

INFECTION PREVENTION & CONTROL

ANNUAL REPORT 2014-15

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



Debbie Bennion

David Richards

Joint Directors of Infection Prevention & Control

Abbreviations:

- AWG Antibiotic Working Group
- CAUTI Catheter associated urinary tract infection
- CCG Northern Eastern and Western Devon Clinical Commissioning Group
- CDI *Clostridium difficile* Infection
- CQC Care Quality Commission
- 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

Contents

1. Executive summary
2. Introduction
3. Description of infection prevention & control arrangements
4. Infection Prevention & Control Team (IPCT)
5. Infection Prevention & Control Committee (IPCC)
6. Reporting line to the Trust Board
7. Links to other groups and committees
8. Link Practitioners
9. DIPC reports to the Trust Board
10. Budget allocation to infection control activities
11. HCAI statistics including results of mandatory reporting
 - 11a MRSA bacteraemia
 - 11b MRSA colonisation
 - 11c MSSA bacteraemia
 - 11d GRE bacteraemia
 - 11e *Clostridium difficile*
 - 11f Surgical site infection surveillance
12. Untoward incidents including outbreaks
13. Antimicrobial resistance
14. Hand hygiene and aseptic protocols
15. Decontamination
16. Cleaning services
17. Audit & surveillance
18. Matron's Charter
19. Antibiotic prescribing
20. Performance limits/outcomes
21. Training activities
22. External reviews
23. Water services management including Legionella control

1 Executive summary:

Infection Prevention & Control has been a high priority throughout the year for NDHT. Key points for NDHT in 2014-15 were:

- A further reduction in the rates of *Clostridium difficile*.
The number of *Clostridium difficile* cases attributed to NDDH decreased from 10 to 9 in 2014-15. The total number of *Clostridium difficile* cases detected in the Trust and North Devon has risen slightly from 35 in 2013-14 to 37 in 2014-15.
- There was 1 MRSA bacteraemia assigned to the Trust in 2014-15. This means the Trust has a rate slightly above the average for England. The total number of MRSA bacteraemias identified in the Trust and North Devon has fallen from 5 in 2013-14 to 1 in 2014-15
- 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 9 *Clostridium difficile* cases against a limit of 16, in 2014-15.
There was 1 MRSA bacteraemia assigned to the Trust in 2014-15. 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 year. The Trust is continually working towards improving compliance with good hand hygiene.
- The CQC inspection of the Trust in 2014 highlighted areas of good practice relating to cleanliness and infection prevention & control. It was reported that staff were 'Bare Below the Elbows' in most areas and noted that staff in all areas of the trust were seen to be washing their hands. The report noted that all areas inspected were clean, tidy and well maintained. It also stated that infection prevention & control processes were generally done well.

The CQC did raise compliance actions relating to infection prevention & control.

The first area related to not all staff being 'bare below the elbows' in clinical areas, especially in the outpatients area. A campaign to raise awareness of the issue was run in August which resulted in improved compliance.

The second area related to the Emergency Department. Several issues were raised which have now been addressed.

- There were a number of changes to the Infection Prevention & Control team in 2014-15. There was an appointment to a full time nurse in Infection Prevention & Control at band 6 and there was also a secondment of a part time nurse at band 6 to the department for 6 months. The Director of Nursing, who is joint DIPC, also left this year: there is interim appointment in post. A replacement antimicrobial pharmacist also joined the Trust this year.

2 Introduction

In 2014-15 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. The IPCT worked closely with Public Health England and Stratton Hospital in Cornwall.

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 March 2015. An interim appointment has been made pending a substantive appointment to the post.

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 in 2014-15 to deliver infection prevention & control services include:

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 6	1.0 wte	Infection Prevention & Control Nurse (in post from August 2014)
Band 6	0.6 wte	Nurse, secondment for 6 months
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

5 Infection Prevention & Control Committee (IPCC)

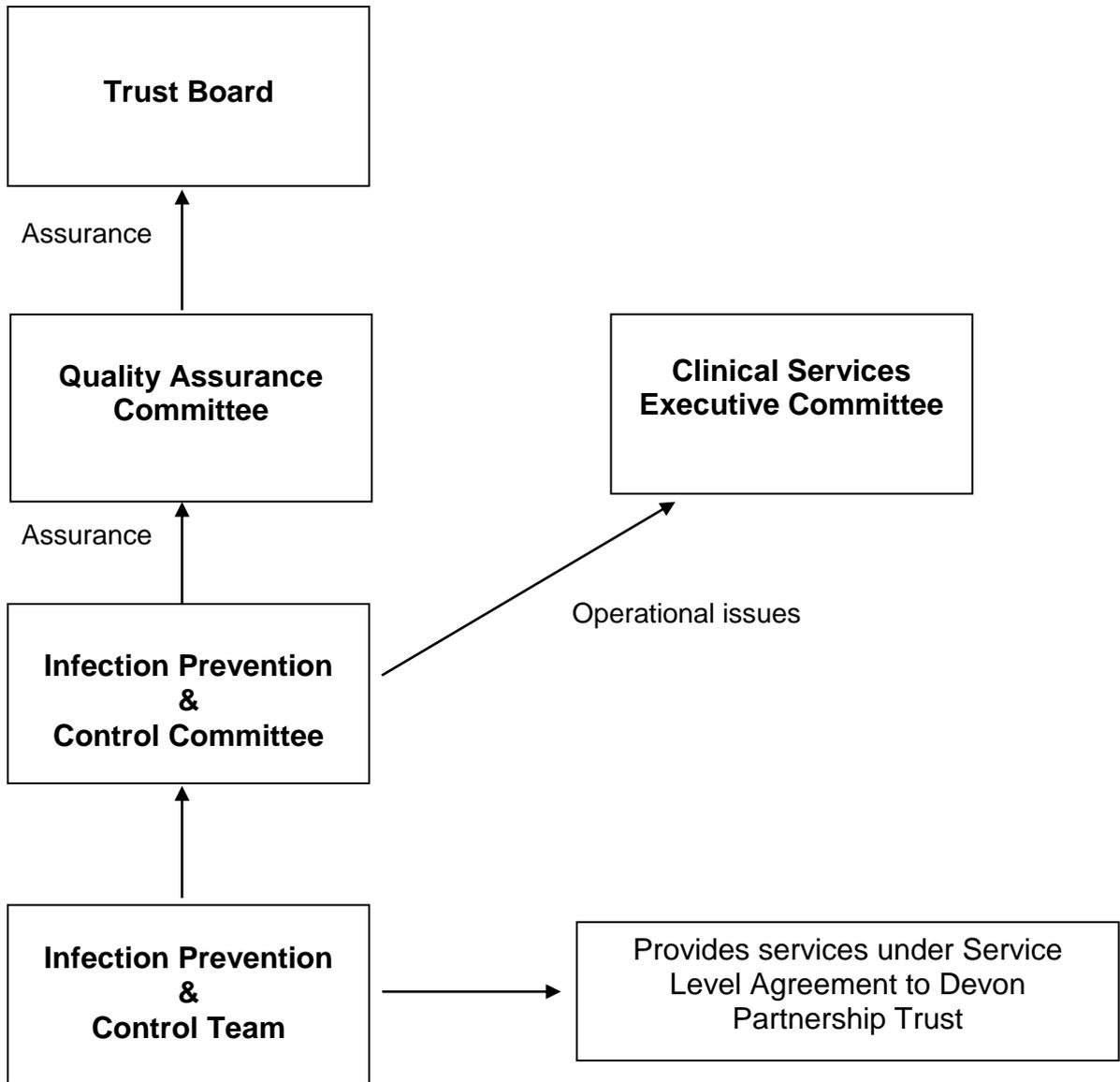
There is an Infection Prevention & Control Committee for the Trust. There are several sub-committees which report to the IPCC: Engineering Controls Group, Facilities Group, Matron's Charter Group and Catheter Associated Urinary Tract Infection Prevention Group. The IPCC receives reports from the Antibiotic 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
- 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 Consultant
- 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 DIPC's 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 the antimicrobial 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 Lead Nurse Infection Prevention & Control 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 administrative staff but not medical staff, who are funded via Pathology. The budget funds staff to the level indicated in the staffing structure and includes the service level agreement with the Royal Devon & Exeter hospital. The non-pay budget is £13,960.

11 HCAI statistics including results of mandatory reporting

11a MRSA bacteraemia

There was one MRSA bacteraemia identified by the Trust in 2014-15. There is an investigation, using the criteria from Public Health England, to determine which trust was caring for the patient when the bacteraemia infection developed. In this case it occurred whilst receiving care at NDHT and has therefore been apportioned to NDHT. This is a decrease from last year when 5 MRSA bacteraemias were detected, two of which were apportioned to NDHT. This gives a rate for 2014-15 of 0.97 cases per year per 100,000 bed days, which is only slightly above the average rate in England (0.93).

	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
2014-15	1	1*		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.

Although the number of new MRSA colonisations detected in NDHT (Northern locality) has risen from 106 to 120 the majority of these cases (109 out of 120, 91%) were detected on the admission screen and so were not acquired during that admission.

The number of new MRSA colonisations detected in 2014-15 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.

The Department of Health has now relaxed the requirement to screen all hospital admissions, but NDHT has decided to continue screening for the majority of categories of patient-admissions because of the benefits.

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
NDHT Northern Locality	212	149	203	189	233	247	200	137	106	120
NDHT Eastern locality							61	31	18	9
Community	244	239	176	126	100	96	60	44	33	18
Total	456	388	379	315	333	343	321	212	157	147

Number of patients identified for the first time as carrying MRSA

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 2014-15 there were 25 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 8 such cases in 2013-14.

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

MSSA bacteraemias	2012-13	2013-14	2014-15
NDHT acquired	7	8	7
Total	25	28	25

MSSA bacteraemias identified

11d Glycopeptide resistant enterococcus (GRE) bacteraemia

There was 1 episode of glycopeptide resistant enterococcus (GRE) bacteraemia in 2014-15.

The episode was related to a central line infection and was treated with antibiotics and removal of the central line.

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	2014-15
GRE bacteraemias	1	2	4	0	0	0	0	0	2	1

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 16 acute hospital acquired cases in those over 2 years of age for 2014-15. There were a total of 9 such cases in 2014-15; this is a decrease from 10 in 2013-14.

Cases of <i>Clostridium difficile</i> acquired in NDDH								
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Total reported cases	77	53	23	27	16	13	10	9

The total number of *Clostridium difficile* cases reported from NDHT rose from 35 to 37 in 2014-15. This rise is due to an increase from 17 to 26 in the number of cases of *Clostridium difficile* that were detected in samples from patients in the community or recently admitted to hospital. The number of cases that were acquired in NDHT (NDDH and community hospitals) fell from 18 to 11 in 2014-15.

Total cases of <i>Clostridium difficile</i> infection										
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Northern Locality	226	126	111	83	60	41	51	36	27	35
Eastern Locality							38	16	8	2
Total NDHT							89	52	35	37

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 knee replacement was chosen. No infections were detected during the patients' initial admissions or any re-admission. 90 procedures were monitored producing an infection rate of 0% which is below the national rate of 0.5%. Surveillance of patients following surgery is very labour intensive so as the IPCT was only able to perform one surveillance module. The small numbers of operations and infections mean that comparisons with the national rate will be unreliable.

In keeping with about half the trusts nationally, this trust performs post-discharge surveillance where patients are contacted after discharge to assess if any infections have developed. Two infections were detected by this method, giving an infection rate of 2.2%. This is identical to the national rate (2.2%) in trusts using this method.

Surgical procedure	No. of operations monitored 2014-15	No. of infections detected 2014-15	NDDH infection rate for 2014-15 module (%)	National infection rate (%)
Knee replacement	90	0	0	0.5

12 Untoward incidents including outbreaks

Viral Gastro-enteritis outbreaks

In common with other Trusts across the country in 2014-15 NDHT experienced outbreaks of viral diarrhoea and vomiting. There were a total of 41 outbreaks where either a single bay or a whole ward was affected. In 14 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.

13 Antimicrobial resistance

The IPCT monitor numbers of resistant organisms and advises on the management of patients who are colonised with these organisms. Antimicrobial use is important in the creation and spread of these organisms and is mentioned in section 19 on antimicrobial prescribing.

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. Laboratory practice has been unchanged in 2014-15 and the number of resistant coliforms detected has fallen slightly from 223 to 204. 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								
2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
34	57	64	103	77	152	454	223	204

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. The Trust has implemented screening for these organisms in line with DH guidance.

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.

Following the inspection by the Care Quality Commission in July 2014, which made comments about not all staff being 'bare below the elbow', a campaign was produced to raise awareness of the issue. Audit showed an improvement in compliance in clinical areas after the campaign, especially in the number of doctors who had removed their watches.

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 & 2013, 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).

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)

Following the assessment in 2014 the wards in NDHT achieved scores of:

Site	Cleanliness %	Food %	Privacy, Dignity & Wellbeing %	Condition Appearance & Maintenance %
Axminster	98.68	92.09	78.72	90.60
Bideford	93.01	83.05	80.51	77.27
Crediton	100.00	91.99	81.05	90.12
Exmouth	86.72	85.78	71.01	88.85
Holsworthy	97.49	85.68	84.29	89.74
Honiton	97.27	91.84	83.00	94.17
NDDH	94.64	79.63	89.24	91.99
Okehampton	96.51	87.75	75.60	90.31
Ottery St Mary	98.71	91.12	84.66	98.26
Seaton	94.41	88.21	82.93	96.67
Sidmouth	96.77	86.75	70.51	93.33
South Molton	98.21	85.96	74.04	88.89
Tiverton	98.83	84.33	86.72	88.13
Tyrrell	94.26	83.02	75.00	78.65
Whipton	95.38	91.83	77.33	92.78
Totals	95.15%	83.12%	84.47%	90.69%

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

There is 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

A new antibiotic pharmacist has been appointed at band 7 and took up her post mid 2014-15. Prior to this there had not been an antibiotic pharmacist in post since October 2013.

Achievements in the last year

Introduction of a prescribing app

All antimicrobial guidelines are now held on an app: RxGuidelines. This can still be accessed over the Trust intranet but can now also be downloaded onto individual mobile phones and other mobile devices. As most junior doctors have access to mobile phones in the course of their daily work it makes access to the antimicrobial guidelines much easier. The guidelines can easily be modified and updated.

Revision of guidelines

In liaison with clinicians, microbiologists and pharmacists guidelines have been revised. This ensures they incorporate the latest national guidance. The revisions also include notes on the diagnosis and management of infections.

Audit of antimicrobial use

Following the appointment of the antibiotic pharmacist the audit programme has re-started.

Since the start of a formal stewardship programme in 2010:

- Total antibiotic usage remains stable
- Prescribing of antibiotics that are 'high risk' for *Clostridium difficile* has decreased
- Prescribing of 'broad spectrum gram negative' antibiotics, which are more likely to predispose to multi-resistant bacteria, has decreased
- Glycopeptide usage has increased. These are considered 'low risk' for *Clostridium difficile* and multi-resistant organisms. This is expected because of the changes to pre-operative prophylaxis

20 Performance limits/outcomes

MRSA bacteraemia

There was one MRSA bacteraemia identified by the Trust in 2014-15. There is an investigation, using the criteria from Public Health England, to determine which trust was caring for the patient when the bacteraemia infection developed. In this case it occurred whilst receiving care at NDHT and has therefore been apportioned to NDHT. This is a decrease from last year when 5 MRSA bacteraemias were detected, two of which were apportioned to NDHT. This gives a rate for 2014-15 of 0.97 cases per year per 100,000 bed days, which is only slightly above the average rate in England (0.93).

There is an expectation from the Department of Health that there should be no healthcare acquired MRSA bacteraemias.

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. This case was also designated as a 'serious incident' so that an in depth investigation could be undertaken. 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 16 acute hospital acquired cases in those over 2 years of age for 2014-15. There were a total of 9 such cases in 2014-15; this is a decrease from 10 in 2013-14. The Trust reports all these cases to the CCG which, using agreed criteria, determines whether each case was 'unavoidable'. 8 of the 9 cases were assessed as 'unavoidable'.

The IPCT continues to investigate with the clinical teams all cases of Trust acquired *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

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 5 and 6 (diploma and degree respectively). 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 or 2014-15.

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 Infection Prevention Society.

22 External reviews

Care Quality Commission

The CQC inspected the Trust in July 2014.

The report highlighted areas of good practice relating to cleanliness and infection prevention & control. It was reported that staff were compliant with 'Bare Below the Elbows' in Medicine, Surgery (except for 3 staff members), Critical Care (except 1 staff member) and Maternity. It was also noted that staff in all areas of the trust were seen to be washing their hands. The report noted that all areas inspected were clean, tidy and well maintained. It also reported that all areas had personal protective equipment available and that this was used appropriately. It stated that infection prevention & control processes were generally done well and isolation rooms were available and isolation techniques were good.

The report did have compliance actions relating to infection prevention & control.

The first area related to not all staff being 'bare below the elbows' in clinical areas. Although many staff were noticed to be complying with this policy some were not, especially in the outpatients area. A campaign to raise awareness of the issue was run in August which resulted in improved compliance. Audits of this aspect of hand hygiene have been increased and it will be incorporated in to the regular monthly hand hygiene audits in mid-2015.

The second area related to the Emergency Department. It was noted that hand washing facilities were limited, a comprehensive infection prevention & control audit had not been performed in the previous 6 months and the sluice & waste facilities were not compliant. These issues have now been addressed.

23 Water services management including Legionella control

The NDHT 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 policy 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 (HSC) 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.
- 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.
- all relevant legislation is considered and applied where necessary.

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.

In addition due to the ever changing service delivery required by the Trusts estate it has become necessary to continually look at new ways and innovative technologies to reduce the risk to water services. This has seen the Trust partner with specialist companies in the field to identify such processes. One such area has been the development of a new shower head that incorporates a silver ring thereby reducing the risk of *Legionella* developing in the shower head between use. In addition to provide assurance to the user, shower heads have been colour coded to display change dates at a glance.

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. Although all these measures are in place a *Legionella* sample test carried out in one of the Trusts properties in 2014 identified a positive *Legionella* sample. Immediate action by the Facilities team working closely with the IPCT resulted in the area being isolated, flushed and re-tested providing a negative reading. The property in question is one of the older locations within the Trusts estate and the cause of the positive reading, which had been isolated to one room, was identified as a change of use that had not been addressed by regular flushing. This resulted in a thorough check of all the Trusts sites and a raising of awareness for all managers to ensure where they had a change in use consideration and diligence was given to *Legionella* prevention control measures.

Occupancy and change of use remain the biggest risk to any site as the Trust continually flexes to meet healthcare needs, but such changes can facilitate *Legionella* growth. 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.

The Facilities Directorate continually strives to improve and update its water management awareness and controls within the Trust and has ensured that all persons responsible for water management at all levels have been trained to a high standard.