

INFECTION PREVENTION
&
CONTROL

ANNUAL REPORT

2013-14

Northern Devon Healthcare NHS Trust
incorporating community services in Exeter, East
and Mid Devon



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Abbreviations:

- AWG Antibiotic Working Group
- CAUTI Catheter associated urinary tract infection
- CDI *Clostridium difficile* Infection
- CPE Carbapenemase Producing Enterobacteriaceae
An organism which is resistant to all penicillin-related antibiotics and, usually, most other antibiotics
- DIPC Director of Infection Prevention & Control
- GRE Glycopeptide resistant enterococcus
A form of the organism, enterococcus, which is resistant to the glycopeptide antibiotics, vancomycin & teicoplanin
- HCAI Healthcare associated infection
- HCW Healthcare worker
- IPCN Infection Prevention & Control Nurse
- IPCC Infection Prevention & Control Committee
- IPCT Infection Prevention & Control Team
- MRSA Meticillin resistant *Staphylococcus aureus*
A form of the common organism *Staphylococcus aureus* which is resistant to penicillins and related antibiotics, but can usually be treated by a range of other antibiotics, both tablets and injection
- MSSA Meticillin sensitive *Staphylococcus aureus*
The usual form of the common organism *Staphylococcus aureus* which is sensitive to penicillins and related antibiotics
- NDDH North Devon District Hospital, part of NDHT
- NDHT Northern Devon Healthcare NHS Trust,
incorporating community services in Exeter, East and Mid Devon
- PLACE Patient-Led Assessments of the Care Environment
- WTE Whole Time Equivalent

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1 Executive summary:

Infection Prevention & Control has been a high priority throughout the year for NDHT. Key points for NDHT in 2013-14 were:

- A further reduction in the rates of *Clostridium difficile*.
The number of *Clostridium difficile* cases attributed to NDHT decreased from 13 to 10 in 2013-14. The total number of *Clostridium difficile* cases detected in the Trust and North Devon has fallen from 52 in 2012-13 to 35 in 2013-14.
- There were 2 MRSA bacteraemias assigned to the Trust in 2013-14. This means the Trust has a higher rate than for England. If the previous 2 years, when there were no such infections, are taken in to account, then the rate for NDHT is significantly below the rate for England.
- The Trust has remained within its limit set by the Department of Health for the number of *Clostridium difficile* cases acquired in NDDH. There were 10 *Clostridium difficile* cases against a limit of 10, in 2013-14.
There were 2 MRSA bacteraemias assigned to the Trust in 2013-14. There is an expectation from the Department of Health that there should be no healthcare acquired MRSA bacteraemias.
- Hand hygiene compliance across the Trust has remained consistently high. Audit shows that overall compliance remained over 95% for the second year. The Trust is continually working towards achieving 100% compliance.
- The Trust Development Authority (TDA) carried out a review of the Trusts infection prevention and control service in December 2013. The review covered a number of areas including: leadership, mandatory training, *Clostridium difficile* management, antimicrobial stewardship, root cause analysis process, decontamination, environmental & equipment cleanliness and safe management of water.
The report stated:
In summary, there is a great deal of work being undertaken by the Trust to develop and strengthen the IP&C service and support a reduction in the HCAI. There is clear engagement in this agenda by the executive team coupled with a strong ambition to deliver high quality safe care to patients.
- Two members of the Infection Prevention and Control Team left the Trust over 2013-14. The departure of these experienced nurses, who worked, part time, for the team at band 8b and band 7, has reduced the capacity of the team to develop the service over this time. An appointment to a full time nurse at band 6 is expected in 2014.

2 Introduction

In 2013-14 the Infection Prevention & Control Team (IPCT) provided a service to Northern Devon Healthcare NHS Trust incorporating community services in Exeter, East and Mid Devon (NDHT). In addition a service was provided via a SLA to Devon Partnership Trust and South West Ambulance Trust. The IPCT worked closely with Devon PCT, Public Health England, and Stratton Hospital in Cornwall. In November 2013 the SLA with the South West Ambulance Trust was terminated.

From April 2011 NDHT has responsibility for community hospitals in Eastern Devon. Part of the Infection Prevention & Control service to the Eastern locality was supplied by the team at the Royal Devon & Exeter Hospital via a service level agreement with NDHT.

3 Description of infection prevention & control arrangements

Staffing

All Consultant Medical Microbiologists contribute medical input to the IPCT. One is the Infection Control Doctor and Joint Director of Infection Prevention & Control (DIPC) for the Trust. Another of the Consultant Medical Microbiologists is the antibiotic stewardship lead for the Trust and chairs the Antimicrobial Working Group.

The Director of Nursing is also joint DIPC. The DIPCs are directly responsible to the Chief Executive for Infection Control issues within the Trust and report directly to the Trust Board. The Director of Nursing left the Trust in January 2014. A substantive new appointment to the post has now been made.

The Infection Control Team is available to provide advice 24 hours a day. The out of hours service is provided by the Consultant Medical Microbiologist on call.

4 Infection Prevention & Control Team

The members of staff specifically employed on 1st April 2013 to deliver infection prevention & control services include:

Band 8b	0.7 wte	Clinical Manager Infection Prevention & Control & Tissue Viability
Band 8a	1.0 wte	Lead Infection Prevention & Control Nurse
Band 8a	1.0 wte	Lead Infection Prevention & Control Nurse
Band 7	1.0 wte	Clinical Nurse Specialist Infection Prevention & Control
Band 7	0.61 wte	Clinical Nurse Specialist Infection Prevention & Control
Band 3	0.64 wte	Secretary
Medical	0.2 wte	Infection Control Doctor/ Consultant Medical Microbiologist Joint Director of Infection Prevention and Control
Medical	0.1 wte	Consultant Medical Microbiologist, Antibiotic Stewardship Lead

Over the course of 2013-14 the individuals in the 0.7wte Band 8b and the 0.61wte band 7 posts have left the Trust. There has been agreement to appoint a whole time band 6 Infection Control Nurse to the team. It is anticipated that this post will be filled in the first half of 2014-15.

5 Infection Prevention & Control Committee (IPCC)

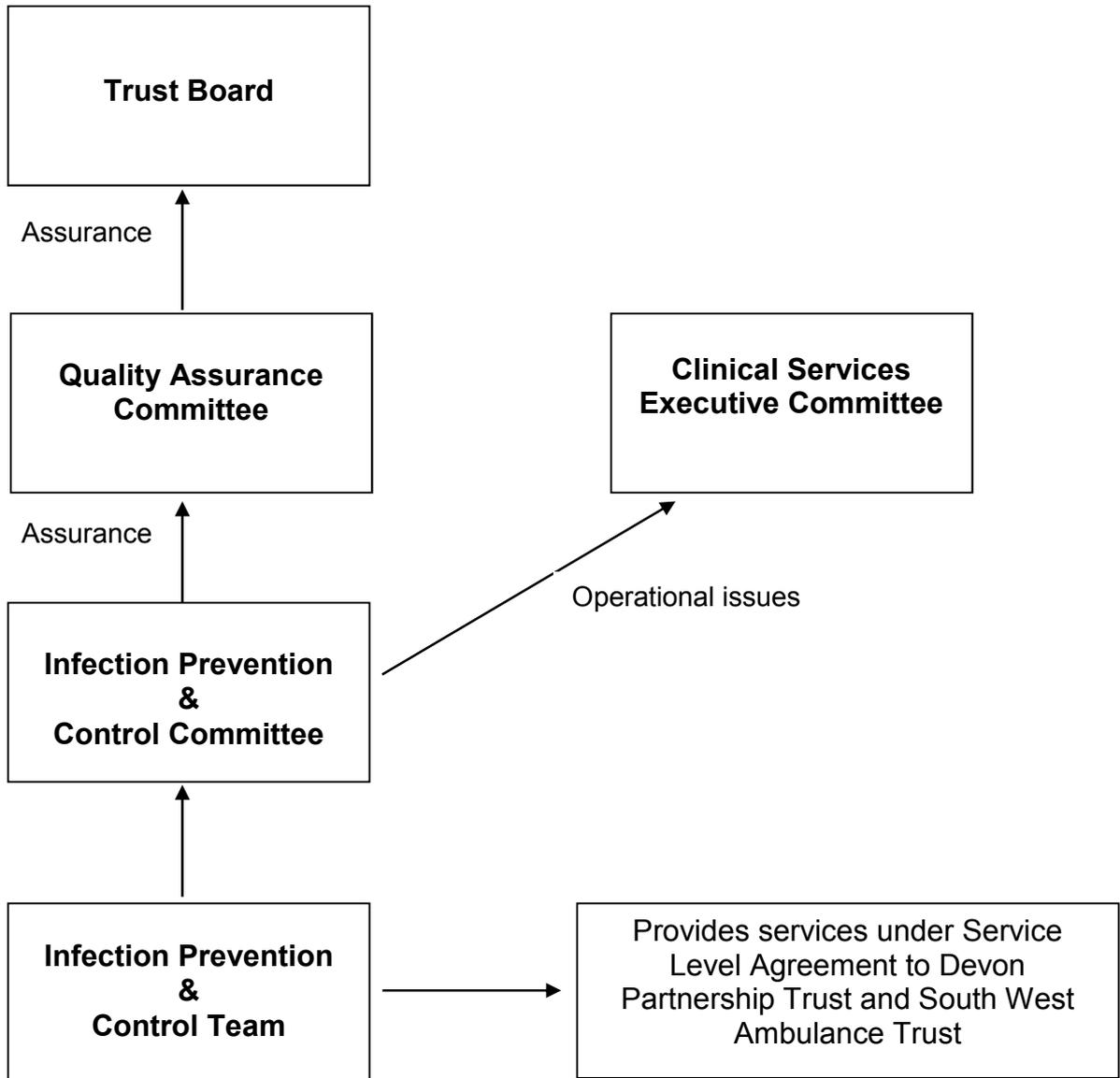
There is an Infection Prevention & Control Committee for the Trust. There are several sub-committees which report to the IPCC: Engineering Controls Group, Facilities Group, Matron's Charter Group, Catheter Associated Urinary Tract Infection Prevention Group and Decontamination Group. The IPCC receives reports from the Antibiotic Working Group.

The IPCC has representation from across the Trust and is chaired by the Director of Nursing, who is also the joint DIPC. The IPCC is a standing committee accountable to the Quality Assurance Committee which is a sub-committee of the Trust Board. The minutes are available on the Trust intranet and the minutes are sent to the Quality Assurance Group. The Infection Prevention & Control annual report is sent to the Quality Assurance Committee and the Trust Board and is also available to the public on the Trust website.

IPCC membership

- Director of Nursing/DIPC (Chair)
- Head of Professional Practice/ Assistant Director of Nursing
- Infection Control Doctor/Director of Infection Prevention and Control
- Clinical Manager Infection Control & Tissue Viability
- Lead Nurse Infection Prevention and Control (North)
- Lead Nurse Infection Prevention and Control (East)
- Infection Prevention & Control Nurse (covering eastern locality SLA)
- Consultant Microbiologist (to cover Antibiotic Stewardship in both Northern and Eastern localities)
- Facilities Clinical Services Manager
- Facilities Manager
- Senior Occupational Health Advisor
- Health Protection Nurse
- Associate Medical Director
- Divisional Representatives for
 - Medical Specialties Division
 - Surgical Specialties Division
 - Health & Social Care Division
 - Specialist Services Division
 - Community Hospitals Division
 - Clinical Support Services Division
 - Emergency Services Logistics and Resilience Division

**NDHT ORGANISATIONAL CHART OF
INFECTION PREVENTION & CONTROL ARRANGEMENTS**



Director of Infection Prevention and Control:

The post is held jointly by the Director of Nursing & Infection Control Doctor
Reports directly to Trust Board and Chief Executive

Member of Infection Prevention & Control Committee and Quality Assurance Committee

Leads Infection Prevention & Control Team

6 Reporting line to the Trust Board

Both joint DIPCs report directly to the Trust Board, as detailed in their job descriptions. One joint DIPC is Director of Nursing and is a member of the Trust Board.

7 Links to other groups and committees

Links to Prescribing and Formulary Committee

The Consultant Microbiologist (antibiotic stewardship lead) is a member of the Drugs, Transfusions and Therapeutics Group and the IPCC. The Antibiotic Working Group is a subgroup of Drugs, Transfusions and Therapeutics Group with authority to make decisions regarding antibiotic use in the Trust. It is chaired by the Consultant Medical Microbiologist (antibiotic stewardship lead) and the membership includes Consultant Medical Microbiologists (who are part of the IPCT) and pharmacists (including the Director of Pharmacy and the Antibiotic Pharmacist). Further details are given in Antimicrobial Prescribing section.

Links to Clinical Governance/Risk Management/Patient Safety

The IPCC is a sub-group of the Quality Assurance Committee and reports to it with respect to governance issues. The minutes, annual plan, annual report and terms of reference are all sent to the Quality Assurance Committee. The Director of Nursing/ joint DIPC and Clinical Manager Infection Prevention & Control & Tissue Viability are members of the Quality Assurance Committee. The lead IPCN is a member of the Trust's Health & Safety Committee and the Patient Safety Operational Group. The Director of Nursing/ joint DIPC is a member of the Safer Care Delivery Committee.

8 Link Practitioners

Link Practitioners are health care professionals, one per ward or department, who have a particular interest in Infection Control. They act as an initial point of contact for Infection Prevention & Control enquiries in the work area.

9 DIPC reports to the Trust Board

Infection Prevention & Control activity, including Trust apportioned cases of *Clostridium difficile* and MRSA bacteraemia, is included in the Performance Report which is a standing agenda item at Trust Board.

The Annual Report was presented to the Trust Board.

10 Budget allocation to infection control activities

The Infection Prevention & Control budget covered pay for nurses and administrative staff but not medical staff, who are funded via Pathology. The budget funds staff to the level indicated in the staffing structure. The non-pay budget is £10,183

11 HCAI statistics including results of mandatory reporting

11a MRSA bacteraemia

There were 5 MRSA bacteraemias identified by the Trust in 2013-14. Two of these were apportioned to NDHT, that is following investigation, using the criteria from Public Health England, they occurred whilst receiving care at NDHT. This is an increase from last year when no MRSA bacteraemias were detected. This gives a rate of about 2 cases per year per 100,000 bed days, which is about twice the rate in England. But if the last 3 years are considered, the rate in the Trust is about 0.7 cases per year which is below the rate for England.

	MRSA bacteraemias detected		DH limit for MRSA bacteraemias	
	Total MRSA bacteraemias	Apportioned to NDHT	Total number	Apportioned to NDHT
2005-06	18	10*	19	
2006-07	22	11*	15	
2007-08	15	6 ⁺	12	
2008-09	7	2 ⁺	12	
2009-10	4	1 ⁺	8	
2010-11	6	3 ⁺		1
2011-12	4	0 ⁺		1
2012-13	0	0 ⁺		1
2013-14	5	2 ⁺		0

* NDHT criteria, + Dept of Health criteria

MRSA bacteraemias detected in NDHT and external limits applied to these categories

11b MRSA colonisation

The IPCT monitors the numbers and locations of patients newly diagnosed as colonised with MRSA. The figures are shown in the table. The national screening programme to screen all admissions to hospital has been implemented. Following discussions with Devon PCT, day-case admissions, with the exception of orthopaedic cases, have not been routinely screened from 2010. In 2014 orthopaedic day cases have not been routinely screened.

The number of new MRSA colonisations detected in 2013-14 continues to fall despite a higher number of admissions being screened in the last few years as part of the national screening programme. The fall in the number of patients newly diagnosed with MRSA colonisation reflects the reduction in the spread of MRSA as a result of this programme to screen and suppress patients for MRSA.

	2005	2006	2007	2008	2009	2010	2011	2012	2013
	-06	-07	-08	-09	-10	-11	-12	-13	-14
NDHT Northern Locality	212	149	203	189	233	247	200	137	106
NDHT Eastern locality							61	31	18
Community	244	239	176	126	100	96	60	44	33
Total	456	388	379	315	333	343	321	212	157

New MRSA colonisations

11c MSSA bacteraemia

Since January 2011 trusts have been required to report all cases of MSSA bacteraemia, in a similar way to the way MRSA bacteraemias have been reported for some years. NDHT have been investigating these bacteraemias for some time, with a more detailed examination of cases that are linked to Trust care.

In 2013-14 there were 28 cases of MSSA bacteraemia. 7 of these samples were taken more than 2 days after admission to hospital and are therefore likely to be hospital acquired. There were also 7 such cases in 2012-13.

At present there are no limits set by external bodies for these bacteraemia

11d Glycopeptide resistant enterococcus (GRE) bacteraemia

There were 2 episodes of glycopeptide resistant enterococcus (GRE) bacteraemias in 2013-14.

One of these episodes was related to a urine infection whilst the other episode was of uncertain origin and could have been a contaminant.

There were an increased number of GRE infections this year. See comments in section 12

GRE are organisms that are resistant to some commonly used antibiotics, but can be treated with other antibiotics. They do not usually cause serious infections unless the individual is severely immunocompromised. GRE bacteraemias are more commonly associated with renal and haematology units where there are immunocompromised patients and glycopeptide antibiotics are used frequently.

	2005 -06	2006 -07	2007 -08	2008 -09	2009 -10	2010 -11	2011 -12	2012 -13	2013 -14
GRE bacteraemias	1	2	4	0	0	0	0	0	2

GRE bacteraemias

11e Clostridium difficile

The IPCT monitors all cases of *Clostridium difficile* infection (CDI). These are individuals who have diarrhoea and have *Clostridium difficile* toxin (CDT) found in their stools. Since January 2004 the Department of Health has required Trusts to report all cases from people over the age of 65 years, and from April 2007 all cases from those aged over 2 years of age.

Risk factors for acquiring CDI include increasing age (especially over 65 years), other medical problems, bowel surgery and antibiotic use.

The IPCT continues to investigate all cases *Clostridium difficile* infection especially prior antibiotic use and links to other cases. The results of this analysis are discussed at the IPCC and the antibiotic working group so that strategies to improve practice can be implemented.

Guidance from the Department of Health on the testing and reporting of *Clostridium difficile* was issued in early 2012 with the changes in reporting to be implemented by April 2012. Prior to April 2012 many trusts, including NDHT in October 2010, introduced more sensitive testing for *Clostridium difficile* toxin. However there was variation between Trusts in both the testing but also particularly in the reporting of *Clostridium difficile*. This made comparison between trusts impossible based on the reported numbers.

Stool samples from Eastern locality hospitals are sent to the Microbiology Department of the Royal Devon & Exeter Hospital for testing, whilst samples from the Northern locality are tested at NDDH. Reporting of positive cases is performed by the testing organisation.

From April 2012 samples from all NDHT patients, whether tested at NDDH or Royal Devon & Exeter Hospital will be tested and reported according to the new guidelines. The new guidance also refers to secondary tests for *Clostridium difficile*. Positive results from these secondary tests are not required to be reported nationally, however such cases are reviewed medically and monitored by the IPCT.

This variation in testing and reporting cases of *Clostridium difficile* has resulted in the reported number of cases being higher in 2010-11 and 2011-12. Comparisons using these years will not be accurate.

NDHT, through the Antibiotic Working Group, develops guidelines for antibiotic use in the Trust which reduces the use of antibiotics which are at highest risk for developing *Clostridium difficile*. Each case of *Clostridium difficile* which develops in the Trust is investigated to understand if management of the case, including prior antibiotic use, is in accordance with guidelines. Each case of *Clostridium difficile* who is an in-patient is reviewed regularly by clinicians and IPCNs, and weekly by a multidisciplinary group, to ensure optimal management.

The Department of Health set NDHT a limit of no more than 10 acute hospital acquired cases in those over 2 years of age for 2013-14. There were a total of 10 such cases in 2013-14; this is a decrease from 13 in 2012-13.

Cases of <i>Clostridium difficile</i> acquired in NDDH							
	2007/8	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Total reported cases	77	53	23	27	16	13	10

The total number of *Clostridium difficile* cases reported from NDHT fell from 52 to 35 in 2013-14.

The number in the Northern locality decreased from 36 to 27 and the number from the Eastern locality fell from 16 to 8.

Total cases of <i>Clostridium difficile</i> infection									
	2005/6	2006/7	2007/8	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Northern Locality	226	126	111	83	60	41	51	36	27
Eastern Locality							38	16	8
Total NDHT							89	52	35

11f Surgical site infection surveillance

The Trust is mandated to perform surveillance of surgical site infections for one type of orthopaedic surgery for at least one quarter (module) each year. This year the procedure of total hip replacement was chosen. No infections were detected during the patients' initial admissions or any re-admission. 103 procedures were monitored producing an infection rate of 0% which is below the national rate of 0.6%.

Surveillance of patients following surgery is very labour intensive so as the IPCT staffing was reduced over the year only one surveillance module was carried out. The small numbers of operations and infections mean that comparisons with the national rate will be unreliable.

Surgical procedure	No. of operations monitored 2013-14	No. of infections detected 2013-14	NDDH infection rate for 2013-14 module (%)	NDDH infection rate for last 2 modules (%)	National infection rate (%)
Hip replacement	103	0	0	0.5	0.6

12 Untoward incidents including outbreaks

Viral Gastro-enteritis outbreaks

In common with other Trusts across the country NDHT in 2013-14 experienced fewer outbreaks of viral diarrhoea and vomiting in the last year compared to recent years. There were a total of 18 outbreaks where either a single bay or a whole ward was affected. In 4 of these outbreaks Norovirus was confirmed as the causative organism. The IPCT monitor affected wards at least once a day and provide advice and support to the ward staff.

When there are a significant number of ward closures, the Infection Prevention & Control Team participate in daily bed meetings at NDDH. The meetings with the Clinical Site Managers and relevant Duty and Divisional Managers ensured expert advice was available to guide operational decisions. There is a review following each significant episode of ward closures to improve management for future outbreaks.

Glycopeptide Resistant Enterococcus (GRE)

GREs are strains of the organism Enterococcus that are resistant to one class of antibiotics that can be used to treat infections. There are other antibiotics that can be used to treat infections if required. Enterococci are organisms that live in the bowel and do not commonly cause infections in people with a normal immune system. GRE are more commonly found in renal and haematology units where glycopeptide antibiotics are used more frequently. GRE do occur naturally but can spread from person to person. In North Devon there are usually 5-10 clinical samples per year from which GRE are identified. In the first quarter of 2013 GRE were isolated from 5 samples and typing showed that 3 of

the isolates were related. Screening of patients in NDDH showed that other patients were carrying the same strain, however most were not infected. Investigations by the IPCT did not reveal any link to a common source to account for this. Over 2013-14 GRE were isolated on 48 occasions from clinical samples. Over half of these samples were of urine and most of these patients did not require antibiotic treatment. The numbers of GRE isolated from clinical samples has decreased and the IPCT continue to monitor the situation.

13 Antimicrobial resistance

MRSA and GRE data are mentioned elsewhere.

There are many different resistance mechanisms that bacteria have to render antibiotics ineffective. Amongst the group of organisms known as coliforms two of the most significant resistances are to gentamicin and β lactam (penicillin class) antibiotics (extended spectrum β lactamase (ESBL) producing organisms). Not all coliform organisms are tested for these resistance mechanisms, so the number of coliforms found to be resistant depends, to a large degree, on the numbers that are tested and the way in which the laboratory reports the results. In 2011 and 2012 the testing for this resistance was significantly increased which will account for most, if not all, of the increase in the number of resistant organisms detected from 77 to 152 to 454 between 2011 and 2013. The fall in the number of recorded resistant coliform isolates in 2013-14 probably reflects a change in the reporting practice of the laboratory rather than a true fall in the incidence of these organisms. The changes in laboratory practice will improve the management of individual patients.

The majority of these organisms were detected in urine specimens from patients in the community. These organisms may be resistant to oral antibiotics but remain susceptible to certain intravenous antibiotics. This can make treating simple urinary tract infections difficult as a patient may need admitting for injections to treat an infection that could otherwise have been treated with tablets at home. The spread of these organisms from person to person is prevented by the use of standard infection control precautions which are applied to every patient under the Trust’s care.

Resistant coliform isolates identified in North Devon							
2006	2007	2008	2009	2010	2011	2012	2013
-07	-08	-09	-10	-11	-12	-13	-14
34	57	64	103	77	152	454	223

A further type of antibiotic resistance in coliforms, known as carbapenemase producing Enterobacteriaceae (CPE), is becoming more prevalent worldwide. These organisms are resistant to all penicillin-type antibiotics and, usually, to most other antibiotics as well. The Department of Health has issued guidance on detecting and managing individuals with these organisms which the Trust is implementing. So far, although other parts of England have detected these organisms, none have been isolated in NDHT.

14 Hand hygiene and aseptic protocols

Hand Hygiene & Implementation of 'cleanyourhands' campaign

Hand hygiene amongst healthcare worker remains at the core of prevention of infection and prevention of the spread of organism to patients.

Audits of hand hygiene compliance are undertaken every month by the infection control link practitioners in clinical areas. The results are fed back and displayed on notice boards at ward and department entrances. The results are discussed every month at IPCC where directorates take responsibility for improving compliance in their area. Hand hygiene compliance forms part of the Trust performance report which is reviewed by the Trust Board.

The audit results show that overall compliance been maintained at over 95% during the year. However analysis of areas and staff groups shows that compliance in some areas is greater than others. Areas with lower compliance are monitored through the IPCC. The aim is to demonstrate 100% compliance and to have continually improving results as the Trust approaches this goal.

Application of aseptic no-touch clinical protocols, IV catheters & urinary catheters

Policies are in place for these areas which take into account the national EPIC guidance published in 2001 & 2007, they also comply with the requirements of the Health Act 2008 (The Code of Practice for the Prevention and Control of Health Care Associated Infections). The EPIC guidelines were revised in 2013 and the policies are in the process of being revised to reflect the changes. The Patient Safety Team undertakes audits of these protocols and feeds results back to directorates and the Patient Safety Operational Group.

15 Decontamination

There is a central sterile services department situated next to the main theatre complex which processes all Trust items for sterile reprocessing. There are 3 double endoscope washer-disinfectors in the refurbished endoscopy suite.

16 Cleaning services

Services are contracted out to Sodexo and monitored through a partnering agreement. Sodexo retained the contract to provide services to NDHT after a tendering process in 2013. There are meetings three times a year of the Partnering Board where the Trust and Sodexo formally discuss the cleaning arrangements. In addition there is a good collaborative working relationship between Trust staff including the IPCT and the staff of Sodexo. There are 'zone co-ordinators' that liaise with ward managers concerning any local cleaning issues. The IPCT liaise with the Sodexo team should any increased cleaning be required, such as during outbreaks.

A gap analysis by the IPCT with the Trust Facilities team against the national cleaning standards was undertaken to ensure that infection control was paramount when deciding on choices about cleaning frequencies.

The ICPT worked successfully with Sodexo and Trust Facilities managers on examining how to blend the '5 moments' of hand hygiene standards with housekeeping routines.

PLACE (Patient-Led Assessments of the Care Environment)

The assessments performed by the patient environment action teams (PEAT) in 2012 have been replaced by Patient-Led Assessments of the Care Environment (PLACE). Following the assessment in 2013 the wards in NDHT achieved scores of:

Site	Cleanliness %	Food %	Privacy, Dignity & Wellbeing %	Condition, Appearance & Maintenance %
AXMINSTER	92.99	76.20	60.00	76.32
BIDEFORD	93.07	82.53	75.69	73.48
BUDLEIGH SALTERTON	88.16	73.11	71.58	69.74
CREDITON	88.19	80.84	68.65	67.07
EXMOUTH	82.82	78.71	81.56	66.23
HOLSWORTHY	87.83	75.40	82.11	69.18
HONITON	90.86	82.42	74.80	78.82
NORTH DEVON DISTRICT HOSPITAL	94.99	80.41	85.25	83.61
OKEHAMPTON	92.42	78.73	77.50	73.66
OTTERY ST MARY	86.91	81.87	74.78	84.78
SEATON	95.64	70.92	76.76	75.33
SIDMOUTH	83.64	76.42	71.56	70.83
SOUTH MOLTON	92.66	84.87	75.56	86.67
TIVERTON	86.68	84.63	79.35	81.74
TORRINGTON	89.20	79.22	73.51	81.58
TYRRELL	93.43	79.56	63.03	75.00
WHIPTON	91.02	86.48	82.69	80.32

17 Audit & surveillance

Infection control audits are co-ordinated through the Infection Prevention & Control Team and Matron's Charter Group on a rolling annual programme. The Patient Safety Team also performs regular audit. Audit results are discussed by IPCC and the Matron's Charter.

Audit and surveillance undertaken include:

- Hand hygiene audit – see Hand Hygiene section.
- Patient-Led Assessments of the Care Environment (PLACE) cleanliness inspections
- Compliance with MRSA screening
- Blood culture contamination
- MRSA suppression
- Commode cleanliness
- Urinary catheter care
- Patient isolation
- Insertion and care of peripheral intravenous lines
- Compliance with WHO surgical checklist
- Urinary catheters- prevalence and associated infections

18 Matron's Charter

The Matron's Charter Groups for the Eastern and Northern Localities have combined to a single Matron's Charter Group for the Trust which meets monthly and reports to the IPCC. The group is chaired by the Assistant Director of Nursing and includes the IPCT, senior nurses, representatives from facilities and Sodexo. The agenda of the group is set by the Charter and therefore has a strong emphasis on cleanliness.

The groups produce a monthly bulletin which follows each meeting. The bulletin includes key points from the previous meeting as well as other relevant information on cleanliness and infection control topics that need to be relayed to staff.

19 Antibiotic prescribing

Antibiotic Stewardship Report: Lead Consultant for Antimicrobial Stewardship

Antibiotic pharmacist

There has been no antibiotic pharmacist in post since October 2013. Initial attempts to replace as a band 8 failed to attract any suitable candidates, and the position was re-advertised as a band 7. This was with the agreement with the pharmacy department that existing band 8 pharmacists would include an element of antimicrobial stewardship in their job descriptions. There was a successful appointment into this post in February 2014. There have been significant delays in the HR process since then. The appointee should finally be in post in June 2014.

Summary of antibiotic usage report and recommendations (October 2013)

Data from pharmacy records and prevalence surveys support general adherence to guidelines. With the exception of co-amoxiclav, usage of antibiotics that are high risk for causing *C. difficile* is low.

Notable reductions in some antibiotic usage:

- Reduced co-amoxiclav and carbapenem usage in medicine
- Reduced cephalosporin usage in surgery / orthopaedics / theatres
- Reduced co-amoxiclav usage in Obstetrics & Gynaecology

Areas of concern:

- General antibiotic prescribing in A+E, but especially co-amoxiclav
- Reasons for general increase in antibiotic prescribing in surgery
- Increased usage in community hospitals
- Carbapenem usage in paediatrics

Suggested actions to address concerns:

- Increased liaison with A+E
 - Are guidelines being followed (especially for community acquired pneumonia and urinary tract infections)?
 - Is take home pack availability driving choices?
 - Possibility of joined guidelines with RD+E
- Increased liaison with general surgery
 - Consider additional support from infection team to surgical directorate. For example to attend Wednesday / Friday grand rounds
- Review use of carbapenems in paediatric guidance.
- Review community hospital prescribing and accessibility to guidelines

Progress on actions June 2014

Most of this work will require input from the antimicrobial pharmacist and is on hold.

Regional point prevalence survey 2013/14

The Trust participated in the South West Regional Point Prevalence Survey.

Summary of the findings:

- 25% of NDDH patients are on antibiotic compared to a regional average of 33%
- NDDH is the highest user of macrolide antibiotics
- 100% of antibiotic prescriptions in NDDH were the correct dose and route
- Less than 50% of antibiotic prescriptions in NDDH had stop or review date compared to a regional average of 80%
- 60% of prescriptions had indication documented on chart, with another 34% in the notes – this is in line with many Trusts, but well below what can be achieved (UHB and Gloucester had over 90% charts with documented indication)

Actions required when antibiotic pharmacist in post

1. Review use of macrolides
2. Target documentation in charts

Current state of antibiotic guidelines

Detailed guidelines are now available for all common conditions, with the exception of ENT. We now have contacts within the ENT team, and are looking to develop these over the coming months.

Guidelines for surgical prophylaxis are in place for all conditions, except obstetrics and gynaecology.

Draft guidelines are now ready for this, and this is a priority area for completion.

A number of guideline reviews have been completed, and these guidelines have improved referencing to demonstrate compliance with national guidance, and improved auditable standards.

New community guidelines are available. These have been harmonised with guidance from East Devon, and have been included in the new formulary app.

Future structure of Antibiotic Working Group

The Antibiotic Working Group is a sub-group of the Drugs and Therapeutics Group with the power to make decisions regarding antibiotic use within the Trust. The primary purpose of the group is to ensure that antimicrobial prescribing practice throughout the Northern Devon Healthcare Trust is safe, effective, appropriate and economic. It also provides support for implementation of guidance and auditing compliance. The group will ensure appropriate prescribing policies are in place which are in line with best practice and take into account Department of Health guidance. The minutes and the terms of reference of the AWG can be accessed on the Trust intranet.

There will need to be restructuring of this group to ensure appropriate and meaningful input from pharmacy and clinical teams. It is proposed that there will be a number of small sub-groups, comprised of: lead microbiologist, antibiotic pharmacist, specialist pharmacist and clinician, with stakeholder input as required. These groups will review guidelines and provide necessary assurance. A larger Antibiotic Working Group will meet at least annually to provide overall assurance.

20 Performance limits/outcomes

MRSA bacteraemia

There were 2 MRSA bacteraemias apportioned to the Trust in 2013-14. There had been no such cases in the previous 2 years. There is an expectation from the Department of Health that there should be no healthcare acquired MRSA bacteraemias. If the bacteraemias are expressed as a rate then the rate at NDDH in 2013-14 is about twice the rate for England. But if the last 3 years are considered, the rate in the Trust is about 30% below the English rate.

The IPCT perform a 'Post Infection Review' for the bacteraemias in collaboration with the clinical team caring for the patient. This process is defined by the NHS Commissioning Board and identifies any improvements in practice that can be made to reduce the chance of a recurrence. The results of the review are reported to Public Health England and the Infection Prevention & Control Committee. Learning from these reviews is disseminated to health care workers and applied to practice within the Trust.

Clostridium difficile

The Department of Health set NDHT a limit of no more than 10 cases of *Clostridium difficile* acquired in NDDH for 2013-14. There were a total of 10 such cases in 2013-14 which is a fall from 13 cases in 2012-13.

The IPCT continues to investigate with the clinical teams all cases of *Clostridium difficile* infection. The results of this analysis are discussed at the IPCC and the antibiotic working group so that strategies to improve practice can be implemented.

The Health and Social Care Act 2008

(Code of Practice on the prevention and control of infections and related guidance)

The Trust is registered with the Care Quality Commission as fully compliant with the Code.

21 Training activities

Education of the Trust staff in the prevention and control of infection is a very important part of the Trust's strategy in containing the number of HCAs. The IPCT are pivotal in co-ordinating and providing the majority of this education.

Infection Prevention & Control training at induction for staff

At induction every member of staff receives Infection Control training by a member of the IPCT. This ensures that every new member of the Trust is aware of the basic principles of Infection Prevention & Control. Bank and many agency nursing staff receive training before starting work. There is a basic electronic learning package with compulsory question and answer section at the end which is used for junior doctors prior to starting their posts.

Annual Infection Prevention & Control training for staff

All staff are required to undertake regular Infection Prevention & Control updates. For clinical staff this includes an annual face-to-face 'refresher'. Non-clinical staff must complete their eMOT every two years. Training was delivered both by traditional 'face-to-face' methods and by e-learning. The Trust is using the eMOT, which is an on-line assessment of an individual's knowledge of theoretical elements required for their role in healthcare. IPC is one element of the eMOT. Theoretical sessions are also available for staff whose knowledge is not sufficient to complete the eMOT. There are additional practical skills sessions for clinical staff

Doctors represent a particular group with respect to their educational requirements. Despite its importance Infection Prevention & Control is often poorly taught at medical school and doctors often not included in other teaching sessions because of their work commitments and the short-term contract of many junior doctors. All junior doctors receive Infection Prevention & Control training as part of their induction programme. IPC teaching occurs at regular departmental meetings and audit sessions. IPC is part of the mandatory training that all newly qualified doctors receive in their F1 & F2 years.

Staff also receive education about particular aspects of Infection Prevention & Control as, for example, part of training for venepuncture / cannulation or IV drug administration. If a new policy is introduced then specific training is delivered to support this.

Delivery of 'Practice & Principles of Infection Control' course

The Infection Prevention & Control Team delivers Infection Prevention & Control modules at diploma and degree level in partnership with the University of Plymouth. The modules 'Practice & Principles of Infection Prevention & Control', and 'Management of Infection Prevention and Control', provide students with 20 credits at level 2 and 3. They are open to registered nurses in the public and private sectors but the majority of attendees are from the Trust, many of whom are, or become, Link

Practitioners. All members of the IPCT contribute to teaching these modules. The modules were not delivered in 2013-14.

Link Practitioners

Link Practitioners are healthcare workers, usually one per ward or department, who have a particular interest in Infection Prevention & Control. They attend meetings, participate in audit and act as an initial point of contact for Infection Prevention & Control enquiries in the work area.

Education of the IPCT

Members of the IPCT attend educational events throughout the year. These include the Infection Prevention Society annual conference and DH events including those arranged specifically for Directors of Infection Prevention & Control. The IPCNs are members of the regional Health Protection Nurse forum.

22 External reviews

Trust Development Authority

The Trust Development Authority (TDA) carried out a review of the Trusts infection prevention and control service in December 2013. The visit was requested as, at that stage of the year, the Trust had exceeded its profile for the number of *Clostridium difficile* cases. The review covered a number of areas including: leadership, mandatory training, *Clostridium difficile* management, antimicrobial stewardship, root cause analysis process, decontamination, environmental & equipment cleanliness and safe management of water. The report was presented to the IPCC and included a number of recommendations which have been incorporated into an action plan. The action plan is reviewed at each IPCC meeting.

The report stated:

In summary, there is a great deal of work being undertaken by the Trust to develop and strengthen the IP&C service and support a reduction in the HCAI. There is clear engagement in this agenda by the executive team coupled with a strong ambition to deliver high quality safe care to patients. Observations made during the visit identified that there are some inconsistencies in the execution of cleaning, environmental audit and conscious leadership in IP&C at ward level which may provide challenges to reducing CDI performance. I hope that the recommendations made in this report will provide opportunities for the Trust to further develop the IP&C service to enable controls to be strengthened.

Internal Audit

As part of the Trust's Audit Committee annual audit plan, in July 2013 Internal Audit undertook a review of the Trust's compliance with the Hygiene Code (The Health and Social Care Act 2008, Code

of Practice on the prevention and control of infections and related guidance). The audit considered certain aspects of criteria 1, 4, 5, & 9. The audit focussed on

- ensuring there are systems in place to manage and monitor the prevention and control of infection for patients with a catheter
- ensuring that where patients are identified as having or carrying an infection that upon discharge/transfer all necessary information is passed on
- evidence of local surveillance and use of comparative data, where available, in order to monitor infection rates and to assess the risks of infection
- identifying the surgical wound infection surveillance data that is available for patients undergoing surgery at NDDH compared to the national picture

The report was presented to the IPCC and included a number of findings and recommendations which have been incorporated into an action plan. The action plan is reviewed by the IPCC.

The report's main conclusion:

In the main, infection control is well-designed with appropriate policies and monitoring in place. The Trust holds a register of evidence against each of the nine Hygiene Code criteria, however this requires updating. We identified several areas for improvement which, if addressed, will provide clearer evidence that the Trust complies with the Hygiene Code Criteria reviewed.

23 Water services management including Legionella control

The Northern Devon Healthcare NHS Trust has in place through the Facilities directorate a program of control measures to reduce the risk of Legionella and Pseudomonas aeruginosa within the Estate water services. The key document that collates all such processes in place is the “Written Scheme for the Management of Water Services”.

The Trust lead is the named ‘Responsible Person’ for Water services (RPW). The RPW is responsible for the above document and all measures and processes within it. This ensures that all areas of potential risk have been identified with preventative measures in place in order to reduce the risk of Legionella and Pseudomonas aeruginosa. Within the Written Scheme, the draft document “The Water Services Management Policy” defines roles and responsibilities for all individuals involved in the management process. In addition, to support this control process, the Facilities Department liaises closely with other professionals in various disciplines and ensure that the following areas are addressed:-

- That Planned Preventative Maintenance (PPM) is delivered based on Statutory & Mandatory requirements.
- That all the recommended Health & Safety Commission’s good practice guidance is adopted and adhered to.
- That an active and comprehensive control program is in place using a temperature control process (thermal disinfection) to reduce the risk of Legionella and Pseudomonas aeruginosa.
- That there is a regular program of monitoring of the stored and delivered water temperatures across the Trust estate.
- That on an annual basis a full audit of all water services management PPM is performed with a report to the Director of Facilities (DOF).

The purpose of this audit and report is to provide the DOF with assurance and subsequently the Trust Board that all control measures are in place, being carried out and recorded. That all alterations, developments and changes in use affecting the water systems in the Trust are carried with full compliance to the Trust’s Legionella and Pseudomonas aeruginosa control requirements.

Since April 2013 the Trust has formally become the owner of the Eastern estate properties and has increased its estate responsibility with the addition of eleven community hospital sites. All these sites have been assimilated into the Trusts PPM program and are now managed directly by the Facilities maintenance team. Although the service is solely provided by contract, all companies involved follow Trust protocol and are closely managed accordingly.

The developing control requirements to meet the issue of Pseudomonas aeruginosa within augmented care facilities has resulted in the IPCT team and the Facilities Department embarking on PPM and test

regimens that are additional to previous control measures. All such preventative measures are planned and carried out with reference to all good practice guidance available.

The Facilities Department is confident that they have processes in place to ensure that all such measures to manage the safe delivery of water services are working correctly. The infection prevention & control team sanctioned one Legionella sample test (re-HTM 04 guidance) within the last year. The property in question is one of the older locations within the Trusts estate and had experienced a major change in use and occupancy. All tests declared the site water services were clear of any Legionella presence. No other area was identified as requiring the need for Legionella water sampling. In addition there have not been any positive Legionella tests from patients or environmental samples associated with the Trust as a source this year.