

Dorset County Hospital



NHS Foundation Trust

DORSET COUNTY HOSPITAL NHS FOUNDATION TRUST

**DIRECTOR OF INFECTION PREVENTION AND CONTROL
ANNUAL REPORT 2006/07**



***Working in partnership to create
a safe, clean environment for patients, visitors and staff.***

CONTENTS

Executive Summary	1
Introduction	2-3
Partnership working	3-4
Healthcare Associated Infections	4
<i>Clostridium difficile</i>	4-6
Meticillin resistant <i>Staphylococcus aureus</i>	6-7
Glycopeptide resistant enterococci	7
Surgical Site Infections Surveillance	7-8
Outbreaks of Infection	9-11
Patient Look back Exercise	11
Decontamination	12
Housekeeping Services	12-13
Policy Development	14
Audit Programme	14-18
Cleanyourhands Campaign	18-19
Training activities	19
Resource group	20
Conclusion	21
References	22
Acknowledgements	23

EXECUTIVE SUMMARY

- The Board has supported investment to strengthen Infection Prevention and Control Services during 2006. This will increase the Trust's ability to develop robust systems to target reductions in rates of infection.
- A full assessment has been undertaken to achieve compliance with The Health Act 2006, the Code of Practice to reduce Healthcare Associated Infections. Compliance against the code will be assessed in 2008 by the Healthcare Commission
- The Trust must achieve full engagement with Directorates to develop accountability for healthcare associated infections (HCAI) and implement tailored programmes to reduce infections.
- The action plan for reduction in *Clostridium difficile* must be implemented and the performance targets set with Dorset Primary Care Trust achieved.
- It is important that patients are provided with information regarding rates of infections associated with surgical procedures. Further surveillance of Surgical Site Infections should be developed during 2007 - 2008.
- It is recommended that a strategic review of Housekeeping Services be undertaken to ensure the Department of Health (DoH) minimum standards for cleaning are met.
- Directorates must demonstrate improved compliance with Trust hand decontamination guidelines.
- Directorates should strengthen the role of IPC resource staff to develop expertise in all clinical areas.

WEST DORSET NHS HOSPITALS TRUST ANNUAL REPORT FOR INFECTION PREVENTION AND CONTROL 2006-2007

1. INTRODUCTION

Infection Prevention and Control (IPC) features as a high priority nationally, reflected in the Department of Health's evolving framework for practice. This is underpinned by a national drive to reduce HCAs. The Trust has responded to the national programme, by investing significant resources to develop a Trust wide IPC programme, strengthening the IPC Team to facilitate development of clinical services to reduce the incidence of HCAs. During 2006 - 2007 the Trust has appointed a Nurse Consultant, a Consultant Microbiologist with dedicated responsibilities for Infection Control, increased secretarial support and most recently an Antibiotic Pharmacist. This demonstrates the Trust's commitment to the local community outlined in its bid for foundation status, underpinned by the creation of quality services that meet the needs of the local population, this includes a commitment to the reduction of preventable HCAs.

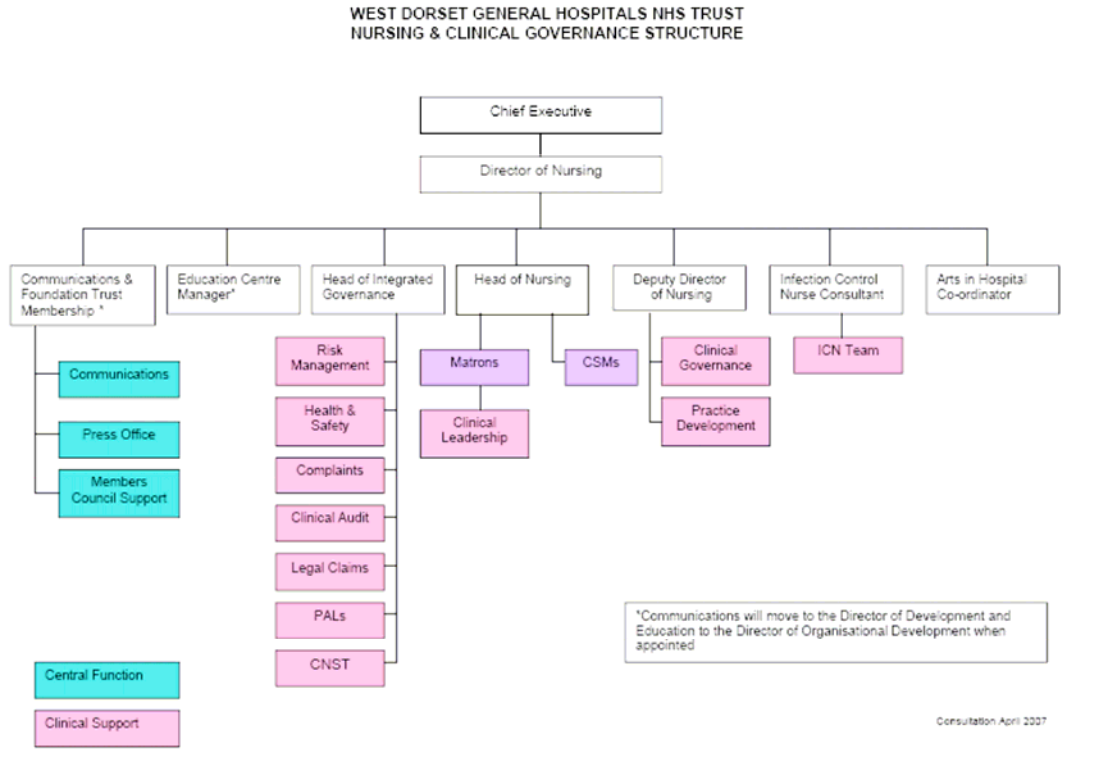
Key priorities of the IPC programme for 2007 will be the implementation of the Department of Health's Saving Lives¹ programme, targeting sustainable reductions in HCAs, requiring full engagement at all levels throughout the Trust.

A Saving Lives programme for renal services has been developed by the Department of Health during 2006. Michelle Smith, Lead Nurse for Renal services, representatives of the nursing team and Anne Smith, Nurse Consultant for IPC attended a national launch of the programme in London. An initial assessment against the plan has been undertaken and an action plan will be developed for the forthcoming year.

The introduction of the Health Act 2006, Code of Practice for the Prevention of HCAs² requires Trust Board commitment to an effective IPC programme. The code establishes Board level accountability via a regulatory framework. The Healthcare Commission will assess compliance with the code during 2007 - 2008. A full assessment against the Health Act has been undertaken and a subsequent work programme is being developed. This programme will align itself to the organisational restructuring that is currently underway, and will require full engagement by directors to embed infection prevention and control into the annual plans and governance structures of Directorates.

Figure 1 demonstrates the proposed structure for the IPC Team following the reorganisation of the Trust. The proposed structure supports the Trust's commitment to development of IPC within the Trust.

Figure 1 Proposed Nursing and Clinical Structure for WDGH



The IPC work programme for 2007 - 2008 is attached (Appendix 1).

The reorganisation of Primary Care Trusts, with key commissioning responsibilities presents new challenges for IPC activities, namely the establishment of targets to reduce the incidence of HCAI's. The Trust has agreed important targets to reduce HCAI's with Dorset Primary Care Trust, the key priority for 2007/08 being a reduction in rates of *Clostridium difficile*.

1.1 Partnership working

1.1.1 Dorset Infection Control Forum

The IPC Team has an established working partnership with Dorset PCT. A Dorset wide Infection Control Forum was established in 2000. The Forum consists of representation from the three acute Trusts, two primary care Trusts and representation of the health protection unit. The key objectives of the Forum being the development of consistent IPC practices across the county. The Forum meets monthly and ensures a consistent approach to the provision of evidence-based guidelines, a unified education strategy and peer support. Gill Payne, Nurse Specialist at WDGH currently shares the position of joint Chair of the Forum.

1.1.2 Dorset and Somerset Health Protection Unit

The IPC Team work closely with the Dorset and Somerset Health Protection Unit to respond to and support local outbreaks of infection and the management of patients with communicable diseases.

The Trust has adopted the Health Protection Agencies MRSA guidance for patients to ensure patients receive quality nationally validated information about their condition.

1.1.3 Patient and Public Involvement Forum

The IPC Team has engaged with the PPIF giving a short presentation of the challenges of HCAI's to develop greater understanding of the work programme of the team. The IPC Team were represented during the PEAT inspections of the Trust.

2. Healthcare Associated Infections (HCAI's) Statistics

HCAI's describe infections that occur in patients and staff as a consequence of their treatment or work within a healthcare environment. Not all HCAI's are avoidable. Many procedures undertaken within contemporary healthcare settings would not have been possible or even considered 20 years ago. The challenges to maintain the health status of a population whose life expectancy has significantly increased should not be underestimated. All invasive procedures present some risk of infection. The emergence of multi-resistant bacteria was not considered with the discovery of antibiotics; many clinicians considered that the battle to control infections had been won. The price of this over reliance on antibiotics is being born by clinicians today. The challenge of contemporary practice, being a balance between appropriate antimicrobial prescribing alongside the complex procedures and the pathological infections that patients present with.

2.1 *Clostridium difficile*

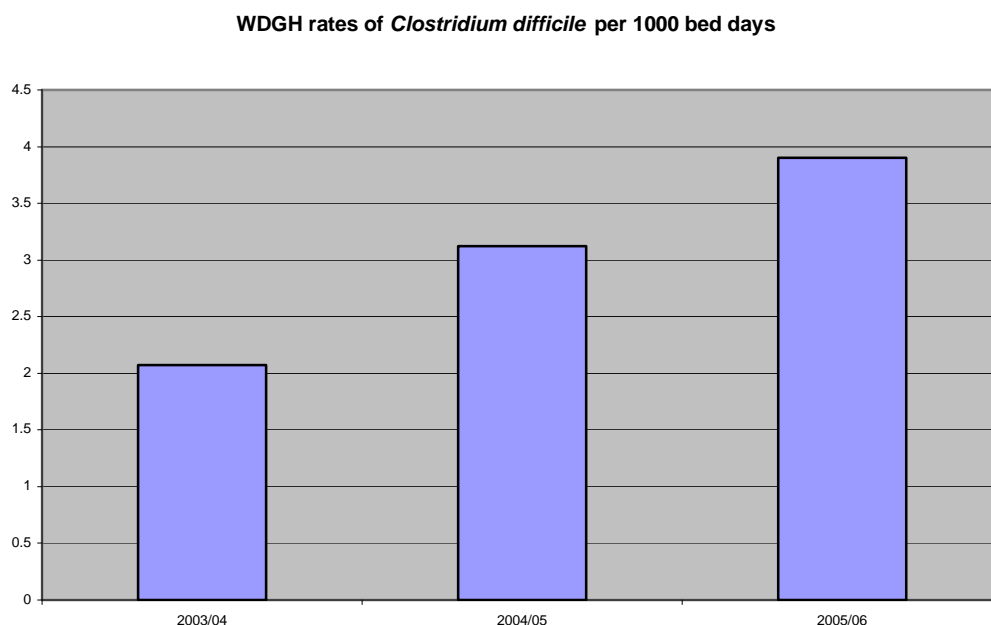
Nationally there has been a significant rise in infections caused by *Clostridium difficile*; this is reflected in the rates within the Trust. The Health Protection Agency³ report that rates of *Clostridium difficile* are consistently higher in small acute hospital Trusts and, that rates increase between January to March; the report offers no explanation for these trends, but these are reflected in the Trust's incidence of the disease.

Clostridium difficile is a HCAI that causes debilitating diarrhoea, particularly in the elderly population, and at times complications that result in significant morbidity or mortality. The infection occurs most commonly in elderly patients receiving broad-spectrum antibiotics. The organism is very resistant to normal cleaning methods, and is often associated with outbreaks of infection within hospital environments. Reducing the incidence of *Clostridium difficile* requires full engagement with clinical and housekeeping staff, focusing efforts upon:

- Developing effective surveillance and timely feedback to clinical teams
- Review of antibiotic policies to reduce the use of broad-spectrum antibiotics, particularly in the medical directorate
- Ensuring patients are isolated promptly should they develop diarrhoea
- Implementing rigorous environmental control measures to reduce the sporicidal effects of the bacterium

Current rates of *Clostridium difficile* isolated in the laboratory do not compare well locally and nationally. Figure 2 demonstrates the rates of infection in those aged 65 years and above.

Figure 2



There is clear evidence of a strategic Trust wide approach to reducing the incidence of *Clostridium difficile*. This area of work represents a key priority for performance improvement for the Trust. A strategic multi-disciplinary team was convened, involving clinicians from the Trust, staff from Dorset Primary Care Trust and regional experts from the Health Protection Agency. From this work an action plan has been developed, and targets for reduction have been set with Dorset Primary Care Trust.

A Trust wide review of isolation practices has been undertaken. This has included a review of cleaning arrangements and implementing the use of hypochlorite (bleach) based cleaning products. The IPC Team has worked with Clinical Site Managers and Ward Sisters to ensure patients are isolated promptly when they develop diarrhoea. Results of stool samples that are positive for *Clostridium difficile* are reported promptly to wards. Matrons and Ward Sisters have been provided with key guidance for dissemination explaining the pathogenesis of the disease to create improved awareness of the spectrum and clinical presentation. This has resulted in improved management of affected patients and a reduction in cross infection.

Revised antibiotic guidelines are being developed to reduce the use of broad-spectrum antibiotics that will reduce the incidence of disease. However, revising antibiotic policies is a complex process, clinicians need to be fully engaged with the process and develop confidence that the outcome of patients will not be adversely affected.

Progress against the action plan will be reported quarterly to the Trust Board.

The Director of Infection Prevention and Control recommends that the IPC team work with the ICT department to develop a database for surveillance of all cases of *Clostridium difficile* to inform clinicians of the progress against the current action plan.

The Trust is required to report individual cases of Meticillin resistant *Staphylococcus aureus* (MRSA) bacteraemia to the Department of Health. MRSA bacteraemia is perceived as an indicator of the overall status of healthcare associated infection within Trusts. During the period 2006 - 2007 the Trust reported 15 cases, against a trajectory of 12. Of these 15 cases, 2 are currently under appeal as neither had been admitted to the hospital within the preceding three months; a further isolate was identified in a patient within 48 hours of transfer from a regional specialist unit; the Trust has no right of appeal against this case under current guidance.

Introduction of Root Cause Analysis to investigate cases of MRSA bacteraemia has identified some key issues for clinical staff to focus their efforts upon:

- Improvement of the management of vascular access - a phlebitis scoring system has been introduced to support the removal/replacement of peripheral intravenous cannulae
- Review of MRSA screening and decolonisation protocols - all patients admitted to the Critical Care Units will be screened on admission and commence decolonisation pending laboratory confirmation of their results
- Introduction of rapid MRSA laboratory testing - to ensure contacts of positive patients are identified and managed promptly
- Trust wide audit of placement and management of Central Venous Catheters to identify clinical issues to improve practice
- Improve documentation of all vascular lines following insertion and during management in line with Trust policy

During 2006 the DoH advised Trusts to review their MRSA screening and decolonisation programme. The IPC Team reviewed current policy against these recommendations and has introduced enhanced decolonisation and screening in the Critical Care Unit and across the Orthopaedic directorate. The recommendations also proposed establishing MRSA ring fenced orthopaedic elective beds as a strategy to prevent the risk of serious infections associated with the orthopaedic surgery. Orthopaedic infections incur significant costs and are associated with increased morbidity and mortality.

Most importantly the Trust has established itself as a Dorset wide centre for spinal surgery, whereby the risks of infection are considerable if patients are not cared for in a controlled environment.

The Director of Infection Prevention and Control seeks support from the Trust Board to establish Ridgeway ward as an MRSA free zone whereby only screened elective orthopaedic patients will be placed.

2.2 Glycopeptide resistant enterococci bacteraemia

Enterococci are bacteria that colonise in the bowels of most humans. Glycopeptide resistant enterococci are bacteria that are resistant to antibiotics that include vancomycin and teicoplanin, infections with these bacteria occur most commonly in regional specialist units.

During 2006/07 there were no reports of isolates of Glycopeptide resistant enterococci.

2.3 Orthopaedic surveillance of surgical site infection

During 2006/07 the Trust has participated in two modules of surveillance of surgical site infections (SSI's) for patients undergoing total hip replacement. Rosemary Wareham, the Infection Prevention & Control Nurse Advisor, undertakes this surveillance.

The current requirement for mandatory surveillance of orthopaedic surgical sites is to complete a three-month module annually of one of the following four categories:

- Total hip replacements
- Knee replacements
- Hip hemiarthroplasties
- Open reduction of long bone fractures

This surveillance exceeds the DoH's mandatory requirement to complete one module of surveillance annually.

The data in the table 1 shows the results for the surveillance since 2004.

Table 1 Surveillance results for Total Hip Replacement and comparative data 2004-2006.

	Jul-Sep 2004	Oct-Dec 2004	Jul-Sep 2005	Oct-Dec 2005	Jul-Sep 2006	Oct-Dec 2006
No. of operations	64	77	49	56	68	86
No. of infections	2	2	0	0	4	0
% operations infected	3.1	2.6	0.0	0.0	5.9	0

The Trust accumulative results compares reasonably well with national results (Table 2). However statistics do not always accurately represent the dynamic challenges of contemporary surgical settings, particularly in relation to the status of patients and the complexities of procedures that are undertaken. The infection rate during the July–September 2006 period of 5.9% appears high, but the risk index system does not take account of procedures undertaken as a result of trauma.

Many hospitals perform only elective orthopaedic procedures, whereby the preoperative assessment process ensures the patient is in optimal condition for surgery and the risk of infection is significantly less.

Table 2 Comparative Surveillance data of Total Hip replacements 2004 - 2006

Risk index	WDGH						All hospitals		
	Last 4 periods			All periods			Number Operations	Number SSI's	% Infected
Number Operations	Number SSI's	% Infected	Number Operations	Number SSI's	% Infected				
0	127	2	1.6	220	4	1.8	54069	577	1.1
1	77	1	1.3	113	3	2.7	26753	508	1.9
2	24	0	0.0	33	1	3.0	4589	173	3.8
3	0	0	0.0	0	0	0.0	100	10	10.0
Unknown	31	1	3.2	75	2	2.7	20567	303	1.5
TOTAL	259	4	1.5	441	10	2.3	106078	1571	1.5

Source data: Health Protection Agency. Surgical Site Surveillance Report December 2006.

Patients want information regarding rates of infections associated with surgical procedures. The Trust is committed to providing high quality services for patients and ensuring that the risk of acquiring an infection is minimised. It is therefore important to develop robust systems of surveillance to inform practice and provide patients with the information they require with regard to the infection risks associated with surgical procedures. This can only be achieved by engaging with the surgical directorate and working to develop robust sustainable systems of surveillance.

The Director of Infection Prevention and Control recommends the surgical and orthopaedic directorate work closely with the IPC team to develop robust systems of surveillance of surgical procedures.

3. OUTBREAKS OF INFECTION

3.1 Norovirus Outbreaks

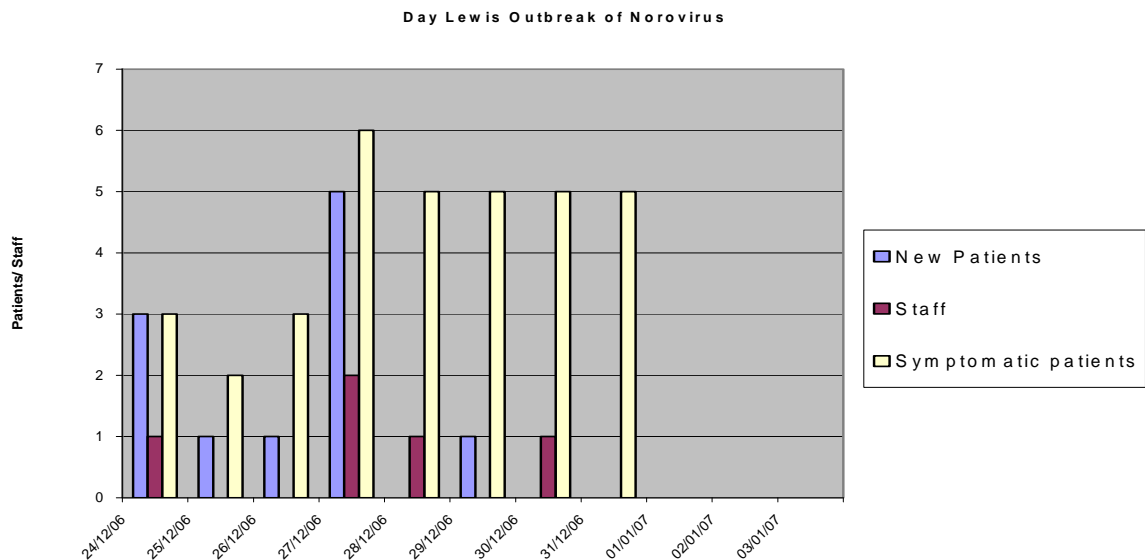
During 2006/07 there have been two outbreaks of infection associated with Norovirus. Outbreaks of Norovirus occur frequently in community environments and can be difficult to contain due to the virulence of the organism, and the circulation of the virus within the community. Outbreaks are expensive to manage and cause considerable disruption to normal services.

The first outbreak of Norovirus occurred in December 2006, commencing on 24th December with symptomatic patients until 1st January 2007 on Day Lewis Ward. The containment measures applied by the ward and the support measures by the housekeeping staff were exemplary. New outbreak control charts were introduced which significantly assisted the decision-making process, particularly when declaring the outbreak over. Following this outbreak a new Norovirus policy was developed based upon national guidelines for the control of Norovirus in hospitals. During this outbreak eleven patients and five ward based staff members reported symptoms.

The Microbiology staff used the rapid ELISA Norovirus test kit to aid rapid identification of the virus within hours of specimens being submitted. Patients frequently report alteration in bowel habits or vomiting during a hospital stay, this can be a result of underlying disease, changes in dietary intake or medications prescribed or viral gastroenteritis. During outbreaks staff throughout the hospital are on high alert to the possibility of viral gastroenteritis; staff respond quickly to patients who develop vomiting or diarrhoea and obtain the relevant laboratory samples. The rapid testing provided a useful aid to clinical decisions of the IPC Team to exclude Norovirus during the outbreaks.

Figure 3 demonstrates the progression of the outbreak on Day Lewis Ward.

Figure 3 Epidemic curve of the Norovirus Outbreak February-March 2007



A second larger outbreak affecting six wards occurred in February-March 2007. This outbreak may have commenced as a result of a visitor vomiting within a bay on Barnes Ward.

The Trust responded well to the challenges this outbreak presented during the busiest time of the year, when management strive to meet performance targets for the year.

Figure 4 demonstrates the progression of the outbreak.

Figure 4 Chart to demonstrate the progression of the Norovirus Outbreak (Feb-Mar 2007).

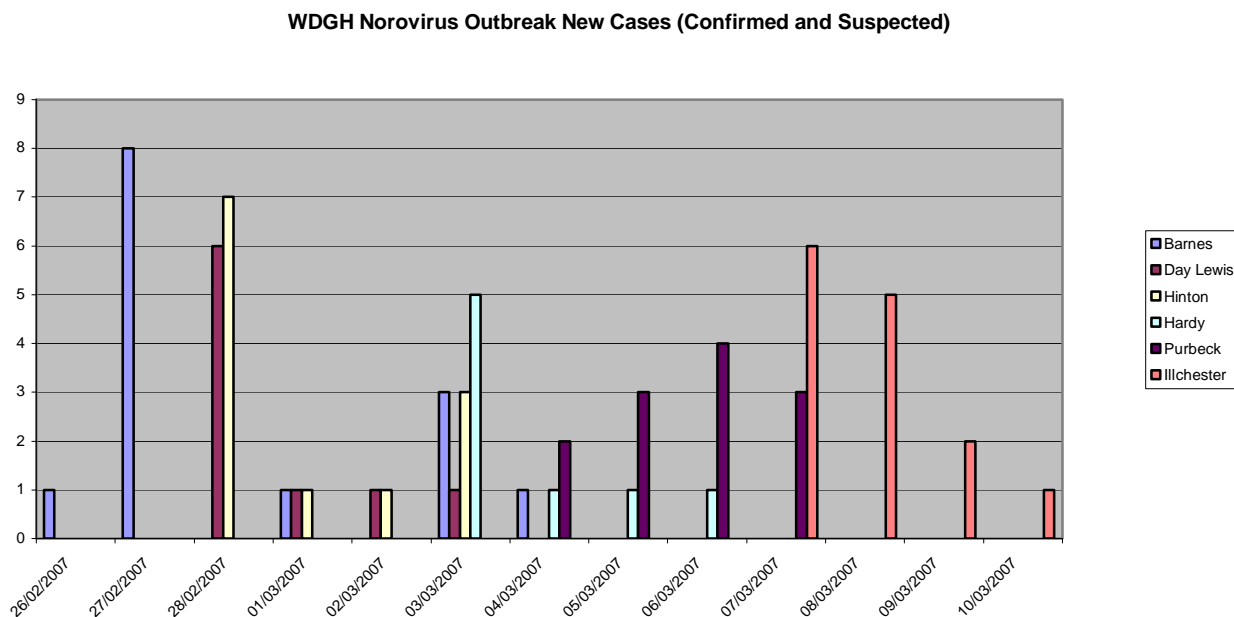


Table 3 demonstrates the periods wards were closed during the outbreak (this does not take account of the time required to complete thorough cleaning prior to reopening).

Table 3 Ward closures during the Norovirus outbreak February-March 2007.

WARD	CLOSED	DECLARED READY FOR TERMINAL CLEANING
Barnes Ward	27/02/2007	07/03/2007
Hinton Ward	28/02/2007	07/03/2007
Day Lewis Ward	01/03/2007	08/03/2007
Hardy Ward	03/03/2007	13/03/2007
Purbeck Ward	04/03/2007	13/03/2007
Ilchester Ward	04/03/2007	15/03/2007

During this outbreak 69 patients were reported as symptomatic across six wards. This outbreak created significant challenges to the Trust to maintain essential services and minimise the reduction of cancelled elective surgical patients.

During 2005 - 2006 the Trust incurred costs estimated in the region of £1, 000,000 associated mainly with contracting patients to the private sector for surgical procedures. The costs associated with the outbreaks during 2006-2007 were contained within existing resources.

During 2006 - 2007 the IPC Team have focused their efforts to develop robust guidance, rigorous reporting tools to aid the management of outbreaks, worked closely with housekeeping and clinical staff to control outbreaks, and with management to resume normal Trust activities at the earliest, safest opportunity. Norovirus is a viral illness that is present in the community; an important community message is that people should not attend the hospital for visits or appointments if they are symptomatic. Media communications during outbreaks reflected this advice. The Trust has placed notice boards and stands with alcohol gel at all entrances. Notices requesting all visitors to use the hand gel prior to entering or leaving the hospital alongside advice not to visit if they have vomiting or diarrhoea are presented on the stands.

Further work has been identified from outbreak reports to work more closely with Dorset Primary Care Trust to prevent admission of symptomatic patients.

Figure 4. New hand hygiene stations introduced at all hospital entrances.

Quote from visitor “ *It is important that visitors play their part to protect patients*”



3.2 Patient Look back Exercise

A member of WDGH staff working in the renal satellite unit at Royal Bournemouth Hospital was diagnosed with pulmonary tuberculosis in January 2007. Fortunately, the member of staff has made a good recovery and has returned to work. However, as the member of staff was working at a time when considered infectious it was necessary to undertake a review of the patients who may have been exposed to the infection.

It is very rare for patients to acquire Tuberculosis from an infected healthcare worker, but following consultation with national and local experts it was agreed to screen all patients who may have had contact with the healthcare worker. This involved patients being offered a chest X-ray and Mantoux skin testing.

As the patients attend Royal Bournemouth Hospital for their dialysis it was agreed that a screening programme involving 62 patients and 2 patients relatives would be undertaken. This work was led by the TB Nurse Specialists and Respiratory Consultants at Bournemouth to minimise the disruption to patients.

Support was received from the Health Protection Unit, and TB Nurse Specialist Karen Gardiner, and Gill Wilde, Occupational Health Nurse Manager, led the support for staff working in the unit.

A help line was organised and run at WDGH. Communications leads from both Trusts organised media statements. There was no evidence of transmission of tuberculosis amongst the patients and relatives screened.

4. DECONTAMINATION

The Trust has invested significant resources into providing state of the art decontamination facilities in the Endoscopy department. Endoscopy is a rapidly evolving sphere of clinical practice, with proven benefits for patients undergoing non-invasive diagnostic and treatment procedures that previously would have involved surgery. The IPC Team has been actively involved in the plans to expand the Endoscopy department, seeking advice from a national expert to ensure standards proposed meet regulatory requirements.

The Trust is actively engaged with the strategic review of decontamination services across Dorset and Somerset, with a view to centralisation of services off site. The DoH decontamination team and the Strategic Health Authority are leading this work. During the course of 2007 a full business case will be presented for consideration to Trust Board. It is important that the risks associated with this project are carefully considered, particularly in relation to the services being managed by an independent company, and the loss of on site bespoke services that are currently available.

A review of washer disinfectant machines identified that machines currently sited in Sterile Services Department are non-compliant with current regulatory guidance.

An options paper has been presented to Trust board for consideration to ensure all central decontamination services are compliant with national and European standards.

The Director of Infection Prevention and Control recommends a trust wide review of Endoscopy decontamination services to ensure that current decontamination processes meet the required regulatory standards.

5. HOUSEKEEPING SERVICES

Housekeeping services are not contracted out, and have been reconfigured during 2006 - 2007. This reconfiguration has not been in consultation with the IPC Team, and therefore has not met the recommendation of the DoH's guidance in section 3 of Winning Ways⁴. The importance of a clean environment and the potential for cross infection arising is well established. Previous research undertaken at WDGH identified direct relationships between the standards of cleaning and environmental contamination with micro-organisms that included MRSA. Having completed this research it is important that the relevance of this research is not forgotten.

Standards of hygiene need to be maintained and monitored in accordance with the DoH recommendations.

Matrons are charged with the responsibility to establish and maintain high standards of cleanliness within the hospital environment. The Matrons Charter⁶ laid out an action plan for Matrons to deliver an improvement programme, this required full engagement with Housekeeping Managers and the IPC Team, reporting their results and action plans via the PEAT committee. In the Trust it has been difficult for Matrons to develop this programme given that cleaning schedules and audit programmes are poorly developed and do not meet the recommended minimum national standards.

However, there is now evidence of more strategic engagement between housekeeping services, the IPC Team, Matrons and Ward Sisters to develop robust plans in line with the recommendations of the National Patient Safety Agency⁵ guidance and the minimum standards endorsed by the DoH⁶. This work focuses upon a strategy to meet the national recommended standards for environmental cleaning for housekeeping services and clinical staff, underpinned by a Trust wide audit programme. The organisational restructuring needs to take account of the complexities of the required minimal revised standards of cleanliness.

The Director of Infection Prevention and Control would recommend considering a strategic review of current housekeeping services to ensure the trust is confident that adequate resources are being allocated to meet the required minimal standards for cleaning, and that there is confidence that the current standards being delivered offer patients a safe environment.

6. POLICY REVIEW

The Dorset Infection Control Forum develops Infection Prevention and Control policies that are then ratified within each of the Trusts. The three Acute Trusts in Dorset and the two Primary Care Trusts represent the Forum.

During 2006 - 2007 the following policies have been developed / reviewed and approved by the Trust:

- Hand Decontamination - guidelines for healthcare workers
- Norovirus - key points for staff, patients and visitors
- Pandemic Influenza
- Standard Precautions
- Meticillin-resistant *Staphylococcus aureus*

Policies have been developed in line with national expert guidance, evidence based findings and the experience of local IPC Teams. All policies introduced

are supported by a strategy for implementation and where appropriate an audit program.

7. AUDIT PROGRAMME

A pilot audit programme was introduced in 2006 - 2007 utilising the Infection Control Nurses Association audit tools⁷ (endorsed by the DoH). Gill Payne, Nurse Specialist IPC, supported by the Clinical Audit department, developed the audit programme and identified directorate audit leads.

The purpose of this pilot audit programme was to:

- Assess the clinical environment
- Assess infection control practices
- Identify areas of concern to inform future work
- Monitor compliance with existing policy

The overall objectives were to:

- Inform practice
- Improve infection prevention and control practices

The audits undertaken in 2006 - 2007 were:

1. The use of Personal Protective Equipment
2. Environment
3. Ward/ Departmental Kitchens
4. Handling and disposal of Linen
5. Safe Handling and disposal of sharps
6. Hand Hygiene

The audit results are considered:

- 85% and above compliant
- 76-84% partial compliance
- 75% and below minimal compliance

7.1 Personal Protective Equipment (PPE)

The use of PPE forms the basis for the application of IPC standard precautions. The level of compliance with this standard was generally high throughout the Trust. PPE is readily available in clinical areas. One key theme emerged as an area of non-compliance, this related to staff not consistently changing PPE between patients and staff did not consistently wash their hands following removal of gloves

This is considered a significant issue, particularly given the emergence of multi-resistant pathogens, whereby the potential for transfer of pathogenic organisms between patients by healthcare workers is considered associated with significant risk of HCAI.

The feedback of results to individual clinical areas is important, the IPC Team have also taken action to ensure the correct use of PPE is reiterated during

mandatory training sessions and observations during ward visits by the IPC Team.

Table 4 summarises the levels of compliance with the audit standard.

Compliant (85% and above)	28 areas
Partial compliance	4 areas
Minimal compliance	5 areas
Non returns	7 areas

7.2 Environment

The clinical environment is a potential source of cross infection if effective control measures are not in place. This audit identified some key themes to be addressed across the Trust; these were:

- Frequency of pre-planned curtain change. All wards identified that curtain changes were not routinely happening. The IPC have discussed this with Housekeeping Managers who are seeking to address this and improve compliance with this standard.
- Workstation equipment in clinical areas was not visibly clean. Staff identified that responsibility for these cleaning tasks was not clearly defined. The IPC Team has updated the mandatory training session for clerical staff to incorporate guidance to address this problem.
- Furniture in clinical areas - some wards identified that some furniture was not covered with permeable material. This has been discussed at the PEAT meetings and there are plans in progress to improve the procurement process.
- Fans and ventilation grills - there are problems identified with the cleaning of fans. This remains an unresolved issue despite discussion between Estates, Housekeeping Managers and Ward Sisters, but will be taken for consideration to the PEAT meetings.

Table 5 demonstrates the levels of compliance with the environmental audit standards.

Compliant (85% and above)	9
Partial compliance (76-84%)	5
Minimal compliance (75% or less)	12
Non returns	15

7.3 Ward Kitchen Audit

The ward kitchens (pantries) are used for storage of condiments, cereals, bread and milk. Essentially there is minimal food preparation undertaken at ward level.

The key issue that emerged during this audit was that there was inappropriate use of the refrigerators e.g. patient and staff food was stored. This issue was raised at the PEAT meetings, notices have been developed to advise staff that this is not a safe practice and these will be distributed to all ward areas. This essentially will mean the refrigerators are used for their intended purpose e.g. storage of milk and sauces, which then reduces the requirement to formally monitor the temperatures. These discussions at PEAT have also raised the issue of reviewing the cleaning responsibilities for the kitchen; these currently rest with the Nursing Staff. Pam O'Shea, Matron Medicine, is leading this review.

Table 4 demonstrates the levels of compliance with the audit standard.

Compliant (85% and above)	8
Partial compliance (76-84%)	7
Minimal compliance (75% or less)	24
Non returns	9

7.4 Linen Audit

Compliance with this standard is important. From an infection control perspective the requirements that could influence the risk of infection were generally achieved. The key failure with this standard is perhaps a more aesthetic one, relating to the frequent observation that linen was visibly stained. Whilst from an infection control perspective the linen once cleaned does not present risk, the Trust should consider the aesthetics and patients' perceptions, particularly as patients have complained about the stained linen they observed. This has been discussed with Housekeeping Managers who identified that ward staff need to formally report stained linen to facilitate support to negotiate with the contractor.

Table 5 demonstrates the levels of compliance with the audit standard.

Compliant (85% and above)	28
Partial compliance (76-84%)	5
Minimal compliance (75% or less)	2
Non returns	13

Following a review of the pilot audit the IPC Team identified some problems with the feedback mechanisms; this initially resulted in action plans being developed for each clinical area for local resolution. This system inhibited the development of strategic plans to resolve common problems identified during the audit process. It was also agreed that the programme for 2007 - 2008 needed to strengthen the focus upon areas of clinical practice that directly impacted upon the potential to reduce HCAs.

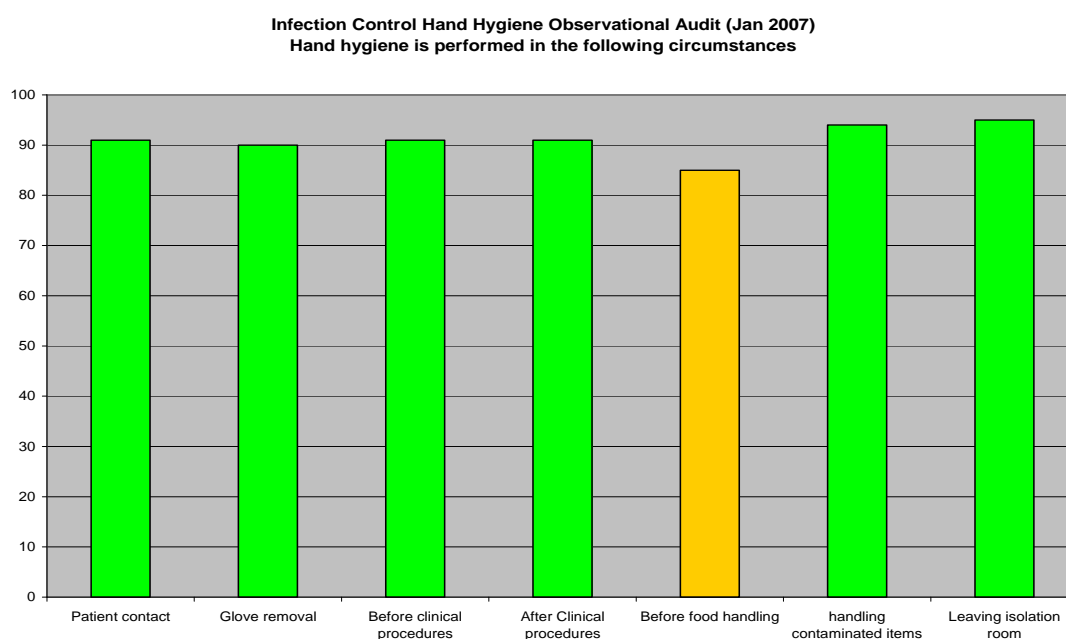
7.5 Hand Hygiene Audit

A Trust wide hand hygiene audit programme was implemented in January 2007. The DoH endorsed audit tools were used for the audit.

Local adaptation of the audit tools to increase the observational component of the audit by five fold was introduced to increase confidence with the audit results. Areas achieving less than 85% compliance with the observational components of the audit were advised to introduce the Saving Lives High Impact Intervention Number 1 to achieve improved practice. This is closely aligned with a Trust wide drive to review the behavioural aspects of compliance with Trust policy.

The audit identified seven wards where the observational audit results were less than 85% and a recommendation to introduce the Saving Lives High Impact Intervention tool to improve compliance has been made. This tool supports a continuous audit cycle undertaken locally, with rapid feedback of results to staff and implementation of strategies to change practice across the multi-disciplinary team. The audit cycle must be maintained until a satisfactory standard of practice has been demonstrated and there is evidence of maintaining the standard.

Figure 5 demonstrates Trust wide results of components of the audit where Trust policy supports hand decontamination.



Initial scrutiny of these results may suggest that the Trust is doing well with compliance; perhaps these statistics would be better analysed in context of the following examples:

Is the Trust satisfied that 85% of the time staff decontaminate their hands prior to handling food?

Is it acceptable that staff decontaminate their hands 95% of the time prior to leaving isolation rooms that are most commonly occupied by patients with infections?

These two practices alone indicate there is a need to change the culture within the Trust, and create a greater awareness of the potential serious outcomes when staff do not comply with Trust policy. These are standards that need to achieve 100% compliance by all healthcare workers. Failure to achieve this exposes the Trust to considerable risk.

The Trust must also take account of the findings of the Healthcare Commission's Patient Survey (2007); this report identified that 76% of doctors washed or cleansed their hands compared with 78% of nurses between touching patients. Comparatively with other Trusts these results placed the Trust in the intermediate level for doctors and the lowest for nurses.

Clearly there is significant room for improvement in hand decontamination and Directorates must take action to address the cultural changes in behaviour to improve this standard of practice. Patients now expect staff to cleanse their hands following contact with other patients, and staff must change their practice to comply with this standard.

The Trust has implemented an improvement programme to ensure that staff have access to hand washing facilities of the highest standard, these include sinks with sensors to reduce potential for cross contamination associated with handling taps. The Trust provides alcohol gel at the point of care and entrances to the hospital and wards. The education programme delivered clearly explains the procedures for hand decontamination. It is the cultural shift to establish hand decontamination as the norm that needs addressing. There is evidence emerging that staff are engaging with the IPC Team to develop practice and respond to local audit findings.

The case study below demonstrates the lead role of the Matron of Elderly Care, Ann Little, whereby the interpretation of audit results, and high rates of *Clostridium difficile* has led to the development and implementation of an improvement programme across the three wards.

Case study 1

Ann Little, Matron Elderly Care Unit, identifying local issues and developing an improvement in Infection Prevention and Control across the three wards, is leading significant developmental work. The IPC Team facilitate this work, but are encouraged by the "local ownership", linking key improvements required to reduce HCAs. This has involved working closely with Link Nurses and Ward Sisters, developing surveillance with rapid feedback, responding to audit results, MDT educational sessions. Most importantly the emphasis rests not only with the physical environment but is also underpinned by the challenges of behavioural change

The Director of Infection Prevention and Control recommends that Matrons develop a strategic review of Infection Prevention and Control audit results and feedback action plans to address areas that fall below the accepted standards to the Infection Control Committee on a bi-annual basis.

8. “Cleanyourhands” CAMPAIGN

The “cleanyourhands” campaign was developed by the National Patient Safety Agency to promote and maintain awareness within acute hospital Trusts of the importance of hand decontamination. The programme was previously launched but has lost momentum due to the increasing demands on the IPC Team. However, following the investment in the team during 2006 it is now opportune to re-launch the campaign and sustain the program.

Gill Payne will lead this with support from Rosemary Wareham. It is important that clinical staff support this initiative, by developing the role of champions within the clinical areas to promote awareness within the team and develop local ownership of practice challenges.

The Director of Infection Prevention and Control recommends that all Directorates nominate a lead responsibility within all clinical areas for the re-launch of the Cleanyourhands campaign. Directorate leads must monitor progress within clinical areas and report this to the Infection Control Committee on a quarterly basis.

9. TRAINING ACTIVITIES

The IPC Team have delivered a training programme that supports the requirements that all staff receive induction training, and a three-tier system of training for staff to meet the mandatory requirements for the Clinical Negligence Scheme for Trusts. This is supported in the Trust’s training needs analysis. A majority of the training for clinical staff is delivered by Link Staff on wards, with support from the Infection Prevention and Control Nurses. Training is recorded on the Trust PRISM system, with responsibility for attendance resting with line managers that should be reviewed during annual appraisal.

During 2006 - 2007 the Dorset Infection Control Forum has developed an Infection Prevention and Control Educational Strategy. This has been developed to ensure that education for healthcare workers working for the NHS in Dorset is robust and consistent. This will form the basis of mandatory training during 2007 -2008.

During the year the IPC Team have also developed and delivered bespoke training for clinical areas, focusing upon local infection prevention and control issues to inform practice.

The Director of Infection Prevention and Control recommends that Directorates report rates of attendance of clinical staff to mandatory infection prevention and control training sessions to the Infection Control Committee on an annual basis.

10. RESOURCE LINK GROUP

During 2006 - 2007 the Link Group met on five occasions. The purpose of the link group is to develop clinical champions within each clinical area to develop practice and disseminate information to all staff. The roles and responsibilities of the resource staff have been clearly outlined and contracts have been issued for negotiation between Ward Sisters and Resource staff. Currently attendance at the link group meetings is not consistent, however this can be difficult given the different shift systems, annual leave and demands of clinical workload. Directorates should monitor attendance at these meetings, and where there are gaps in attendance, arrangements should be made to ensure information is disseminated.

Twenty-one link staff commenced the Infection Control Distance Learning Package during the year. The generic learning package was developed to underpin the knowledge, skills and competencies that link staff require to develop practice within the clinical environment. The package was developed by the Dorset Infection Control Forum, and is currently being considered for Kite marking as an indicator of its quality by Bournemouth University. Trained nurses will have the opportunity to complete a practice development module to gain accreditation for the work undertaken with the package.

The Director of Infection Prevention and Control recommends that all clinical areas have identified resource staff and that protected time is allotted to support attendance at Link meetings and meet the requirements of the role. Directorates should report the achievements of the Link staff in their biannual report to the Infection Control Committee.

11. CONCLUSION

2006 - 2007 has been a milestone in the development of Infection Prevention and Control services for the Trust. The significant investment for new roles demonstrates the Trust's commitments to reducing the incidence of HCAs. The challenge ahead for the Team is to secure ongoing engagement and commitment of the clinical and management staff to develop a quality programme to achieve the targets for the reduction of HCAs.

The profile of IPC has been raised, but the IPC Team cannot achieve reduction of infections. It is the application of consistent standards of practice across the healthcare arena that will contribute to creating a safer environment that will achieve a reduction in HCAs.

It is therefore, critical and a fundamental requirement that, following the organisational restructuring, Directorates have clearly developed responsibilities aligned to the strategic objectives of the Trust to reduce HCAs. The essential tenet being that *"Infection Prevention is everybody's business"*.

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As the Director of Infection Prevention and Control I would like to acknowledge the efforts of the Infection Prevention and Control Team, led by Dr Sarah Crook, Infection Control Doctor for the Trust.

There is clear evidence that the Infection Prevention and Control work programme is engaging support of the staff working for the Trust to reduce the incidence of HCAs. This work is supported by the work of the Biomedical Scientists in the Microbiology department, who have worked to introduce innovative technology to support rapid diagnosis of infectious agents.

Most importantly I acknowledge the support of the board, and their vision to develop Infection Prevention and Control services to ensure that patients are cared for in a safe environment and a commitment to reduce HCAs.

I

INFECTION PREVENTION AND CONTROL WORK PROGRAMME 2007 - 2008

AREA	ACTION REQUIRED	PROGRESS	PROGRESS	RESPONSIBILITY
Saving Lives¹ Engage Senior Management CNST² Standard Governance (1.1.3: 2.1.3: 3.1.3)	1. Annual review of the terms of reference of the ICC to check compliance with HCC & Standards for Better Health ^{1,2} .	Defer until organisational restructuring is established ^{1,2} .	September 2007	Chair of ICC / Trust Board
	2. Review attendance at ICC ²		May 2007	Nurse Consultant
	3. Nominated lead for Infection Control in every Directorate ^{1,2} .	Defer until organisational restructuring is established ^{1,2} .	September 2007	Directorate Managers / DIPC
	4. Responsibility of senior managers for infection control clearly identified in managers on-call handbooks and relevant emergency plans ¹ .	Develop on call senior managers IC section for on call pack ¹ .	September 2007	ICD / Nurse Consultant
	5. IPC Annual Report to Trust Board ^{1,2}	Ensure Annual Report is placed on Internet ²	May/June 2007	DIPC / ICD / Nurse Consultant
	6. Annual IPC work programme presented to Trust Board and agreed ²		June 2007	DIPC
	7. Annual IPC Presentation to Trust Board ²		October 2007	ICD / Nurse Consultant
	8. Evidence that actions from outbreaks have been actioned. ²	Outbreak reports available with recommendations. Organise Norovirus meeting with ECU Clinicians and PCT ²	June 2007	IPCT / PCT / ECU

AREA	ACTION REQUIRED	PROGRESS	PROGRESS	RESPONSIBILITY
<p>Saving Lives¹ <i>Appoint and train Infection Control leaders at each level of the organisation</i></p> <p>CNST STANDARD (1.2.8) (2.2.8) (3.2.8) Competent and Capable Workforce</p>	<p>1. Matrons responsible for developing infection control standards across directorate^{1 2}.</p> <p>2. Develop wider link group to incorporate allied healthcare workers^{1 2}.</p>	<p>PEAT inspection reports and action plans¹.</p> <p>Support for Link Nurses to develop knowledge and skills within the clinical environment e.g. protected time for meetings/ IC work within clinical environment².</p> <p>Work with ITU developing dress code to minimise risk of cross infection².</p> <p>Work with Elderly Care Unit to improve hand hygiene, environmental cleanliness. Current progress includes developing clear common signage, posters inside and outside of isolation rooms, clear objectives set monthly for Link Nurses².</p> <p>I/C education sessions organised by Link Nurses to disseminate mandatory updates across the trust.²</p>	<p>Ongoing</p> <p>April 2007- ongoing</p> <p>May / June 2007</p> <p>April- ongoing</p> <p>April 2008</p>	<p>Matrons / Ward Sisters / IPC Nurses</p> <p>Nurse Consultants Critical Care / IPCT</p> <p>Matron ECU</p> <p>Lead PAM Managers</p>

AREA	ACTION REQUIRED	PROGRESS	PROGRESS	RESPONSIBILITY
<p>Saving Lives ¹ <i>Implement a local surveillance programme to identify throughout the Trust in real time the infectious status by providing directorates with quarterly reports</i></p>	<p>1. Review requirements for surveillance e.g. current epidemiology reports / C Diff data / MRSA data ¹.</p> <p>2. Feedback monthly C Diff data to ECU/Medicine and Surgical directorates ¹.</p> <p>3. Review SSIS and engage with vascular clinicians to commence surveillance linked to HPA ¹.</p> <p>4. Review available IT systems to support I/C surveillance programme and develop business case to support ¹.</p>	<p>Appoint I/C secretarial support to facilitate efficient surveillance system ¹.</p> <p>Commenced in March 2007. Immediate actions taken to improve isolation of patients and improved environmental cleaning/disinfection of isolation rooms ¹.</p>	<p>June 2007</p> <p>March 2007</p> <p>September 2007</p> <p>April 2008</p>	<p>IPCT</p> <p>Nurse Consultant / Matrons</p> <p>DIPC / IPCT / Surgeons</p> <p>IPCT / DIPC</p>

AREA	ACTION REQUIRED	PROGRESS	PROGRESS	RESPONSIBILITY
<p>Saving Lives¹ <i>Ensure effective auditing of infection control practices throughout the Trust.</i></p> <p>CNST STANDARD² (1.2.8) (2.2.8) (3.2.8) Competent and Capable Workforce</p>	<p>1. ICNA audit tools used^{1 2}.</p> <p>2. Audit tools supported by introduction of HII tools for areas below 85%^{1 2}</p> <p>3. Develop Directorate action plans in response to audit findings^{1 2}.</p> <p>4. Develop and feedback antimicrobial data to clinicians^{1 2}.</p>	<p>Audit programme agreed by ICC^{1 2}.</p> <p>Develop in line with organisational restructuring^{1 2}.</p> <p>Visit to RBH to review arrangements for collection and dissemination of antimicrobial data to clinicians^{1 2}.</p> <p>Develop robust feedback to clinicians following review of antibiotic policies^{1 2}.</p>	<p>Ongoing</p> <p>September 2007</p> <p>May 2007</p> <p>January 2008</p>	<p>Gill Payne / Clinical audit / Audit committee.</p> <p>IPCT</p> <p>Dr Clements/Robin Parsons/ Anne Smith</p> <p>Dr Clements / Robin Parsons</p>
<p>Saving Lives¹ <i>Ensure that all Trust employees have a programme of education and training.</i></p> <p>CNST STANDARD² (1.2.8) (2.2.8) (3.2.8) Competent and Capable Workforce</p>	<p>Antibiotic policy review. Implementation to incorporate education strategy for Doctors and Clinicians with prescribing responsibilities¹.</p> <p>Review of clinical competencies to meet preceptorship programme. Need to align programme to Junior Doctors training¹.</p>		<p>January 2008</p> <p>April 2008</p>	<p>Consultant Microbiologists / Robin Parsons</p> <p>IPCT</p>

AREA	ACTION REQUIRED	PROGRESS	PROGRESS	RESPONSIBILITY
<p>Saving Lives¹ <i>Review the patient journey for planned and emergency admissions to reduce the risk or transmission of infection by minimising the movement of infected patients.</i></p> <p>CNST STANDARD 4² (1.4.9) Clinical Care</p>	<ol style="list-style-type: none"> 1. Develop guidance on management of elective and emergency patients to reduce the risk of MRSA transmission¹. 2. Development and implementation of Norovirus guidance to reduce the risk of transmission of patients who present with gastroenteritis.¹ 3. Develop Risk Tool in conjunction with CSMT for transfer of patients with hierarchy of risk.¹ 4. Duty to ensure infection rates are available to the public². 5. Duty to ensure policies available of internet² 	<p>Developed new MRSA policy advising on segregation of patients and MRSA screening/ decolonisation¹. Evidence of consultation between orthopaedic/ surgical/ ITU clinicians¹.</p> <p>Trust Internet site redesign to incorporate IPC section with current rates of infection².</p>	<p>June 2008</p> <p>January 2007</p> <p>September 2008</p> <p>June 2007</p>	<p>IPCT / Directorate clinicians</p> <p>IPCT</p> <p>IPCT / CSMT</p> <p>Nurse Consultant</p>
<p>Saving Lives¹ <i>Review the status of the built environment and the effectiveness of the management services, including cleaning, in order to provide a clean and safe environment for patient care.</i></p>	<ol style="list-style-type: none"> 1. Improve audit programme of the environment¹. 2. Audit compliance against national cleaning standards¹. 3. Increase IPCT involvement with changes to cleaning schedules¹. 		<p>July 2007-ongoing</p> <p>September 2008-ongoing</p>	<p>DIPC / Matrons / Housekeeping Manager / Nurse Consultant</p> <p>Directorate Manager/ IPCT</p>

AREA	ACTION REQUIRED	PROGRESS	PROGRESS	RESPONSIBILITY
<p>Saving Lives¹ <i>Implement robust Trust wide policies for decontamination to ensure that patients will not get infected by inadequately decontaminated instruments, including but not limited to surgical instruments and endoscopies.</i></p> <p>CNST STANDARD 4² (1.4.9)(2.4.9) (3.4.9) Clinical Care</p>	<p>Review of washer /disinfection machines in SSD that are non compliant with HTM 2030 and EU directives¹².</p> <p>Review of decontamination policy¹².</p> <p>Review of Core policies to meet requirements of Code of Practice²</p>	<p>Risk assessment developed by strategic group following decontamination meeting.</p> <p>Options presented for consultation</p>	<p>May 2007</p> <p>May 2007</p> <p>May/June 2007</p> <p>December 2007</p>	<p>Estates Manager / Endoscopy Manager / Nurse Consultant IPC / Authorised Person</p> <p>Directorate Manager</p> <p>IPCT / DICF</p> <p>IPCT</p>