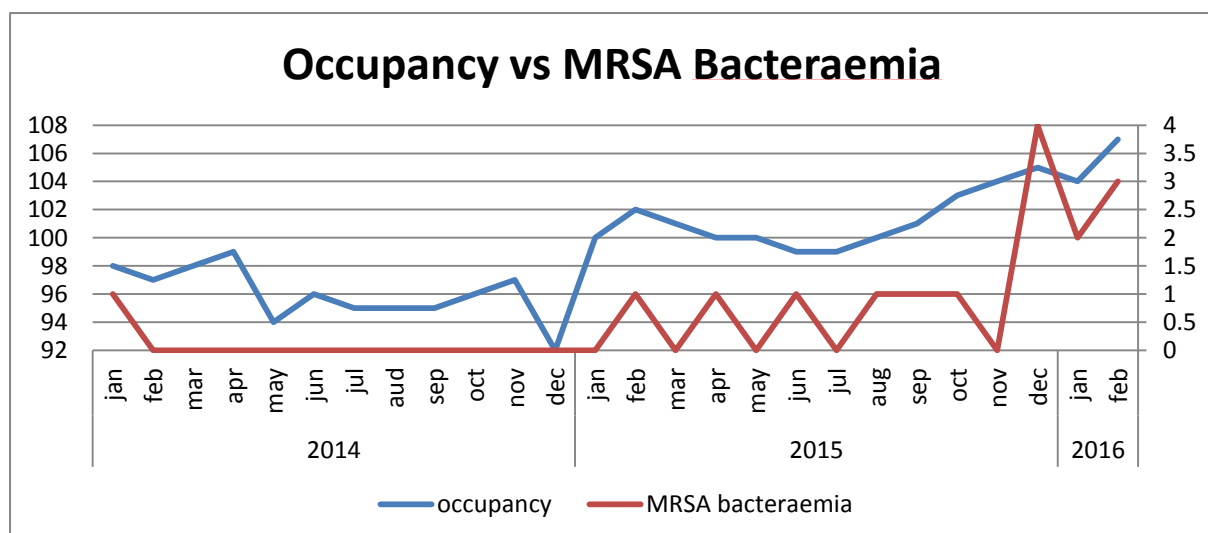
Dartford and Gravesham NHS Trust: Infection Prevention and Control Report to the Kent Health Overview and Scrutiny Committee, January 2017.

Introduction

In 2015/16, 14 patients at Darent Valley Hospital (DVH) developed an MRSA bacteraemia (bloodstream infection) during their admission, (the highest rate and number of MRSA bacteraemia cases of all Trusts in England that report submit data to the Public Health England surveillance system), and the Trust Development Authority (TDA, now known as NHS Improvement (NHSI)), were asked by the Trust to undertake an inspection / review of infection prevention and control practice at DVH. The Review, which took place on the 8th March 2016, acknowledged that there were a number of aggravating factors that contributed to the high MRSA bacteraemia rate within the Trust, such as:

- high bed occupancy (see **Figure 1** below)
- the decision to cease “universal” MRSA screening and move to modified / targeted screening based on Department of Health guidelines published in 2014, and a historically low rate / incidence of MRSA infection / bacteraemia within the Trust
- the performance of the Infection Prevention and Control Team (IP&CT) in relation to the provision of expert guidance and advice for staff. The ability of the IP&C Specialist Nursing Team, consisting of three members of staff, to work pro-actively had been hindered by long-term sickness within the Team.
- compliance with IP&C practice
- the need for greater Directorate engagement with / ownership of Infection Prevention and Control.

Figure 1: Bed occupancy DVH v MRSA bacteraemia: 2014-2016



Following the TDA Review, a 63-point MRSA / Healthcare Associated Infection Quality Improvement Action Plan (QIAP) was developed and work commenced on its implementation. The IP&C Specialist Nurses all left their posts at the end of March 2016 (planned retirement; employment with another Trust, and relocation abroad), and an interim IP&C Specialist Nursing Team were seconded to the Trust pending the appointment of a new substantive Specialist Nursing Team. On the 28th June 2016, the Care Quality Commission (CQC) undertook a focussed responsive inspection, supported by NHSI, and found that the Trust had made good progress in a short space of time.

The Chief Executive Officer (CEO) and the Director of Infection Prevention and Control (DIPC) attended the Kent Health Overview and Scrutiny Committee (HOSC) in June to provide assurance on the actions that had been taken to improve IP&C practice, and were asked to provide an update in January 2017. Therefore the intention of this Report is to provide the HOSC with further assurance regarding the systems and processes that have been established within the Trust in relation to IP&C.

The Infection Prevention and Control (IP&C) Specialist Nursing Team

A new substantive Infection Control Team are now in place.

- Director Infection Prevention and Control (DIPC); joined the Trust on the 31st May 2016 as Assistant DIPC, also fulfilling the IP&C Lead Nurse role, and was appointed to the DIPC post in October 2016 following the retirement of the previous post-holder.
- IP&C Clinical Nurse Specialist. Joined the Team on the 26th September 2016
- IP&C Sister (designated training post). Joined the Team on the 20th June 2016.
- Generalist Matron seconded from adult medicine with an IPC background

The Trust is now in the rather unique position of having a full-time DIPC who is also a highly experienced and senior IP&C Specialist Nurse, and a Business Case is being developed for the recruitment of an IP&C Lead Nurse during 2017/18. The post holder will be the operational lead for the IP&C service and will manage the work of the Team on a day to day basis. This will enable the DIPC to concentrate on developing the IP&C strategy, and strengthen reporting, surveillance and assurance / governance arrangements. With the appointment of a Lead Nurse in addition to the full-time DIPC, the IP&C Specialist Nursing Team will be better resourced than it has ever been.

The Specialist Nursing Team have a very high clinical profile, reviewing the IP&C management of patients who are known to have infections or be carriers of organisms such as MRSA and C. difficile, and acting as an expert, specialist resource for staff. They are also challenging staff with regard to poor clinical practice / non-compliance with policy, and utilising every opportunity during clinical visits to engage with nursing, medical and allied health teams in order to embed practice, move to the implementation of Best Practice standards and foster a culture of ownership of, and engagement with, IP&C.

An additional Consultant Medical Microbiologist joined the IP&C Team in October 2017, and also holds the post of Infection Control Doctor. This has further strengthened the IP&C service, and enhanced engagement with the medical teams.

MRSA bacteraemia

At the time of writing, there have been four Trust-assigned cases of MRSA bacteraemia (June – November 2016), compared to 11 Trust assigned cases occurring between April 2015 - January 2016. Table 1 below records the number of Trust-assigned cases in 2015/16 and 2016/17.

Table 1: Trust-assigned cases of MRSA bacteraemia 2015/16 and 2016/17

	2015/16	2016/17
April	1	0
May	0	0
June	1	2
July	0	0
August	1	1
September	1	0
October	1	0
November	0	1
December	4	0
January	2	0 (to date)
February	3	
March	0	

MRSA bacteraemia Post Infection Reviews (PIRs) are now lead by the IP&C Specialist Nurses, which ensures that the entire process is undertaken robustly, and that Trust-wide actions / learning are identified. Action plans are then developed with the appropriate ward(s) and learning is shared Trust-wide, with the PIRs reported at the Infection Control Committee (ICC).

MRSA screening

The decision to cease universal screening within the Trust in 2015 was taken in response to recently published guidance in 2014 from the Department of Health, which advised Trusts that they could adopt “a more focused, cost-effective approach to MRSA screening, in order to promote a more efficient and effective method for identifying and managing high risk MRSA positive patients” (*Implementation of modified admission MRSA screening guidance for NHS*). The guidance stated that “...importantly, focussed screening should be adopted in line with local risk assessments to ensure that Trusts concentrate on reducing negative patient outcomes for their own populations. Changes to current practice need to be undertaken with a commitment to improved compliance with focussed screening.” During

the summer of 2016, the DIPC submitted a Freedom of Information request to other NHS trusts regarding uptake of the Department of Health guidance. 139 responses were received; of these, only 23 Trusts had adopted the guidance. 90 Trusts had made no changes to their MRSA screening policy, and the remainder had made very minor changes but had not adopted the guidance.

The Trust re-introduced “universal” screening in January 2016. With the exception of some very low-risk patient groups, all elective and emergency admissions are screened for MRSA on admission, and then every seven days until discharge. The routine screening of patients at seven day intervals allows the prompt identification and management of patients who have acquired MRSA during their in-patient stay, and ensures that IP&C interventions are implemented to prevent cross-infection.

Wards are required to audit compliance with MRSA screening weekly, and this is reported to the Quality and Safety Committee; an MRSA Report is also submitted to the Trust Board. While there are still improvements to be made regarding compliance with screening, progress has been made. Acquisitions have fallen since June 2016, with 13 cases being the highest number of acquisitions occurring in month. Although this is above the internal Trust “target” of ≤ 10 cases, it represents a significant reduction in the number of acquisitions that were seen during January – May 2016 when 19 – 25 acquisitions / month were reported.

The number of new acquisitions each month is monitored by the IP&C Specialist Nurses and reported to the Directorates. Where there are two or more new acquisitions on a ward in a calendar month, the Ward Manager and Matron are required to complete the “MRSA Ward-Acquired Checklist”, which assess compliance with IP&C policy and clinical practice, and results in the development of an action plan, which is then monitored by the IP&C Specialist Nurses.

Clostridium difficile

The Trust has an objective / target of no more than 24 cases of *C. difficile* (cases occurring ≥72 hours post admission to hospital), and to date there have been 17 cases. A Root Cause Analysis (RCA) is undertaken using on new *C. difficile* cases. and the RCA process is led by the IP&C Specialist Nurses to ensure that it is undertaken robustly. All cases of *C. difficile* infection are reported to the Quality and Safety Committee.

Meticillin-Sensitive *Staphylococcus aureus* (MSSA) bacteraemia

There are no NHS reduction targets for MSSA bacteraemia, although the Trust has a year-end target of 12 post-48 hour cases. To date, there have been eight cases of MSSA bacteraemia occurring 48-hours post admission to hospital during 2016/17.

E. coli bacteraemia

There have been 125 cases of *E. coli* bacteraemia occurring pre-48 hours admission to hospital in 2016/17 to date, compared to 27 cases occurring post-48 hours admission.

Further information is pending from NHS England / Public Health England regarding a 50% reduction in Gram-negative bloodstream infections, to be achieved by 2020. Whilst this is understood to be primarily a community / CCG focussed target, strategies and interventions to support this reduction will be required from acute Trusts, and this will be a key area of

focus for NHS Bexley and NHS North Kent CCGs, and the IP&C Team, and will be included in the IP&C Annual Programme for 2017/18/

The Intensive Therapy Unit at Darent Valley Hospital (DVH) have registered to participate in the Public Health England led *Infection in Critical Care Quality Improvement Programme* (ICCQIP) – Surveillance of Blood Stream Infections in Patients Attending ICUs in England, commencing in April 2017.

The MRSA / HCAI Quality Improvement Action Plan (QIAP), MRSA Task Force and the IP&C Focus Group

Progress with the implementation of the 63-point Quality Improvement Action Plan that was developed following the inspection in March 2016 was monitored via the “MRSA Task Force” and the Infection Control Committee, and reported to the Quality and Safety Committee. Now that the levels of MRSA are under control, work has been ongoing to re-develop and simplify the QIAP so that it can now be used to monitor *individual* Ward / Department compliance by rag-rating their performance against 10 metrics. The QIAP will be owned by the wards, and continue to be monitored via the ICC and reported to the Quality and Safety Committee.

Key IP&C actions – June 2016 to date

A number of changes in practice / new initiatives have been introduced by the new IP&C Specialist Nursing Team since June 2016, including:

- Re-launch of the IP&C Link Practitioner Programme
- The IP&C Link Practitioners are receiving training in hand hygiene (correct technique and indications for undertaking hand washing; correct technique and indications for using alcohol hand rub / foam sanitiser; understanding the “5 Moments for Hand Hygiene”; care of the hands), and being taught how to undertake hand hygiene competency assessments. With effect from April 2017, it will become mandatory that all clinical staff within the Trust will be required to undergo an annual hand hygiene competency assessment (practical hand hygiene training) by the Ward / Department IP&C Link Practitioner. Compliance with this will be a Directorate Key Performance Indicator, and the number of staff who have undergone this assessment will be reported via the IP&C Dashboard.
- IP&C training delivered via e-learning from December 2016 for clinical and non-clinical staff.
- Development of an “MRSA Bacteraemia Alert Label” (in conjunction with the Medical Microbiologists) to ensure that Medical / Nursing / Pharmacy staff are aware that patients with a bacteraemia, regardless of the causative organism, must complete 14 full-days of appropriate IV antibiotic therapy.
- Implementation of a new IP&C audit tool that audits compliance with 19 environmental, and 29 clinical practices, standards. The IP&C Specialist Nurses are in the process of ensuring that all wards at Darent Valley Hospital are audited using the new audit tool by the end of March 2017. Action plans are being developed by the Ward Managers and Matrons, and once a period of time has been allowed for implementation, the wards are being re-audited against their action plan.

Departments at DVH, Queen Marys Sidcup and Erith District Hospital will be audited during 2017/18.

- Development of “Key / Important Points” and “Simple Messages”, as A4 posters, to help staff understand key aspects of IP&C practice and their practical application. Examples include hand hygiene at the point of care; important points for the prevention of MRSA infection and the prevention / management of MRSA bacteraemia; the correct use of disposable gloves and aprons; the infection control management of patients in open bays where isolation in a single room cannot be undertaken; guidance on stool specimen collection; the care of peripheral intravenous cannulae
- The development of new “Isolation Door Signs” that clearly illustrate the IP&C precautions that need to be taken by staff
- Development of a new “Peripheral Cannula Insertion and Ongoing Care Record” to improve the documentation of peripheral cannula management and care
- Introduction of Clinell Sporicidal Wipes for the cleaning of commodes
- Introduction of new disinfect wipes for the cleaning of equipment

In addition to the above, the following actions will be completed by the end of March 2017:

- IP&C Manual review - 18 IP&C policies and guidelines will have been revised / developed (of which seven are new); the remaining policies will be reviewed during 2017/18.
- A prevalence audit of all in-patients with a urinary catheter in-situ (indications for insertion / ongoing care). The Urinary Catheter Guidelines will then be re developed during 2017/18.
- A prevalence audit of all in-patients with a peripheral intravenous cannula in situ prior, to ensure that peripheral cannulae are inserted and managed strictly in accordance with Best Practice standards.

Strengthening Ward ownership and engagement in 2017/18

This will be a key area of focus for the DIPC, Director of Nursing and Quality and the Medical Director during 2017/18, along with the embedding of IP&C Best Practice to ensure that the improvements seen during 2016/17 are further developed and, crucially, sustained. The Clinical Directors have been asked to identify Department IP&C Leads, and these individuals will play a key role in helping to support the IP&C agenda within the Directorates. Robust Directorate IP&C Key Performance Indicators (KPIs) are in the process of being developed by the DIPC.

Conclusion

The majority of the IP&CT’s work described in the IP&C Annual Programme 2016/17 will have been implemented by year end, although there are some planned elements of the programme that will be carried over to 2017/18. The focus for the IP&C Specialist Nurses will be embedding the changes in relation to clinical practice, IP&C policies, and learning from root cause analysis. The systems and processes that are now in place in relation to how the IP&C Specialist Nursing Team work, and the move towards implementing Best Practice, has raised the profile of IP&C within the Trust, and restored credibility and confidence in the IP&C service overall.

While significant improvements have been made during 2016/17, there is still more work to be undertaken. The Executive Team and the Trust Board are committed to ensuring that profile of IP&C continues to increase and that, over time, the Trust becomes known as a centre for excellence regarding the prevention and control of healthcare associated infections.

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Dartford and Gravesham NHS Trust

12th January 2017