Chelsea and Westminster Hospital NHS
NHS Foundation Trust

Delivering World Class Research and Innovation for Patients
Research and Innovation Strategy
2014-2019

Choose Chelsea and Westminster

Foreword from Tony Bell and new Chairman short piece from DB

CONTENTS **Page**

1. Executive Summary

This research strategy outlines the commitment and direction for research and innovation at Chelsea and Westminster Hospital NHS Foundation Trust over the next five years. The Trust vision is to be a leading centre for world class applied and translational research and innovation. Building increased research capacity and capability will deliver high quality research outputs and help to engage staff and patients throughout the organisation and directly contribute to improved patient outcomes and experience, consistent with the wider strategic and organisational objectives.

The strategy builds on our existing strengths and the important research partnerships across North West London, while recognising the changing national research landscape. Our vision, aims and objectives reflect a current analysis of the local and national strategy, our clinical and research strengths, and the views and opinions of senior investigators, managers, staff, patients and the public. Over the next five years we will prioritise the following key strategic aims.

STRATEGIC AIMS

Aim 1: To embed a research and innovation culture capable of driving high quality research, service innovation and improvement

A strong research and innovation culture provides a supportive environment within which to develop and retain a skilled workforce with capacity to undertake high quality research and translate the benefits into improved patient outcomes. The Trust aims to embed research and innovation at all levels of the organisation and to create multi-professional leadership roles to promote staff engagement. Senior investigators will be supported and nurtured to maximise research outputs based on clinical and research expertise. This aim will be achieved in partnership with patients and public and by creating greater awareness of the research opportunities provided by the Trust and other partners including National Institute of Health Research (NIHR), Clinical Research Network (CRN) and the NIHR Collaboration for Leadership in Applied Health Research and Care (CLAHRC) based at Chelsea and Westminster Hospital.

Aim 2: To build research capacity and capability to deliver research excellence and readiness within an evolving research and innovation landscape

A skilled and knowledgeable research workforce is necessary to increase both the number of clinical trials undertaken and patients recruited to clinical trials (local and national research objectives). To support staff high quality in-house research training will be provided combined with professional development opportunities including higher degrees and research fellowships in partnership with Imperial College and health care charities.Our team of multi-professional Research Associates will work to increase engagement of all staff including nurses, midwives and allied health professionals. The aim is continue investment in the Research Associates as a and support the growing virtual trial unit infrastructure.m

A research portal will be developed that is fully intergrated with the Trust Information Management & Technology (IM&T) strategy, The research portal will support and manage all research data and expand opportunities for patients to directly contribute to research. The proposed research portal design will place the Trust in a unique position to improve patient and staff access to research, to better design and deliver trials, and facilitate all research partnerships. A sub-component of the portal will be a patient registry, **Consent for Consent**, to provide the ‘front end’ and promote patient engagement, improve clinical trial development and patient recruitment. The portal would be a major component of a clinical trials unit. Continued investment in the NHS-funded research staff infrastructure to maintain high standards of trial delivery is critical to maximising financial growth, and improved performance against NIHR objectives.

Aim 3: **To deliver world class research and innovation aligned to clinical and academic priorities with capacity to transform the quality of treatments and services**

The Trust will build on existing research strengths, which includes the local research partnerships between the basic and clinical sciences for the delivery of world class applied and translational research. Key research priorities include Acute Medicine, Child and Maternal Health, HIV and Immunology, and translating the outcomes from the nationally successful NIHR CLAHRC for North West (NW) London and Neonatal Research programmes into improved patient outcomes. The Trust with Imperial College was awarded a further £10M from January 2014 for the NIHR CLAHRC programme and the research programme is aligned with Trust and regional objectives.

World class innovation inspired by the Trust's strong legacy for service innovation, quality improvement and safety will be achieved through partnership across NW London including Imperial College London, Royal Brompton & Harefield and Royal Marsden Hospitals and Imperial College Health Partners. Knowledge and technology partnerships such as those with Imperial Innovations will help staff to manage intellectual property (IP), and ensure innovation is translated into service improvements. Service innovations will be aligned to the CQUIN framework, clinical and financial targets as well as key clinical and service priorities, for example the planned growth in paediatric services.

Aim 4: To develop and strengthen collaborative partnerships with industry

The Trust will foster improved industry engagement with the aim to become recognised as a growing centre for high quality clinical research. This will build on a shared industry post with the Royal Brompton & Harefield NHS Foundation Trust with support from the NIHR CRN for NW London and support investigators design and deliver high quality clinical research. Improved industry engagement will yield benefits for patients, staff and the wider organisation. Increased industry trials within the Trust improve patient outcomes and over time provide additional research income. The NIHR CLAHRC has a growing number of industry research partners working with the Trust and it is envisaged this will further increase over the next five years.

Aim 5: To continue to build strong synergistic partnerships across North West London to respond to national and local priorities and opportunities

The Trust will maintain high quality research and clinical services, and increase the speed at which new healthcare solutions are adopted into practice, placing the Trust at the forefront of innovative clinical practice. Partnerships with local NHS providers and community, the NIHR family network, Imperial College, industry, and local charities such as Chelsea and Westminster Health Charity (C&W Health Charity), St Stephen's Aids Trust (SSAT), and Westminster Medical School Research Trust will be strengthened. Exploratory discussions in line with Shaping a Healthier Future are taking place with West Middlesex University Hospital Trust. As such we will develop a strategic dialogue with all partners, streamline cross-organisational collaboration, and develop synergistic partnerships with common goals.

2. Introduction

The NHS has undergone extensive reform with associated challenging fiscal targets. The Quality, Innovation, Productivity and Performance (QIPP) agenda aims to deliver £20billion efficiency savings by 2014-15 to be reinvested in frontline care. Simultaneously, the NHS has a statutory duty to deliver research with a renewed focus upon research and innovation, service improvements and economic growth. To achieve this, the government has embarked upon an ambitious national strategy; '***Innovation for health and wealth***'[1] and the ***Strategy for UK Life Sciences***[2] to transform healthcare delivery and improve patient outcomes.

The previous Trust research strategy (2010) reflected an ambition to deliver high quality patient-focused research and achieve the objectives of ***'Best Research for Best Health'*** (2006). Consequently, the Trust has achieved a higher research profile with increased patient and investigator engagement and improved and streamlined governance processes. The Trust research portfolio has strengthened and NIHR CRN targets have been exceeded. As part of this expansion the Trust hosts two large National Institute of Health Research (NIHR) funded programmes, the NIHR NW London Collaboration for Leadership in Health Research and Care (CLAHRC) and the NIHR Applied Research Programme (Medicines for Neonates) both leading changes in patient care, clinical service delivery, and research practice.

Our vision for the next five years is to be a leading centre for applied and translational research and innovation where patients will have access to world class research and staff will embrace research and innovation to improve patient care and experience. Building on the previous Trust strategy the aim is to be responsive to new opportunities in the evolving research and innovation landscape through engaging in strong partnerships with the Local CRN for NW London, Imperial College, the Academic Health Science Network (AHSN) Imperial College Health Partners, the Royal Brompton & Harefield, and the Royal Marsden NHS Foundation trusts as well as industry and charities.

3. The Research and Innovation Landscape

The **'*Cooksey Review*'** (2006) highlighted the UK's global reputation for high quality basic research but emphasised the poor uptake and adoption of research evidence into routine practice. The NHS and Universities were challenged to focus upon the entire research pathway from discovery to delivery and the need to develop productive partnerships between the NHS, academia and industry. More recently, ***'Innovation, Health and Wealth'*** (2011), and the ***Strategy for UK Life Sciences*** emphasised the need to transform the UK health innovation and life sciences landscape to promote economic growth, and accelerate patient access to new therapies and innovation within the NHS.

Improved productivity within the UK healthcare and life sciences research sectors is critical to delivering these objectives and NIHR funding to NHS Trusts is conditional upon meeting pre-defined national benchmarks for clinical trial delivery. These include patient recruitment to time and target, and first patient visit within 70 days of NHS research permission. Achieving these performance targets directly funds the local NHS-funded research infrastructure necessary to promote increased patient recruitment within a high quality clinical governance structure.

[1] Innovation, Health and Wealth: Accelerating adoption and diffusion in the NHS (2011), Department of Health
[2] Strategy for UK Life Sciences (2011), Department for Business Innovation and Skills

The NIHR local CRN is mapped to the NWL geographical boundaries with fewer research themes and a five year planning cycle with central sign off for research to streamline approval systems www.crncc.nihr.ac.uk/nihrstructure. The NWL budget will be approximately £125M over the next five years from April 2014.

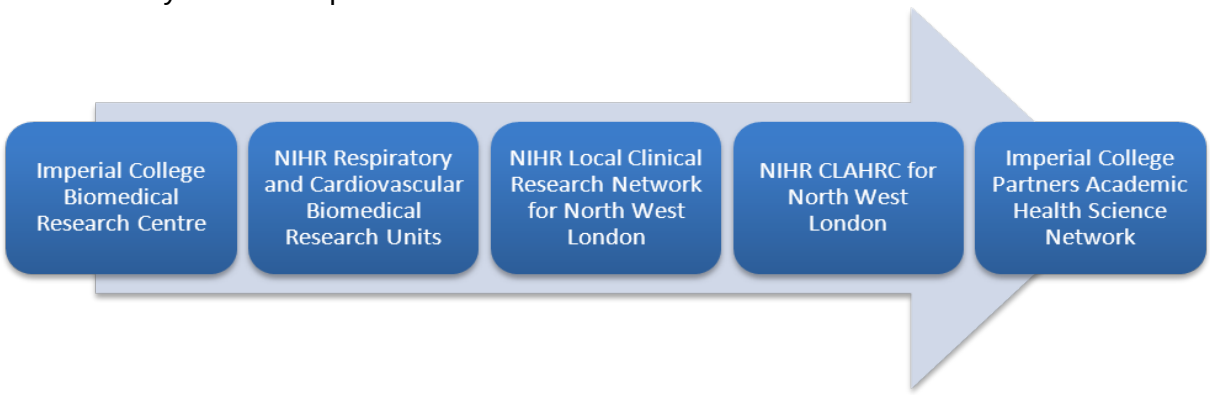


Figure 1: The North West London Innovation Pipeline

Increased investment in translational research will strengthen cross-sector collaboration at organisational and patient level. NW London hosts an extensive NIHR family comprising Imperial College Biomedical Research Centre (BRC), Royal Brompton & Harefield Hospital NHS Foundation Trust Biomedical Research Units (BRUs), local Clinical Research Networks (CRNs), and the CLAHRC. These organisations form a pipeline of innovation for improved patient outcomes. Imperial College Health Partners (www.imperialcollegehealthpartners.com) and the NIHR CRN working with industry will help broaden the scope and geographic impact to benefit the local patient population.

4. Strategic Aims and Objectives

The Trust aims to continually improve services to maximise positive patient outcomes. Research and innovation is an enabler that will help achieve this objective through translating research outputs into practice and increasing the speed at which they are adopted for patient benefit. A core Trust Corporate Objective is 'to deliver excellence in innovation, teaching and research'. This strategy will support achieving this objective underpinned by an informed analysis of the current national and local strategic priorities; our unique strengths as an NHS research active Trust, and the views of our clinicians, investigators, managers and patients.

4.1 Aim 1: To further embed a culture for research and innovation capable of driving quality, service improvements and innovation

Research and innovation are major contributors to achieving high standards of patient care and to the recruitment and retention of high quality staff. Research provides the necessary knowledge base which underpins improvements in healthcare, and ensures high quality service delivery and innovation. A more research focused environment will increase research productivity and outputs, achieve overall better clinical performance and patient outcomes, and attract and nurture a new generation of talented researchers[3]. The Trust has developed a research aware culture based on strong leadership, increasing research productivity and staff support and recognition.

[3] Being a good research partner: the virtues and rewards (2010) NHS Confederation Health Services Research Network

In 2011, the Trust was nominated for the 2011 Health Service Journal National Research Culture Award. The recently devolved clinical and research infrastructure aligned with the three Trust clinical divisions has embedded research and innovation at all organizational levels to support the implementation of research, service improvements and innovation into clinical practice.

The transparency of staff allocated research time has improved as the Trust research portfolio has grown and provided increased external income. Regular Trust research meetings and forums have facilitated strategic planning with cross-disciplinary investigator collaboration to strengthen the internal research culture. Staff, patient and public awareness of the benefits of research has increased through the use of interactive educational materials at hospital open days and events, including targeted patient communication in the form of information screens, posters, website (www.chelwest.nhs.uk/about-us/research-development/research-development) and leaflets/booklets.

Over the next five years we aim to further embed a culture for research and innovation consistent with the values of the NHS Constitution. Our objectives include developing research leadership with the appointment of multi-professional research leads and champions to drive forward research priorities and deliver high quality service improvements. Senior investigator capacity to engage and undertake research will be increased through accountable job planning and appraisal, aligned with productivity and delivery of the Trust research portfolio. All patients will be given an opportunity to participate in research, relevant to them[4]. The evolving Trust research patient and public engagement programme will be fundamental to achieving this.

4.1.1 Developing Leadership for Research

To formalise the research agenda within the Clinical Divisions, the Divisional Research Leads have allocated time to support research development and governance. Going forward, the aim is to grow the leadership roles to fully embed the research and innovation culture within all clinical specialties across the Trust Divisions. As part of the programme the strategy includes establishing multi-professional research leaders with protected time, to represent all staff including nurses, midwives and allied health professionals. Research champion roles will be created within clinical areas to increase research awareness for staff and patients and support the Divisions achieve their research objectives and local and national performance targets.

4.1.2 Increased Senior Investigator Capacity

The Trust research away day highlighted the need for senior investigators to have agreed job plans which balance research and clinical activities, and are an established component of the annual appraisal process. The Divisional Research Leads will work with the senior management teams to formalise this process and ensure research and research productivity are consistent reviewed within the appraisal system. As part of this process the Trust will increase the number of active clinical investigators for research funded staff through charitable grants, NIHR income, and Research Capability Funding. This protected time will be used to conduct research, attend training or professional development courses, and develop research grant proposals.

[4] NHS Constitution for England (2013)

4.1.3 Patient and Public Engagement (PPE) in Research

Patient and public engagement is recognised as essential to the delivery of high quality care and research. The national NIHR Mystery Shopper survey assessed patient and public NHS research awareness and engagement and reported that a high percentage of NHS Trusts did not provide an adequate level of information to support patient choice. Building on previous work and the results of the Mystery Shopper survey, the Trust has launched a PPE programme to make research more accessible to patients and the public. This has involved disseminating information about research through promotional events such as International Clinical Trials day, the Trust Open day, NIHR information packs, local leaflets, patient targeted posters, and computer and electronic information screens. Staff working in reception areas, wards and outpatient clinics have received training to enable them to talk to patients about research within the Trust and direct them to the research office for more formal information.

Over the next five years we aim to provide patients with better access to information to make informed decisions about their treatment and care. Our aim is to improve the content and quality of information using a wide spectrum of communication methods including social media, the Trust web pages as well as patient friendly written materials. Partnerships with Trust patient forums, the council of governors, patient and public networks, NWL CLAHRC, NIHR CRN patient engagement programmes, and Imperial College Health Partners will be instrumental to meeting this objective. The Research Portal and Patient Registry will further increase patient involvement in both research development and delivery. These initiatives will increase the public awareness of research within the Trust.

Building research capacity and capability is integral to the delivery of improved care, meeting our research priorities and to adopt and innovate best practice treatments. Over the last five years the Trust has developed and improved work-based learning opportunities for all staff engaged in research through the delivery of a comprehensive research training programme. Staff are supported to complete national competitive NIHR research training programmes, charity-funded research fellowships and higher degrees, and clinical fellowships in partnership with Imperial College, NWL CLAHRC, the London Deanery, NHS partners, and local charities.

4.2 Aim 2: To build research capacity and capability to deliver research excellence and readiness within an evolving research and innovation landscape

Over the next five years we will increase the research capacity and capability of the workforce through the continued delivery of work-based learning opportunities including mandatory training such as Good Clinical Practice (GCP) and specialist research training courses related to informed consent and intellectual property development. New research talent will continue to be nurtured to fulfill their potential as future leaders of cutting edge research through local mentoring and partnerships with academic providers, local charities and NIHR partners as well as the MRC and Wellcome Trust. Increased organisational capacity and capability to support the level and quality of clinical research will be a key priority.

4.2.1 Joint Research Committee

Working in partnership with Chelsea and Westminster Health Charity (www.cwhc.org.uk), and Westminster Medical School Research Trust, through the Joint Research Committee (JRC) 13 research fellowships, 11 PhD studentships,132 small project grants, and 84 travel grants have been awarded over the last five years representing an investment of over £2M. Outputs include peer-reviewed national and international journal publications and conference presentations, contribution to the development of clinical guidelines, and an increase in NIHR research grant submissions and CRN portfolio adopted studies. This collaboration our health charities is perceived as invaluable by Trust senior investigators, is highly competitive and would benefit from increased funding to maximize developing 'in-house' research talent. The commitment of all staff in delivering this work is significant. Going forward the Trust wishes to grow the JRC research portfolio to improve opportunities for multi-professional staff research activity.

4.2.2 Developing a Multi-Professional Research Workforce

Over the last three years, the Trust has developed the role of Research Associates as part of a multi-professional research workforce. Their role has ensured the delivery of patient recruitment, delivered high quality clinical trials and allowed the Trust to achieve our NIHR business objectives. They have also acted as knowledge brokers and stimulated wider interest in clinical and academic careers amongst the workforce. Over the next five years, we plan to further increase the number of Research Associates working within the Trust, by generating additional trial income from NIHR and industry sources. All staff will be supported to be research aware and pursue academic and clinical research career development with appropriate training pathways.

The Trust will work closely with other academic providers to secure increased opportunities for staff access to higher degrees and accredited academic training modules. As part of this work the research role of senior clinicians working in nursing, midwifery and allied health professions will be reviewed and research opportunities including access to higher degrees programmes highlighted. Staff development opportunities will include secondments and joint clinical and research appointments designed to develop a home-grown research workforce that attracts high calibre staff. Cross-disciplinary partnership between Trust research and education will foster joint collaboration in achieving shared organisational objectives such as staff education and learning designed to build research capacity and capability within the workforce. Wider partnership with Health Education North West London (http://nwl.hee.nhs.uk) will increase opportunities to develop the workforce to respond more adeptly to translating new research findings, innovation and service improvements into practice.

4.2.3 The Research Portal and Patient Registry

The life sciences strategy emphasises the need to utilise NHS patient databases for clinical trial delivery, and development of innovative treatments. Capital funding has been secured to develop an IT research portal which will commence in 2014/15. This builds upon the Trust Information Management & Technology (IM&T) strategic priorities and a scoping exercise based on staff interviews, a literature review and existing systems. Capacity to manage clinical data through the research portal and patient registry system (**Consent for Consent**) will facilitate early engagement and closer working between investigators and patients leading to improved trial feasibility, increased patient access to research, and improved delivery against national performance targets. This is an essential component of our ability to develop a high performing clinical trials unit and increase the Trust profile as an attractive and high performing research and innovation partner.

4.2.4 Clinical Research Support

The Trust has a highly trained research office and a growing team of Research Associates to deliver clinical trials to a high standard, in line with good clinical practice (GCP). This team works closely with clinical investigators on over 70 NIHR CRN portfolio studies and audits and monitors progress to ensure they meet all quality and regulatory standards. Dedicated staff allows a more structured approach to patient recruitment, and the deployment of research associates to maximise recruitment. This aligned with responsive governance systems ensures we meet our national NIHR performance benchmarks for governance and recruitment.

Over the next five years, there will be a greater emphasis on increasing patient participation in research throughout NW London. As a result of this the Trust is developing closer working partnerships with adjacent Trusts and exploring potential collaboration with other clinical trial facilities including the St Stephen's Aids Trust Clinical Research Facility, the Royal Brompton & Harefield NHS Foundation Trust Biomedical Research Units for Respiratory and Cardiovascular Medicine, and the Imperial Clinical Trials Unit (ICTU). These partnerships provide a foundation for exploring opportunities to optimise workforce, productivity and performance for increased patient participation in clinical trials.

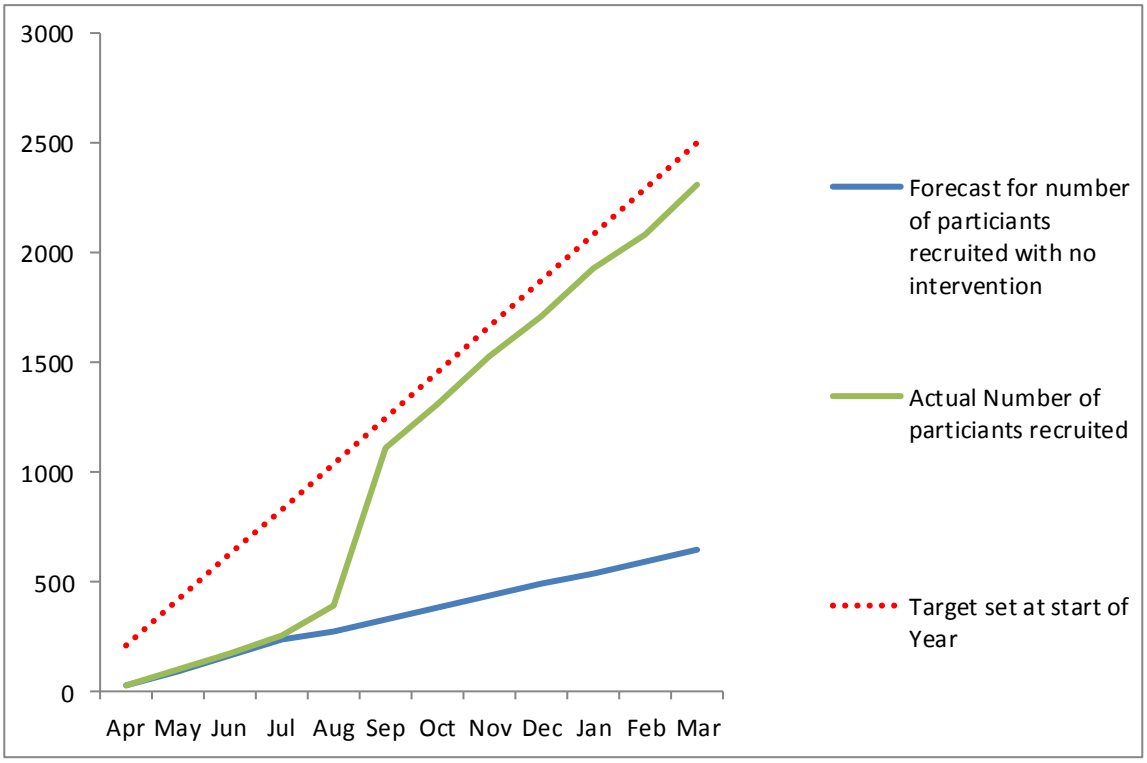


Figure 2: Patient recruitment for 2013/14 demonstrating impact of Research Associate support on NIHR CRN portfolio performance

4.2.5 Embed a Sustainable Research Infrastructure

A proactive research support infrastructure is necessary to optimally manage trial feasibility, set-up and delivery. The Research & Development Support Office provides core NIHR CRN-funded staff employed to support clinical trial activity, which includes staff to support the set-up and delivery of studies. Clinical trial delivery is dependent on key support from departments and individuals throughout the Trust including divisional business analysts, finance, HR, IT, pharmacy, radiology and laboratory services. Their support ensures research is delivered in a timely fashion to maximise benefits for patients. They also help to embed research capacity and capability, workforce engagement, research training and development, and project manage Trust research projects and programmes. They are critical to Trust to meeting NIHR business objectives, for financial growth, and sustaining NIHR-funded infrastructure. Continued investment in the research support infrastructure investment is necessary for clinical trials to be efficiently coordinated and managed to a high standard.

4.3 Aim 3: To deliver world class research and innovation to transform the quality of treatments and services

The primary research focus is to improve current treatment, service provision and patient care by strengthening basic and clinical science collaborations for improved patient outcomes. These priorities are aligned to Trust clinical and NIHR business objectives. In 2011/12 the Trust was ranked in the top 10% of highest performing NHS research Trusts in England recruiting in excess of 5,000 patients. In 2013/14, the Trust ranked the 2nd highest recruiting Trust in NWL. In the last five years 17,000 patients have been enrolled into NIHR CRN portfolio studies (Appendix 1). Continued NIHR portfolio engagement enables increased patient access and participation in clinical trials, and will generate sustainable income for research infrastructure.

4.3.1 Future Research Priorities

Over the next five years, building on our current strengths of the NWL CLAHRC and the Neonatal Medicine Research Programmes, the Trust will prioritise research into Acute Medicine, Child and Maternal Health, and HIV. The Imperial College Section of Immunology at Chelsea and Westminster Hospital is led by the new Chair of Immunology, Professor Xiao-Ning Xu, and the aim is to further strengthen the existing collaboration between immunology and HIV medicine as well as explore broader aspects including inflammation research. Our aim is to integrate expertise and output from the most successful Trust research programmes with other research departments and related clinical services to deliver world class applied and translational research for improved patient outcomes.

Both the NWL CLAHRC and MFN NIHR-funded programmes generate significant research outcomes for direct patient benefit. Where possible, these outcomes will be translated into patient care to ensure novel therapies, service improvements, and innovation reach the local patient population. The extension of the NWL CLAHRC programme for a further five years will be critical to engagement across NWL. Increased patient participation in clinical trials which will be strengthened by the development of a virtual clinical trials unit and research portal; improving the translation, adoption and diffusion of new innovations; and increasing industry engagement.

The described alliance between departments allows the Trust to establish a Centre for Translational Research. The Institute of Medicine's Clinical Research Roundtable, highlighted two blocks (i.e., distinct areas in need of improvement): the first translational block (T1) prevents basic research findings from being tested in a clinical setting; the second translational block (T2) prevents proven interventions from becoming standard practice The latter is an area that can be exploited as few research groups focus on these areas and both CLAHRC and the Neonatal Research programme have strengths in these areas. As the Trust grows its clinical trials portfolio it can support further work in relation to the first translational gap building on the experience of the research associates and SSAT. The next sections outline the on-going and future work in key areas.

Acute Medicine and Anaesthetics

Acute Medicine covers work of internationally leading clinical researchers such as Professor Derek Bell (Acute Medicine), Professor Masao Takata (Anaesthetics), Professor Andrew Rice (Pain Medicine) and Professor Margaret Callan (Rheumatology). Prof Bell leads an internationally recognised research programme with a focus on the delivery of high quality emergency care as well as being the Director of the NIHR CLAHRC for NW London. Professor Takata leads the 'burns research initiative' which aims to develop translational research into the inflammatory processes of burns injury. Prof Rice has successfully developed translational research into neuropathic pain in the context of infection (HIV, herpes zoster and leprosy), diabetic neuropathy and nerve trauma. Future priorities include genetic and profiling / stratification patient studies to understand the risk factors for neuropathic pain and individual responses to therapy. Professor Margaret Callan leads the non-commercial rheumatology research portfolio at Chelsea and Westminster. This covers conditions such as Rheumatoid Arthritis, Ankylosing Spondylitis, Giant Cell Arteritis (GCA) and Polymyalgia Rheumatica (PMR). Developing commercial research partnerships to grow further research into autoimmune diseases is a future priority.

Child and Maternal Health

The Trust provides one of the largest children's services in London and is a centre of excellence for high risk maternity care and leading centre for neonatal research. We opened the £1.2M Children's Hospital in March 2014. Research in this covers the clinical areas of neonatal medicine, medical and surgical paediatrics as well as obstetric care. Over the next five years, the vision is to strengthen each of these research disciplines and develop cross-disciplinary collaborative research studies over the continuum from pre-pregnancy through to infancy, adolescence and adult health and well-being. Chelsea and Westminster and the Royal Brompton is to develop a stronger partnership through collaboration with the highly active group of researchers in paediatric respiratory led by Professor Andy Bush (Royal Brompton). The overall theme of this work is aligned with the Early years Theme within the CLAHRC programme.

The Neonatal Medicine Research Programme

The Neonatal Medicine Research Group, led by Professor Neena Modi, is a multi-disciplinary team of over twenty clinical and non-clinical staff and doctoral students. Current grant funding is approximately £5M including Medicines for Neonates, a £1.6M five year NIHR Applied Research Programme hosted by the Trust, plus awards from the Medical Research Council (MRC), British Heart Foundation and national charities. The Group collaborates with research groups at Imperial and internationally, and works closely with the Trust paediatrics and obstetrics units.

The Group incorporates the Neonatal Data Analysis Unit (NDAU) (www.imperial.ac.uk/ndau and www.chelwest.nhs.uk/ndau) and manages the National Neonatal Research Database. This international resource for clinical and health services research, is a comprehensive, population-based, longitudinal repository of detailed clinical information extracted from the electronic patient records of admissions to all NHS Neonatal Units. The Group's clinical research is centred upon early developmental programming of life-long health, with a focus on nutrition. NDAU conducts health service research, supports a growing number of external investigators, and conducts evaluations for national bodies including NHS England, Department of Health, Public Health England, and NHS Trusts. Strategic priorities are to develop the National Neonatal Research Database as a platform for multi-centre neonatal nutrition trials and ascertainment of life-long outcomes using linked datasets.

Child Health

Paediatric research at Chelsea and Westminster Hospital has primarily focused upon specialist disciplines such as paediatric gastroenterology (Dr John Fell), and paediatric neurology (Dr Maria Kinali). Collaborative research has been established by Dr John Fell and Professor Neena Modi. The new Children's Hospital will provide scope for expanding paediatric research across all sub-specialties drawing upon the unique clinical setting, access to specialist workforce and facilities, and clinical disciplines. Future work will also build upon translational research into paediatric neurology in collaboration with Professor Bush's team as well ongoing collaboration in genetics in the human epilepsy study, and the brain function in Rolandic Epilepsy with King's College Hospital. Mr A Saxena has been appointed as an academic paediatric surgeon with an interest in tissue engineering and work is on-going to establish a tissue engineering laboratory and research focus at Chelsea and Westminster.

Maternal Health

Research into obstetric medicine and maternal health is led by Professor Mark Johnson supported by Dr Enitan Ogundipe, Dr Gubby Ayida, Vivian Bell and Dr Shane Duffy. The team specialises in research of high risk maternity care (http://borne.org.uk) such as maternal cardiac disease, and the relationship between maternal obesity and metabolic and cardiovascular disease in children of obese mothers. Future research priorities will include collaborative research to examine the impact of bariatric surgery upon pregnancy outcome. There will also be translational research into the mechanisms for reducing the risk of preterm labour in high risk women, and research into 'Methods of Delivery' (MoDs) to examine rising rates of Caesarean section (CS) vs vaginal delivery and compare maternal and fetal outcomes. Research will be greatly strengthened through the Chelsea and Westminster and Royal Bromptom paediatric research collaboration.

HIV and Sexual Health

The Stephen's HIV Clinical Trials Unit is led by Professor Brian Gazzard (http://www.ssat.org.uk). SSAT research teams have a long-standing collaboration with Imperial College Section of Immunology based at Chelsea and Westminster. This collaboration includes investigation of immunological responses to HIV infection and the development of immunological treatments. This work has engaged Trust senior investigators and clinical departments facilitating the translation of new and novel HIV therapies for patients. The International Aids Vaccine Initiative (IAVI) (http://www.iavi.org.uk) hosted by Imperial College again based in the Trust has been integral to these outputs and this global-wide programme engages world class research institutions in the delivery of novel HIV-prevention strategies

including research into AIDS vaccines. Other collaborators include the US National Institute of Health (NIH), the UK MRC, and industry partnerships.

4.3.2 The NIHR Collaboration for Leadership in Applied Health Research and Care for NW London (CLAHRC)

The CLAHRC is led by Professor Derek Bell and hosted at Chelsea and Westminster and has been awarded a second five year programme grant commencing in January 2014. Dr Julie Reed is the Academic co-director with Prof A Majeed from Imperial College. This £10 million (£20M with matched funding) NIHR research programme is designed to accelerate the delivery of evidence and research into practice and build applied research capacity. The programme will initially focus on three clinically driven themes – ***early years, breathlessness and frailty*** that align well with Trust and NWL objectives. This work is supported by extensive external and internal evaluation and a comprehensive PPE programme.

The CLAHRC has influenced the local research landscape and the hospital's reputation for leadership in quality improvement science and research (www.clahrc-northwestlondon.nihr.ac.uk). The CLAHRC team consists of over 25 multi-disciplinary researchers and improvement scientists. In the last five years the CLAHRC programme has published over 160 peer-reviewed publications, sponsored 14 PhD students and actively involved over 18,000 patients in research projects. The CLAHRC has made a major contribution to building research capacity and will continue to support research and improvement fellowships and knowledge mobilization events.

4.3.3 Supporting Innovation and Service Improvement

The vision of the national innovation strategy is to pursue innovations that add value, quality and productivity to the NHS. Innovation is defined as 'an idea, service or product, new to the NHS or applied in a way that is new to the NHS, which significantly improves the quality of health and care wherever it is applied'. Supporting innovation and service improvement requires effective innovation partnerships and systems to support innovators in transforming their ideas into practice to improve patient outcomes and healthcare delivery.

The Trust has developed an innovation and quality improvement culture through the NWL CLAHRC, and the Trust driven "Directors Den" which have helped to inspire service improvement, high quality services and innovative therapies. From May 2014 the Trust Director's Den and Charity Enterprising Health schemes will be merged to create a £250K investment fund to support service or product innovations, and service improvements to improve patient care and experience. This new fund will be called the 'Enterprising Health Partnership.

The Trust Intellectual Property policy will be the framework to guide the development of new ideas and innovations, and to support partnerships with Technology Transfer services (Imperial Innovations http://www.technologytransfer-cwft.co.uk/about-us/) and industry. Our strategy is to deliver world class innovation capable of driving improved patient outcomes and sustainable service improvement. To achieve this objective we will ensure staff, as part of our research training programme, are trained in aspects of innovation including intellectual property and patients are made aware of the benefits of innovation for quality and service improvement. We will incentivise innovators to drive their ideas from conception to implementation by rewarding innovation through a generous revenue sharing scheme and help innovators access the necessary funding and expertise to support the translation of innovation into service improvements.

4.4 Aim 4: To develop and strengthen collaborative partnerships with industry

The Strategy for UK Life Sciences encourages closer industry collaboration. North West London has a strong academic research base with high levels of patient recruitment but with relatively few industry portfolio trials with the exception of infection and HIV. Working with the local CRN we aim to increase the number of industry studies lead by the Trust and expand the research portfolio by targeting additional clinical research areas including cardiovascular medicine, ophthalmology and rheumatology and continue to build on existing industry partnerships in pain and respiratory medicine.

Our industry partnership post has proved successful and we intend to expand this role, working with the research associates, to attract more commercial partners. This will include improving site feasibility assessment to enable the set-up of high quality studies and deliver the competitive commercial performance targets. The Trust will continue to host joint NHS and industry partnership meetings to explore opportunities for business collaboration, and communicate the opportunities and benefits of industry engagement to patients, staff and the public to increase the profile and appetite for industry collaboration. The aim is to grow income generated through increased industry activity and to re-invest into patient care, research infrastructure and service improvements.

4.5 Aim 5: To build strong collaborative and synergistic partnerships across North West London to respond to national and local priorities and opportunities

North West London is one of the most research active areas in the UK and hosts an extensive NIHR family with Imperial College London as the main academic partner. NWL hosts one of five UK Academic Health Science Centres, Imperial College Biomedical Research Centre (BRC), the Royal Brompton & Harefield Hospital NHS Foundation Trust Biomedical Research Units (BRUs), the NIHR NWL CLAHRC, NIHR CRN for NW London. The NIHR family has strengthened clinical and academic research partnerships, and the NWL CLAHRC has facilitated wider NHS partnership engagement. The Trust has a leading role in the new management structure of the local NIHR CRN for NW London (Prof Derek Bell).

Several local charities work closely with Chelsea and Westminster namely SSAT, Chelsea and Westminster Health Charity, and Westminster Medical School Research Trust. Close working with the local charities has increased patient participation in clinical trials, and staff access to development opportunities contributing to world class research in areas such as acute medicine and HIV. A close clinical and evolving research partnership exists between the Chelsea and Westminster, Royal Brompton & Harefield and Royal Marsden Hospitals, known as the Fulham Road Collaborative, especially in respiratory and paediatric medicine and cancer.

Collaborative and cross-disciplinary partnerships influence the strong research profile and high research output of North West London. Imperial College Health Partners is the designated Academic Health Science Network for North West London and designed to provide a focus for collaborative research. Our strategy will ensure that the Trust is fully aligned to local and national for our academic and clinical partners. A strong cross-organisational strategic dialogue will be maintained with key partners such as Imperial College, and the NIHR family network, to optimise collaboration through the NIHR CRN.

5. Supporting Research and Innovation Delivery

Nationally, research investment will be directed towards improving the regulatory environment, sustaining the life sciences, and supporting the translation of research and innovation into improved patient outcomes and service improvements. Delivery of the NIHR portfolio and achieving NIHR high level objectives will be critical to sustaining a Trust NHS-funded research infrastructure. NIHR funding streams are now aligned to both commercial and non-commercial trial performance targets and will target investment through NIHR programme funding, clinical trials and evaluative studies of new interventions.

Over the last five years Chelsea and Westminster Hospital has attracted in excess of £15million in research income through NIHR funding streams and other non-commercial funding. All governance systems, including finance have been strengthened through increased transparency and financial modeling to promote stabilised investment, and sustained productivity of the Trust NIHR CRN portfolio. Trust Divisional funding models enable research income to be targeted to research active clinical teams. This has rewarded staff engagement, and increased capacity of frontline staff to undertake research to directly influence patient care. Future income generation will rely upon continued capacity to achieve NIHR objectives and attract sustainable commercial and non-commercial income with return on investment.

The strategy will enable research income growth to sustain continued staff development, and delivery of high impact research and innovation programmes. The Trust invested in increasing industry capacity as a potential growth area to improve care and generating increased revenue research infrastructure and service improvements. The latter includes £0.5M investment in the development of a research portal to increase capacity, efficiency and delivery of high quality research. Surplus income will be directed towards building research capacity within the Research Associate workforce as well providing incentives to increase and sustain organisational and workforce engagement. This will support investigators in attracting competitive commercial and non-commercial research funding from NIHR partners such as the MRC, research charities, and the Wellcome Trust to drive our academic and clinical research priorities.

6. High Level Delivery Plan

Strategic Vision:

To be a leading centre for applied and translational world class research and innovation

Year 1 (2014)

- Align Divisional-led strategic plans to vision for world class research and innovation and Trust corporate strategy
- Ensure appraisal system to support the professional development of senior investigators
- Support increased patient and public engagement in Trust-wide research activity
- Develop implementation plans developed for each research priority
- Align Trust-wide research and innovation with service improvement activities.
- Implement marketing and communication plan to increase commercial trial portfolio
- Achieve annual targets for patient recruitment and performance, initiation and delivery (PID)

Year 2 (2015)

- Establish professional development pathways established for nurses, midwives and AHP
- Multi-professional research programme with submission/award of funded grant proposals
- Active Research Portal and Patient Registry
- Expanded Virtual Clinical Trials Unit with on-site expertise for research trial delivery
- Clear Joint strategy between Chelsea and Westminster and key stakeholders
- Formalise internal clinical science partnership centred on key themes including immunology /inflammation and tissue engineering)
- Achieve annual targets for patient recruitment and performance, initiation and delivery (PID)

Year 3-5 (2016 – 2019)

- Deliver a large virtual Clinical Trials Unit to support a Clinical Trials Facility development
- Ensure large multi-disciplinary collaborative programme grant proposals in pipeline
- Established centre for excellence in translational research
- Highly effective partnerships with industry and recognised Prime Site Status
- Achieve annual targets for patient recruitment and performance, initiation and delivery (PID)

7. Research Strategy Implementation Plan

Strategic Aim 1: To consistently embed a research and innovation culture capable of driving high quality research, service innovation and improvement

Priorities:

- Developing Leadership for Research
- Increased senior investigator capacity
- Engaging all clinical disciplines in research and increasing opportunities for patient participation
- Patient and Public Engagement

Implementation Objectives	Achievement Measures	Resources Required	Timescales	Responsibilities
Deliver annual divisional-led research meetings for investigators, clinicians and managers to communicate progress, and inform strategy and business plans	Clear strategic and measurable plans for each clinical division integrated into annual business planning	To be agreed	Immediate	**Lead:** Divisional R&D Directors General Managers Head of R&D
Fully embed research and innovation within the business planning process and establish multi-professional research appointments across each of the clinical divisions	3 new multi-professional research appointments	To be agreed	2016	**Lead:** Divisional R&D Directors Head of R&D Head of Programme Delivery
Support the development of senior investigators by implementing a system and criteria to guide the allocation of funded PAs evaluated through an annual HR appraisal process	Increased research productivity (e.g. projects, publications, grant-funded activity) Increase number of active PIs /CIs/clinical specialties	To be agreed	Immediate	**Lead:** Director of HR Divisional R&D Directors Head of R&D HR Business Managers General Managers

Implementation Objectives	Achievement Measures	Resources Required	Timescales	Responsibilities
Implement five year programme to increase patient and public participation and engagement in Trust-wide research activity	Trust PPE strategy endorsed by Trust Board, Council of Governors and other key stakeholders	To be agreed	Immediate	**Lead:** Head of R&D PPI Lead (NWL CLAHRC) Lead Research Associate Head of Communications and Marketing

Strategic Aim 2: To build capacity and capability to deliver research excellence and readiness within and evolving research and innovation landscape

Priorities:

- Developing research talent
- Developing the Multi-Professional Workforce
- The Research Portal and Patient Registry
- Clinical Research Support and Research Associates

Implementation Objectives	Achievement Measures	Resources Required	Timescales	Responsibilities
Develop and promote increased professional development opportunities for multi-professional research staff (nurses, midwives and AHPs)	JRC Awards Increased intake to masters/doctoral programmes Joint Trust / Academic Appointments	To be agreed	2015	**Lead:** Chair of the Multi-Professional Strategy Group Heads of R&D/Multi-Professional Learning Lead Nurse for Education
Develop multi-professional research programme aligned to Trust clinical and research strengths	Funded grant proposals Increase in MPR PIs/CIs Increased publications	To be agreed	2015	**Lead:** Chair of the Multi-Professional Strategy Group
Implement the Trust Research Portal	Installed Research Portal and Patient Registry Increased patient recruitment / grants / projects	£0.5M Capital Investment agreed	2015/16	**Lead:** Directors of R&D/IMT
To establish a virtual Clinical Trial Unit to build up research delivery capacity and investment towards Trust-based Clinical Research Facility within the next five years	In-house trial delivery expertise for all aspects of trial management and governance	Dedicated Trust statistician	2015	**Lead:** Director of R&D/ Head of R&D

Strategic Aim 3: To deliver world class research and innovation to transform the quality of treatments and services

Priorities:

- Develop basic and clinical science partnerships and collaboration
- NIHR CLAHRC II
- Neonatal Research Programme
- Future priorities include Acute Medicine, Child Health & Maternity and HIV
- Supporting innovation and service improvement

Implementation Objectives	Achievement Measures	Resources Required	Timescales	Responsibilities
Establish a formal joint strategy between Chelsea and Westminster and Imperial College	Joint strategy in place with key actions/targets	To be agreed	2015/16	**Lead:** Chief Executive Director of R&D
Develop clinical science partnerships around themes such as inflammation and immunity which complement and strengthen the Trust research priorities	Establish clinical science partnership with collaborative priorities/projects	To be agreed	2015/16	**Lead:** Divisional R&D Directors
Develop and communicate clear strategy five year plans for each of the Trust research priorities	Established and communicated plans for research priorities	To be agreed	Immediate	**Lead:** Divisional R&D Directors
Develop a portfolio of grant proposals for funding to support the development of the Trust research portfolio and research priorities	Goal – as many professorial chairs on 1 proposal as possible	To be agreed	On-going	**Lead:** Divisional R&D Directors
Develop strategy for innovation and service improvement based on research, clinical work and service development activities	Innovation strategy in place with key actions/targets	To be agreed	Immediate	**Lead:** Director of R&D/ Commercial Director/ Head of R&D

Strategic Aim 4: To develop and strengthen collaborative partnerships with Industry

Priorities:

- Increase industry-sponsored studies
- Improve industry engagement
- Improve feasibility and set-up
- Generate income

Implementation Objectives	Achievement Measures	Resources Required	Timescales	Responsibilities
Develop a marketing and communication plan to support the development of the Trust commercial trial portfolio and increase industry engagement	Increase industry partnership Increased number of trials	To be agreed	2014	**Lead:** Head of R&D Industry Facilitation Officer (IFO) Research Ops Manager
Build partnerships and alliances with pharma companies and CROs acquiring preferential status by key industry partners	Industry prime site status	To be agreed	On-going	**Lead:** Research Ops Manager IFO
Develop the capacity and capability to increase and support a growing industry portfolio through investment in R&D infrastructure and support services	Increased commercial income stream	£22K to build research support infrastructure	On-going	**Lead:** Head of R&D Research Ops Manager
Further improve trial feasibility processes to ensure trials are set-up and delivered in accordance with national NIHR performance benchmarks	Achieve 80% annual target recruitment to time and target Achieve 80% annual target 70 day first patient first visit (PID targets)	To be agreed	On-going	**Lead:** Research Ops Manager IFO
Increase opportunity for more Trust specialities to become engaged in the delivery of commercial research	Increase coverage of commercial activity across Trust specialties Increased number of new investigators	To be agreed	On-going	**Lead:** Research Ops Manager / IFO

Strategic Aim 5: To build strong collaborative and synergistic partnerships across North West London to respond to national and local priorities and opportunities

Priorities:

- Develop new and existing academic and clinical partnerships
- Imperial College and NIHR family network
- NIHR LCRN for NWL
- Imperial Partners AHSN
- Industry partnerships to support local industry strategy

Implementation Objectives	Achievement Measures	Resources Required	Timescales	Responsibilities
Establish a formal joint strategy between Chelsea and Westminster and Imperial College (including other key stakeholders such as RBH and RMH)	Joint strategy in place with key actions/targets	To be agreed	2015/16	**Lead:** Chief Executive/Director of R&D
Communicate strategic plans and outputs from all academic and clinical partnerships across the sector highlighting key priorities for C&W	Communicate strategic plans and actions to be taken forward	To be agreed	On-going	**Lead:** Chief Executive/Director of R&D

8. References

Academic Health Science Networks (2012) Department of Health

Best Research for Best Health (2006), Department of Health

Health and Social Care Act (2012)

Developing the Role of the Clinical Academic Researcher in the Nursing, Midwifery and Allied Health Professions (2012) Department of Health

Imperial College Health Partners AHSN prospectus (2012)

Improving Patients' lives through Research and Innovation 2010 – 2013 Chelsea and Westminster Hospital NHS Foundation Trust

Innovation, Health and Wealth: Accelerating Adoption and Diffusion in the NHS (2011), Department of Health, NHS Improvement & Efficiency Directorate, Innovation and Service Improvement

NHS Constitution for England (2013)

NIHR Clinical Research Network Structure www.crncc.nihr.ac.uk/nihrstructure

NIHR High Level Business Objectives www.crncc.nihr.ac.uk

Strategy for UK Life Sciences (2011) Department for Business Innovation and Skills

The Plan for Growth (2011) HM Treasury

9. Appendices

Appendix 1: C&W Research Performance as at 06 February 2014

Research Performance in Set-up, Initiation and Delivery, 06.02.2014

Set-up

Set-up Service Survey Results (April 2013–Jan 2014):

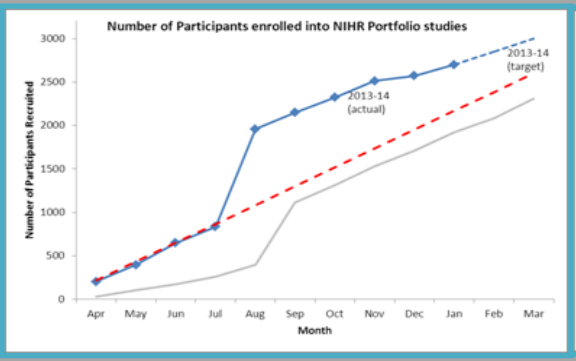
- 94% of Investigators kept well informed of progress and knew the anticipated R&D approval date
- 94% of Investigators felt fully/often supported throughout process
- 94% of Investigators rated their experience with us a 'very good' (i.e. rated us 5 out of 5

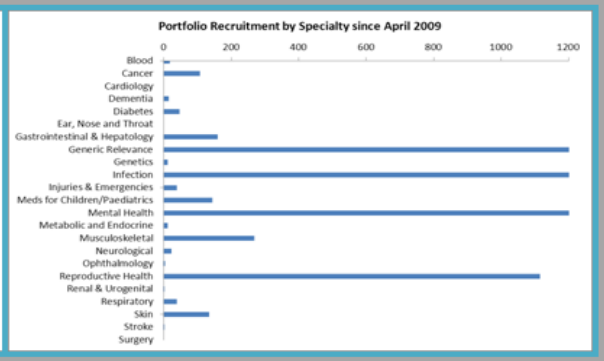
Initiation

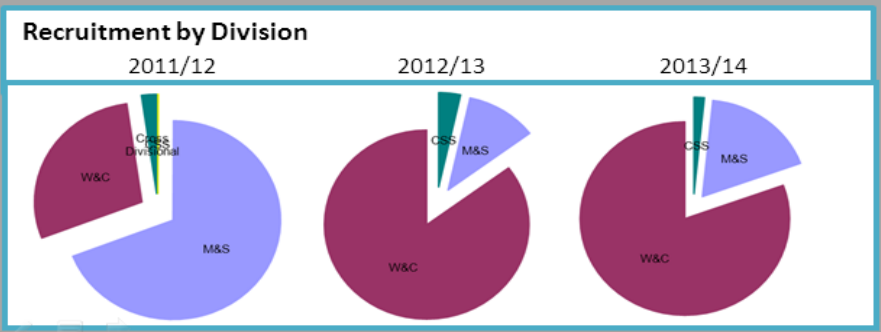
Proportion of NIHR Portfolio studies achieving first participant recruited within 30 calendar days of NHS Permission		
Year	%	Target
2009-10	11.1%	80%
2010-11	20.8%	
2011-12	4.8%	
2012-13	6.7%	
2013-14	21.0%	

Identified as priority for 2014/2015 (raising awareness of metrics, robust feasibility, weekly reviews)

Delivery

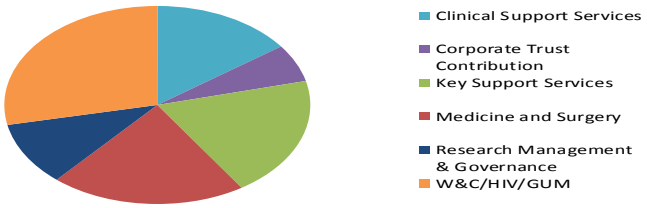


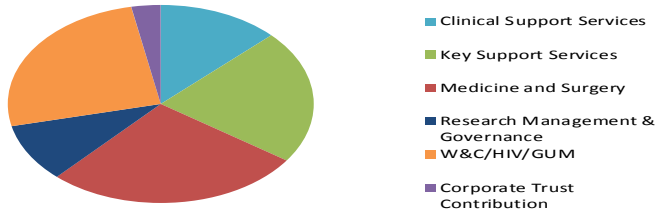


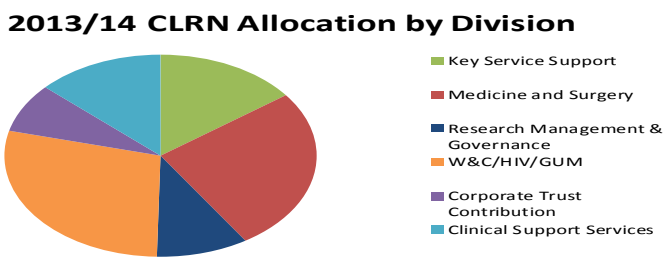


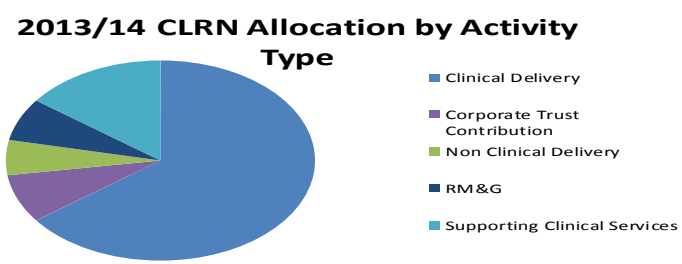
Recruitment to time and target has been Identified as a priority for 2014/2015 (RA support for commercial studies, PI/study team training, guidance on intranet, weekly reviews)

Appendix 2: C&W Finance Performance 2011 - 2014









Divisional resource is allocation based on:
- Complexity / intensity of trial delivery
- Interventional 'v' Observational studies
- Sustainability of CLRN Portfolio and performance recovery

Activity type' resource is allocated based on:
- Ensuring overall Trust-wide CLRN portfolio performance to target
- Meeting national benchmarks (Time and Target / Recruitment of 1st patient)

Research & Development Detailed Forecast Outturn 2013/14

2013/14 Funding Stream / Project Analysis	Expend PLAN £,000	Forecast Outturn £,000	Variance £,000	Comments
Comprehensive Local Research Network (CLRN)				
- Consultant PAs	100	100	0	
- Academic / Research Fellows	55	55	0	
- Research Associate / Nurse Support	388	388	0	
- Key Service Support	130	130	0	
- Research Assistant / Data Management	49	49	0	
- Research Management & Governance Office	60	60	0	
- Divisional Lead Contribution	24	24	0	
- Corporate Trust Contribution	69	69	0	
Subtotal CLRN	**876**	**876**	**0**	
Research Capability Funding (RCF)	**52**	**52**	**0**	
Medicines for Neonates Programme Grant (MfN)	**222**	**222**	**0**	
NEON	**23**	**23**	**(0)**	
Commercial Studies	**0**	**0**	**0**	- Commercial Study income distribution under review - All associated income in deferred
Charity & Public Funded Projects	**148**	**139**	**(9)**	
CLAHRC	**3,747**	**4,220**	**473**	- 9m forecast position to 31 December 2013 - £400k represents C&W matched funding contribution
GRAND TOTAL	**5,068**	**5,532**	**464**	

Director of Infection Prevention and Control (DIPC) and Infection Prevention and Control Team (ICT) Annual Report April 2013-March 2014

Title:	Director of Infection Prevention and Control (DIPC) and Infection Prevention & Control Team (ICT) Annual Report to the Trust Board (April 2013 - March 2014)
Executive Summary:	The attached report outlines the performance and service developments of the Infection Prevention and Control Team between April 2013 - March 2014
Key Issues for Discussion:	To provide assurance to the Trust Board that the Infection Prevention and Control deliver a safe and comprehensive service in terms of: • Infection Prevention and Control Team activity • Mandatory surveillance reporting and progress against targets • Responding to outbreaks • Surveillance and audit • Staffing • Infection Prevention and Control Team Annual Programme
Edited/Compiled by	Roz Wallis; Consultant Nurse, Infection Prevention and Control Zara Tzouros; Administrator, Infection Prevention and Control
Authors:	Dr Berge Azadian; Consultant Microbiologist, D.I.P.C Greig Benson: Norland's Managed Services Engineering Manager Nick Cooley; Antibiotic Pharmacist Suzanne O'Reilly; Occupational Health Advisor Zara Tzouros; Service Administrator Holly Ashforth; Interim Chief Nurse Rochelle Gee; ISS Patient Services Manager Catherine Sands; Acting Emergency Planning Officer Olga Sleigh; TSSU Manager and Decontamination Lead Roz Wallis; Consultant Nurse Infection Prevention and Control

Co**ntents**

Glossary

Healthcare Associated Infections: where the specimen has been taken 48 Hours or more after admission (HCAI) or 72 hours after admission for c diff.
Community Acquired Infections: where the specimen has been taken up to 48 hours after admissions and prior to admission (CAI)

1. Description of Infection Prevention and Control Arrangements

1.1. Infection Prevention and Control Team (IPCT)

At the end of the financial year, the members of the Infection Prevention and Control Team were;

Dr. Berge Azadian (BA)	Director of Infection Prevention and Control ,Infection Control Doctor and Consultant Microbiologist
Therese Davis (TD)	Chief Nurse and Director of Patient Flow and Patient Experience (left the trust in June 2013)
Elizabeth McManus (EM)	Director of Nursing and Quality
Holly Ashforth (HA)	Acting Deputy Chief Nurse
Roz Wallis (RW)	Consultant Nurse, Infection Prevention and Control
Dr Elli Demertzi (ED)	Associate Specialist Microbiologist
Helen Mustoe (HM)	Infection Prevention & Control Nurse (left in November 2013)
Imogen Thomas (RL)	Microbiology SPR (left June 2013)
Rekha Lopez (RL)	Microbiology SPR
Colin Barnes (CB)	Infection Prevention & Control Nurse
Sarah Ross (SR)	Infection Prevention & Control Nurse (April- September 2014)
Margaret Kafanyanga (MK)	Infection Prevention and Control Team (Joined the team in December 2014)
Nick Cooley (NC)	Lead Antimicrobial Pharmacist
Orla Geoghegan (OG)	Antimicrobial Pharmacist
Kitty Kahan (KK)	Service Administrator (Kitty left the team in January 2014)
Zara Tzouros (ZT)	Service Administrator (Zara joined the trust in February 2014)

1.2 The Role of the Infection Prevention and Control Team (IPCT)

The role of the IPCT is to maintain patient safety through assuring the Trust's compliance with the Health and Social Care Act (2008) [updated 2010] and also with the Trust objectives. This is done through implementing the annual programme and policies which facilitate clinical decision making in relation to the prevention and control of infection on a twenty-four hour basis. The IPCT provides advice to all grades of staff regarding the management of infected patients and on reducing the risk of infection in hospitals. The functions of the team include:

- The identification and control of outbreaks, in collaboration with the Consultant in Communicable Disease Control (CCDC) and an outbreak control group, as appropriate.
- Education of all hospital staff on infection control procedures and hand hygiene.
- Preparation and review of policy documents in liaison with relevant staff.
- Formulation of an annual programme of work via the Infection Control Committee. This includes surveillance of infection, and implementation of this programme in liaison with other hospital staff.

- Mandatory surveillance and reporting of MRSA bacteraemias, Clostridium difficile, VRE bacteraemias, MSSA bacteraemias, and E-coli bacteraemias.
- Surveillance of other alert organisms.
- Provision of an annual report to the CE following discussion at the IPCC meeting on the results of the programme, indicating achievements and highlighting any matters of concern.
- Liaison with the Occupational Health Service (OHS) on relevant staff issues.
- Liaison with the Clinical Site Managers on bed management issues.
- Liaison with clinical teams on development of standards, audit and research.
- Liaison with cleaning contractors on standards of cleanliness.

1.3 Communication within the Infection Prevention and Control Team (IPCT)

Key communications within the Infection Prevention and Control Team are as follows;

- There is daily liaison between the microbiology laboratory and the Infection Control Nurses in relation to reporting of antibiotic resistant bacteria or other alert organisms.
- The Infection Control Nurse meets with the Associate Specialist microbiologist on a weekly basis to discuss significant specimen results and other infection control issues.
- The DIPC informally meets with the Chief Executive on a monthly basis.
- The DIPC meets with The Chief Executive and the Medical Director formally every other month.
- The DIPC meets with the Executive Nurse (Chief Nurse) before and after the IPCC, the Team Meeting, the Liaison Group with the PCT.
- The Consultant Nurse meets with the Deputy Chief Nurse fortnightly.
- The Infection Prevention and Control Team, DIPC and Deputy Chief Nurse meet formally on a monthly basis.
- The Infection Prevention and Control Nurses and administrator meet on a weekly basis to review their workloads.

1.4 Infection Prevention and Control Committee (IPCC)

The purpose of the committee is to:

- Advise and support the Infection prevention and Control Team.
- Identify and review clinical and organisational risks and report to the Chief Executive.
- Meet monthly to consider reports on infection prevention and control problems.
- Discuss and endorse a plan for the management of infection outbreaks in the hospital and monitor its implementation.
- Discuss and endorse the hospital response to major outbreaks of infection in the community (the Major Incident [Outbreaks] Plan) and monitor its implementation.
- Discuss and endorse the annual infection prevention and control programme, which will be submitted for approval to the CE, review progress of the programme, assist in its implementation and review results.
- Advise on the most effective use of resources available for implementation of the programme and for contingency requirements.
- Advise on and approve infection control policies before their submission for the CE's approval, and review their implementation.
- Promote and facilitate the education of all grades of hospital staff in infection control procedures and hand hygiene.
- Promote communication between the different disciplines in the hospital. The IPCC minutes are widely circulated and made accessible to senior medical and nursing staff and appropriate committees.

Infection Prevention and Control Committee terms of reference are shown in Appendix 1.

Infection Prevention and Control Committee members are shown in Appendix 2.

1.5 Reporting Lines to the Trust / Links to Clinical Governance/Risk Management/Patient Safety

Clear lines of accountability are in place throughout the Trust defining the relationship between the Infection Control Committee, Risk Management Committee, Quality Committee, and the Trust Board.

1.6. Links to the Formulary & Prescribing Committee:

There are excellent links with the Formulary Committee and Pharmacy:

- The antibiotic pharmacists liaise closely with the Consultant Microbiologist/DIPC and are members of the Infection Control Committee.
- The Consultant Microbiologist/ DIPC is a member of the Medicines Committee.
- The Medical Microbiologists receives a daily electronic report from Pharmacy of restricted antibiotic use in the Trust.
- Any unusual antibiotic prescribing is brought to the attention of the Consultant Microbiologist/DIPC or microbiology registrars by the antibiotic pharmacist on a daily basis so that antibiotic prescribing is well monitored.
- The Antibiotic Stewardship Group.

2. DIPC Reporting to the Trust Board

Duty 2 of the Health & Social Care Act (2008) (updated December 2010) requires all NHS organisations to appoint a Director of Infection Prevention and Control (DIPC) to be a senior officer with responsibility for:

- Overseeing control of infection control policies and their implementation
- Being responsible for the Infection Prevention and Control Team
- Reporting directly to the Chief Executive and Board
- Challenging inappropriate hygiene practice and antibiotic prescribing
- Assessing the impact of all plans/policies on infection control
- Being a member of the Quality Committee and Patient Safety teams/structures
- Producing an annual report

The DIPC at the Trust meets these requirements. He reports to the Chief Executive on a monthly basis and to the Trust Board on an annual basis to present the ICT/DIPC Annual Report. The report is structured to comply with Department of Health DIPC annual reporting guidelines (Appendix 3)

3. Budget Allocation

The Infection Control service is funded for:

1 Consultant microbiologist (3 Programmed Activities)
1 Band 8c Consultant Nurse
2 Band 7 Infection Prevention and Control Nurses
1 Band 4 Service Administrator.

The non-pay budget for stationary is £700 per annum. The named signatory for the Infection Control budget is Roz Wallis. If additional funding is required in outbreak situations The Outbreak Committee requests it.

4. Infection Prevention and Control Team Activities between April 2013- March 2014

4.1 Membership of Committees:

The Infection Prevention and Control Team participate in the following activities;

- Infection Prevention and Control Committee
- Decontamination Committee
- Health and Safety Committee
- Patient Environment Action Team (PEAT)
- Waste Management` Group
- Medical Devices Committee
- Senior Nurse Group
- Risk Management Committee
- Antibiotic Steering Group
- Facilities Assurance Board
- Clinical Reference Group
- Infection Control Commissioning Liaison Group
- Medicines Committee
- Emergency and Pandemic Influenza Planning Committee
- Medical Staff Committee
- Postgraduate Medical Education Committee
- ITU/HDU Morbidity and Mortality Meeting
- MDT meeting Neonatologists and Obstetricians
- Trust Executive Quality Assurance Committee (replacing Clinical Governance Committee)
- Research Strategy Board
- Water Management Board
- London Directors of Infection Prevention and Control Forum
- Mandatory Training Committee
- Divisional Board Meetings
- North West London Antibiotic Pharmacist Group
- CNWL Infection Control Group
- Quality Committee
- North Central London Sector Control Of Infection Network (COIN)
- Cross Organisational Working and Learning Programme (COWL)

4.2 Education and Training

Education continued to be a priority in 2013/14. Infection Prevention and Control is included in the Trust Mandatory face-to-face Induction and Updates. Hand Hygiene/Infection Control compliance for 2013/14 was 75%. The overall Trust compliance for all mandatory training was 79% this is against the Trust target of 85% compliance. The Target increases to 95% for 2014/15.

Follow-up of non-compliers is a rigorous process. Currently, staff are documented as having completed their mandatory training if they have completed both their face-to-face training and online training. Nurses have dedicated time within their mandatory induction and updates to complete the online training. Other staff groups have one month to complete after which directorates are subject to financial penalties. This has resulted, over the last year, in better compliance. Feedback from external auditors (eg NHSLA) has also enabled the Trust to focus on improving processes. This included ensuring that mandatory updates are in place for all staff groups including the doctors.

Improvements in performance are overseen by the Mandatory Training Committee. Its remit is to look at all aspects of Mandatory Training. It was established in 2009 and meets on a two monthly basis. In addition a task group has been established to plan towards improvements required for the Trust to achieve NHSLA Level 3.

Workforce distributes monthly mandatory training reports via qlickview to all managers with the individual names of staff members who have not completed their mandatory training. Direct line managers are responsible for ensuring that their staff attend and complete the required training.

To improve junior doctors compliance emails are sent to the individual doctor to remind them to complete their training within one month of starting in the Trust. The general manager and clinical director are also emailed. A further two reminders are sent at monthly intervals. If the doctor has still not completed training further escalation will take place.

Mandatory update training for medical staff who have been in the Trust for two or more years commenced in December 2011, for Allied Health Professionals commenced in November 2011 and for Administrative staff in September 2011.

Attendance and completion is recorded on the Trust Training Database (OLM) by Organisational Learning and Development (OLD) for all non-medical Trust staff, the Post-Graduate Medical Centre for Doctors.

Line managers are responsible for following up on non-attendees and workforce provide managers with reports of staff who are not up to date on their mandatory training through monthly RAG rated reports. Further detail of the follow-up process of non-attendees can be found in the Trust Induction and Mandatory Training Policy.

In relation to ICLP training this is recorded on OLM by the Infection Prevention and Control Team

Regular infection prevention and control teaching sessions included:

- Corporate Induction for all new employees (excluding doctors) to the Trust (monthly).
- Nursing & Midwifery Induction (monthly)
- Nurses and Midwifery Update (monthly)
- Admin and Clerical Update (Bi-Monthly)
- Therapies Update
- Allied Health Professionals Update
- Foundation Year 1 and 2 (FY1 and FY2) Induction (annual)
- Senior House Officers Induction (Learn online)
- New Specialist Registrars and Consultants Induction (Learn online)
- Student Nurses Induction (per intake)
- IV Administration Study Day (monthly)
- Intensive Care Foundation Course (every six months)
- Medical Students (per new intake and in year 3)
- Infection Control Link Professionals (ICLP) three courses per year, each three days long
- Infection Control Link Professionals monthly meetings
- Excellence in Care Course (Health Care Assistants) (per intake)
-

Regular Antibiotic Prescribing Teaching Sessions:

- New pharmacist inductions
- Doctors FY1 Induction
- Doctors FY2 Induction
- ICLP Courses (antimicrobial stewardship and Clostridium difficile infection)

- FY1 and FY2 doctors: prudent antibiotic prescribing
- Resident pharmacists - therapeutic drug monitoring and antibiotic prescribing (basic microbiology and common infections)
- Pharmacists and pharmacy technicians at lunchtime teaching sessions
- A variety of medical staff grades at Grand Rounds
- NICU update training

In addition to mandatory training IPCT provided various monthly teaching sessions for staff groups, topics include practical sessions on how to conduct an RCA (including governance, FY1, FY2 and ward team study days)
Table 1 shows the number of staff who attended the mandatory training by department (induction and update) by the end of March 2014. It includes the Junior Doctors Induction and those trained through the online mandatory induction module.

Table 1: The Percentage of Staff Who Had Completed Mandatory Training (which includes Infection Prevention and Control) by the End of March 2014.

Division	Directorate	Hand Hygiene	Mandatory Training Compliance %
Total	**Total**	**75%**	**79%**
Clinical Support Services Division		**78%**	**82%**
	Adult Outpatients Directorate	81%	75%
	Anaesthetics Directorate	38%	73%
	Diagnostic Services Directorate	76%	80%
	Intensive Care Directorate	91%	89%
	Peri-Operative Services Directorate	85%	84%
	Pharmacy Directorate	78%	88%
	Therapy Services Directorate	85%	83%
Management Exec & Corporate Services Division		**77%**	**84%**
	Chief Executive Directorate	64%	65%
	Finance Directorate	77%	83%
	Governance & Corporate Affairs Directorate	50%	72%
	Human Resources Directorate	88%	87%
	Imperial College Health Partners Directorate	71%	70%
	Information & Strategy Directorate	94%	88%
	Information Mgmt & Technology Directorate	85%	83%
	Nursing Patient Affairs Directorate	83%	85%
	Regional Pharmacy Directorate	71%	73%
	Research & Development Directorate	56%	70%
Medicine,Surgery & Private Patients Division		**74%**	**79%**

	Medicine Directorate	77%	80%
	Private Patients Directorate	81%	81%
	Surgery Directorate	66%	75%
Womens, Childrens and Sexual Health Division		**74%**	**77%**
	Children & Neonatal Directorate	66%	73%
	HIV/GUM & Dermatology Directorate	66%	72%
	Womens Services Directorate	88%	85%

4.3 NHS Litigation Authority (NHSLA) Risk Management Standards

The NHS Litigation Authority (NHSLA) concluded their assessment process for the Trust's application to meet the standards for NHSLA Level 3 accreditation on 4th October 2013 and confirmed that the Trust achieved Level 3 accreditation having passed 48 out of 50 of the criteria. This is an extremely positive outcome for the Trust.

During this two day assessment the NHSLA assessors have examined evidence of how the Trust complies with their risk management standards, including those relating to Infection Prevention & Control and Hygiene. This process included evidence of policies and procedures and also how these are put into practice by the assessors visiting wards and looking at records.

4.4 Hand Hygiene:

Hand Hygiene is a key priority within the organisation. Monthly audits of hand hygiene compliance take place and are reported at the following monthly meetings:

- Infection Prevention and Control Committee
- Infection Control Link Professionals Meeting,
- Patient Led Assessment of the Patient Environment Committee. (PLACE)
- Divisional Board Meetings

The Director of Nursing as the Infection Prevention and Control Executive Representative updates the Trust Board each month. Ownership of hand hygiene compliance is encouraged at all levels by including it in all Infection Prevention and Control teaching sessions (see 4.2). Infection Control Link Professions receive in depth training on Hand Hygiene, enabling them to audit and monitor practice. We have to date held 25 ICLP 3 day training sessions, and continue to hold three courses per year.

4.4.1 Alcohol Gels and Signage:

The Trust has alcohol gel dispensers throughout the Trust, in every department, by every bedside, in every clinical corridor and in every outpatient consulting room. Alcohol gels are also used in our operating theatres as an alternative to the usual hand antiseptics for surgical hand antisepsis.

Automated gel dispensers are used across the Trust in both clinical and non-clinical areas to encourage the public to adhere to hand hygiene precautions when attending the hospital site. Speaking signs have also been fitted by the lifts to prompt public and staff. These are activated during the day by movement sensors. They are automatically deactivated after 7pm, recommencing at 8am.

4.4.2 Hand Hygiene Audits:

Monthly auditing of Hand Hygiene compliance commenced in July 2005. The Infection Control Link Professionals (ICLPs) conduct the audits. The ICLPs are taught how to audit on the ICLP course. The audit tool is based on the World Health Organisation's 'Five Moments of Hand Hygiene' focusing on patient care at the bedside. These audits are now up-loaded to the Synbiotix system and the dashboard which automatically updates the audit results dashboard.

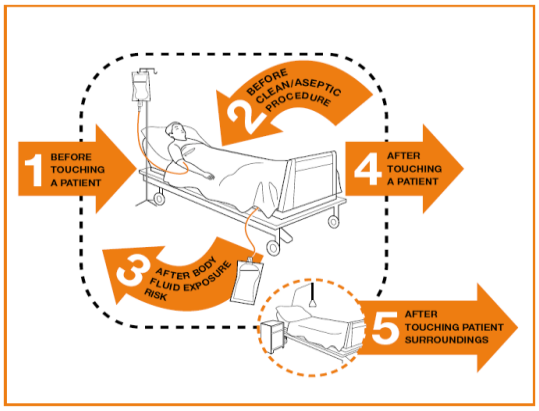


Figure 1: The world Health Organisation's 5 moments of Hand Hygiene

The average monthly Trust compliance is published in both the Trust News every month and the ICLP monthly Newsletter. Table 2 shows a steady improvement in hand hygiene compliance over the last year. Figure 1 shows improvement in compliance over the last 5 years.

The Trust aims for continuing improvement in completion of and compliance with monthly hand hygiene (HH) audits. Our target for completion of audits is 100% (i.e. all clinical areas must complete a HH audit each month) whilst for compliance it is 95%.The average hand hygiene compliance has decreased over the last year from 94.5% (average compliance 2012/13) to 94.17% (2013/14). 93.18% of hand hygiene audits were completed compared to 96.26% the year before. These are crude calculations, which should be used as comparative indicators. Please see appendix (5) for the raw data for compliance. Action plans are completed on Synbiotix if compliance is below target. Progress against the action plans are reported to the Divisional Boards. This is monitored in the monthly Infection Prevention and Control Committee and escalated to the relevant leads for those areas. Overall hand hygiene compliance is reported in the Trust News each month. Figure 1 shows the increase in hand hygiene compliance year on year since hand hygiene auditing began in 2006.

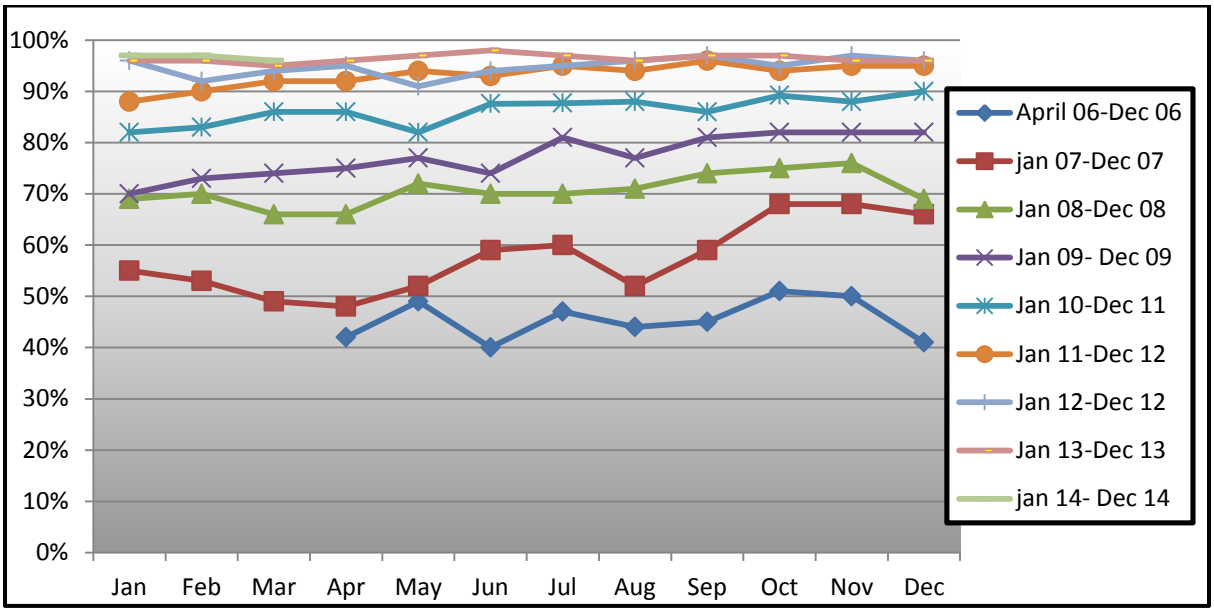


Figure 2: Hand Hygiene Compliance April 2006-March 2014

4.4.3 The Synbiotix System:

Synbiotix is a web based system for recording and analyzing a range of clinical information, and is accessed via the Trust Intranet. A range of modules are now well established, a number of which support the ongoing monitoring and reporting of infection prevention and control standards. A wide range of staff have the ability to view data from the system, and a process of role based access is in place across the organization.

The hand hygiene module provides an established process for departmental Infection Control Link Professionals to enter their monthly audit information and any action plans that are required. The system combines hand hygiene completion and compliance rates from each area to provide Trust wide performance data. This process provides assurance of standards for the Infection Prevention and Control Committee through monthly reviews. Data can be viewed at Trust, departmental and individual audit levels, and provides analysis of compliance by differing staff groups.

A hygiene checklist provides a user friendly approach for staff within departments to record compliance with hygiene standards on a daily basis (see appendix 5), and enables organisation wide monitoring of these through a 'dashboard'. Monthly Matron checklists also continue as an approach to further assurance of hygiene standards.

'Saving Lives' compliance audits have been developed for both adults and children. These monitor the standards of peripheral venous lines, central venous line continuing care and urethral catheter care.

4.5 Infection Control Link Professionals (ICLP):

The ICLP system commenced in July 2005, being developed by the Infection Prevention and Control Team as a local initiative based on National Audit Office (2000) recommendations. The aim is to ensure that there is one informed and influential healthcare professional in each clinical area who is responsible for auditing, implementing and monitoring the Trust's infection control priorities as identified in The Health and Social Care Act (2008) revised 2010).

All ICLPs are initially required to complete a three day training course run by the IPCT. As part of the course, each ICLP completes a project which involves improving an aspect of infection prevention and control care in their area of practice using a theoretical framework.

As part of their course work they are also required to complete a hand hygiene audit, an environmental audit, a daily checklist and the *Saving Lives* audits (peripheral line, central line and urinary catheter audits). 46 ICLPs were trained in the Trust in 2013-14.To date 334 ICLPs have completed the training and 220 are still active in the Trust. The remaining ICLPs have left the Trust.

Following training the ICLPs are responsible for conducting, feeding back and recording on Synbiotix the monthly hand hygiene, daily checklist and Saving Lives audits. They are responsible for updating the Infection Control Board in their clinical areas and must attend monthly meetings. This provides a forum for feedback of monthly audits, professional development and networking. The minutes of the meetings are circulated to ICLPs.

4.6 Other Activities of Infection Prevention and Control Team:

The table below (3) lists the key activities of the IPCT by month between April 2013-March 2014.

Table 2: Infection Control Key Activities 2014/14.

Month	Key Activities
April 13	MRSA PostInfection Review (PIR) And Serious Untowards Incident investigation Training Bariatric Evacuation Sheet Decontamination review.
May 13	SUI Panel Review Emergency preparedness steering group MRSA and IPC training Sharps Audit 2nd MRSA PIR
June 13	PLACE Audit ICLP course 22 IC visitors from Hong Kong Clinical governance half day. Negative pressure room audits BNU SUI investigation RJ SUI investigation SSI Quality standard consultation review SSI surveillance system review
July 13	Investigating Infection Incidents Course Burns Infection Control Policy Meeting. NICU teaching Musical Instrument Infection risk review Theatre Waste Project Meeting Review of ED architectural extension plans
August 13	MRSA Taskforce M&S IV training and auditing. RNM PVC training LWIG IV awareness Preventing preventable Infections Lecture IC net business case presented and submitted. Trust wide training for Chloroprep and Biopatch use Burns Unit outbreak meeting
September 13	ICLP course 23 PLACE audit Ultrasound teaching Peripheral line auditing in Medicine and Surgery
October 13	MSSA RCA RCA training with FY2

Month	Key Activities
November 13	Burns outbreak meeting
December 13	MRSA SUI investigation/panel review. Creation of public and C forum group: FIT- Fighting Infection Together Adaption of new isolation sign posters.
January 14	New ICLP course 24 Emergency Burns Meeting Paediatrics training ANTT meeting TB investigation SSI signage
February 14	Vomiting and Diarrhoea outbreak on NG and EH Outbreak Management C diff SUI meeting. Outbreak Strain in Burns emergency meeting
March 14	Working on MRSA Policy Clinical Governance Theatres half day- CJD session Australian delegation visit. ANTT strategy meeting MRSA bacteremia

4.7. MRSA Screening:

MRSA screening of elective and emergency patients continued in 2013/14. The target was to screen 95% of both elective and emergency admissions. Elective admissions must be screened up to three months prior to admission, emergencies within 24 hours of admission. For the financial year 2013-14 the average percentage screened was: 94.7% elective and 98.5% emergency admissions had been screened. Figure 2 shows a steady improvement in MRSA screening in both categories over the financial year. It is a small number of patients (up to 10 per month) that have prevented us from achieving our target of 100%.

Compliance was driven up by monthly compliance reports produced by the Information and Performance Dept. All non-compliant cases in the report are reviewed by the MRSA Screening Taskforce prior to wider circulation and are reported into the monthly Infection Prevention and Control Committee and Divisional Board meetings. The group has reviewed the elective patient pathway, identified gaps, visual prompts for patients in some outpatient and day care clinics, and follow-up of individual patients and feedback to matrons and wards.

The MRSA Screening Taskforce has found that breaches in the elective category mostly occur when patients do not have their operations within 3 months. Last year the screening compliance was improved in bariatric surgery by using postal MRSA screening packs. This has now been extended to Trauma and Orthopaedics. Patients are identified by the Admissions Booking Office when they ring the patients at home to inform them of their operation date. They note if the patient is likely to breach the three month screening window prior to surgery and send out the packs. This has resulted in overall improved compliance.

To improve our data the report is validated by both Infection Control and by the Admissions Booking Office. The latter manually check if non-compliant surgical cases in the draft report have been screened by their GP prior to wider circulation of the report. This has improved the accuracy of the report and has also improved the overall MRSA screening compliance.

MRSA screening compliance of emergency admissions has been driven up by screening at the point of admission in A&E and in AAU. An electronic flag to alert ward staff of emergency patients who have not been screened was introduced this year and this has contributed to improve emergency admission MRSA screening compliance.

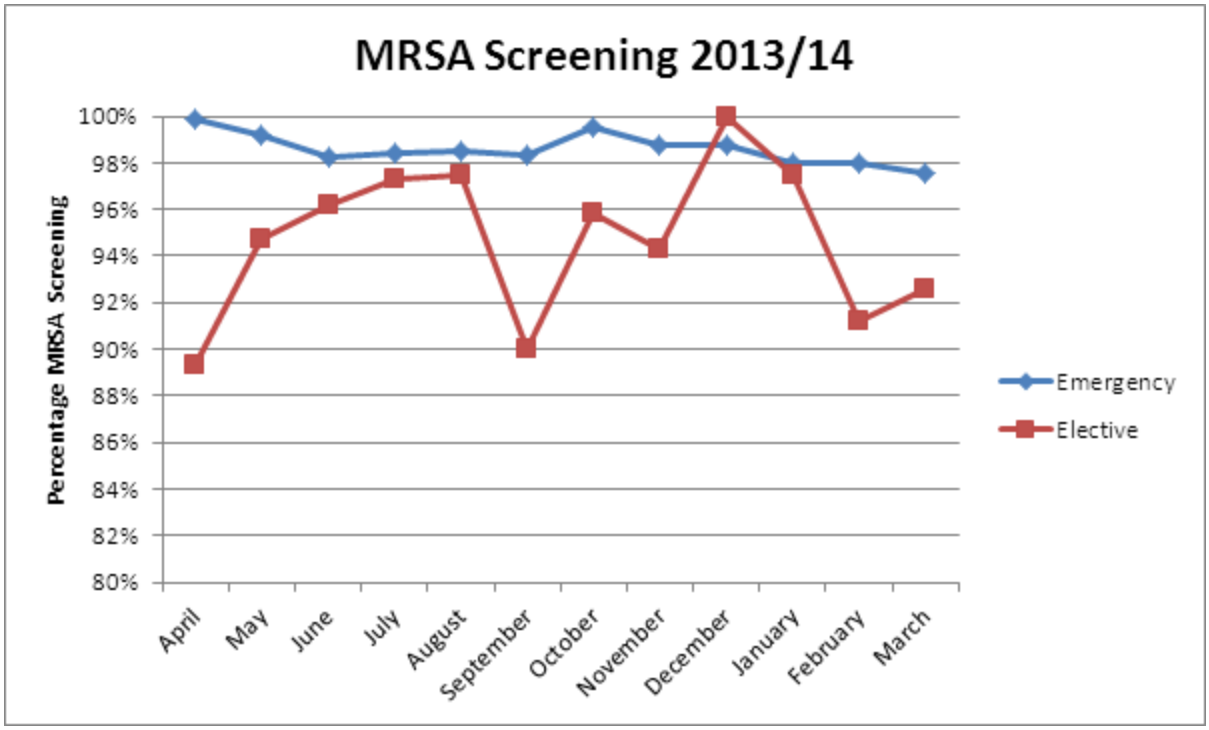


Figure 3: MRSA screening in Emergency and Elective admissions

4.8. Flu Response:

The Head of Emergency Preparedness continues to oversee the management of the Trust staff flu vaccination campaign and mask fitting. Strategic Flu meetings chaired by Berge Azadian commenced as usual in August, with review of the Seasonal Flu Plan and terms of reference of the committee.

Staff Vaccinations: The vaccination delivery order which is due historically in the last week of September was delayed till 18th October. This was because new strains being added to the vaccine at a late stage causing delays in the manufacturing process which was undertaken in the Netherlands. Although the vaccination campaign was three week delayed, a concentrated effort ensured this wasn't a problem and pharmacy negotiations ensured that any unused stock money was reclaimed not just the usual 10%.

The majority of areas demonstrated a rise in number of staff vaccinated. A total of 3,236 employed staff, 1,889 staff were vaccinated. In addition, 672 non Chelwest/contractors were vaccinated. The Final total of staff vaccinated was: 2,019, the highest number to date. Despite such high figures DoH reporting is only certain categories and our final submission in January was 60.4%

Vaccinations per Divisions:

- Medicine, surgery and private patients – 83%
- Clinical Support Services – 71%
- Management Executive and Corporate services 71%
- Women's, Children's and Sexual Health 67%

Suzanne O'Reilly Occupational Health Manager increased the number of open clinics and supplied a roving bank nurse who successfully vaccinated 24% of the total by 9th December. 36 staff attended the vaccination training but only 16 vaccinated during the season; this may have been due to work pressure notably there was no vaccinator for the medical/surgical wards.

Total vaccinators broken down to areas:

- Occupational Health (715) 35%, roving vaccinator (462) (23%)
- HOEP (301): 15%
- Maternity (90): 4%
- Emergency Department (67): 3%
- Theatres (56): 3%
- Dean Street (57): 3%
- Harbour Yard (46): 2%
- Paediatrics (44): 2%
- ICU (37): 2%
- London Post Grad Pharmacy Education and Training (14): 0.5%

The figures for the number of staff vaccinated over the last 5 year are below:

- 2013/2014: 2019
- 2012/2013: 1862
- 2011/2012: 1830
- 2010/2011: 1871
- 2009/2010: 1835

Vaccinate Video: This season saw a unique collaboration between music therapy (Stephen Sandford Clinical Lead Music therapist and Jonathan Cohen Music therapist) and emergency preparedness with the release of the 'Vaccinate' song and video, unique compared to other hospital videos as the tune was composed by music therapist Jonathan Cohen who adapted lyrics written by Catherine Sands the Emergency Planning Officer. The video featured hospital staff from across the Trust many aspects of the hospital to demonstrate that the Trust protects all staff groups by offering the vaccination and also showed mask fitting too.

Respiratory Protective Equipment (RPE) – FFP3 masks: *Under Health and Safety Legislation it is vital that the RPE is adequate and suitable. To ensure that the selected RPE has the potential to provide adequate protection for individual wearers, COSHH stipulate that tight-fitting RPE must be fit tested as part of the selection process.*

Mask Fit Testing: Since 2009, the Trust were using the Quantitative fit testing whereby FFP3 masks are tested using a portacount machine and laptop which provides a numerical measure of the fit i.e. a fit factor. This test is time consuming and although over 1,000 staff were fit tested they were passing on reusable masks which are expensive, high maintenance and not popular to wear, therefore staff were putting themselves at risk by not wearing them.

In August 2013, a new form of testing was trialed with a variety of new and old style disposable masks. Qualitative fit testing involves staff wearing a mask in the hood and having a bitter substance sprayed into the hood. Subjective test with a small number of staffs inability to taste the bitter substance once the mask is removed, the testing is quicker, simpler and staff passing on a new style of disposable masks which they find are very comfortable. This method of testing allows each area to keep their own testing kit which promotes flexibility with testing. The new make of mask trialed had an adjustable head banding which allowed a tighter fit.

It is cheaper to bulk buy the masks direct from Full Support this way the masks are cheaper and the company offer free full days training saving £1,000 per day. The stock is stored in Receipt and Delivery where Peter Malone (Supplies Manager) checks who are requesting the masks to ensure the staff are fit tested and the masks suitable for use. Liaising directly with HOEP this has prevented FFP3 being used in place of cheaper surgical masks that don't need fit testing and patient's condition that requires FFP3 moved to areas where staff are fit tested thereby ensuring the safety of our staff.

Like other Trusts FFP2 are no longer being used for TB, FFP3 instead as advised by NICE guidelines for Multi Drug Resistant TB. This new method and masks has seen the different types of masks reduced from 12 to just 2 preventing confusion with staff. In addition these are the only mask on the market without a shelf life so expired masks being thrown away is no longer an issue. However the new FFP3 masks are more expensive at 99p per mask and the number and reasons for using masks is being looked at.

At the recent National Pandemic Flu Conference the Trust was named and praised for its success with mask fit testing.

4.9 Antibiotic Pharmacist Activities:

4.9.1 Antimicrobial Pharmacist Stewardship Activities:

The Trust has a dedicated specialist pharmacy team working with medical microbiology, infection control and clinicians to form the Trust Antimicrobial Steering Group (TASG), which reports to the Medicines Committee. An antimicrobial pharmacist and medical microbiologist review restricted antimicrobial prescriptions daily and provide feedback and advice to clinicians on all elements associated with antimicrobial prescribing ensuring safe and appropriate use of these agents. This proactive engagement results in clinical reviews of over 475 antimicrobial prescriptions per month (approximately 275 restricted antimicrobials prescriptions and 200 antimicrobial prescriptions on the Acute Assessment Unit (AAU) following the implementation of a thrice weekly pharmacy / microbiology SpR ward round). These reviews act as the cornerstone to the robust antimicrobial stewardship activities within the Trust.

Antibiotic prescribing continues to demonstrate sustained improvement in 2013/14 and, together with strong infection control practices has resulted in the Trust substantially overachieving on Department of Health targets recording only 9 Hospital attributed Clostridium *difficile* infection (CDI) cases against a maximum of 13 cases. This is a 40% reduction compared to 2012/13. We are also proud to have the lowest CDI rates of any acute teaching hospital in England and Wales currently.

The Trust has detailed, up to date adult and paediatric antimicrobial guidelines in place to optimise treatment and prophylaxis, prevent resistance and promote safe cost effective prescribing. These guidelines are developed and managed by the antimicrobial pharmacists in conjunction with microbiology and clinicians, and via the TSAG continue to ensure these guidelines remain current and adhered to. The use of antimicrobials is managed and monitored by the TASG.

The Trust can demonstrate strong adherence to antibiotic guidelines through regular monthly audits of restricted antibiotic prescribing, with in-patient prescribing averaging 88% (range: 81% - 96%, mode 88%) compliance with guidelines / specialist microbiology advice. A user-friendly antibiotic pocket guideline for staff was introduced in August 2008 and updated in June 2011 which continues to contribute to improved antimicrobial usage; resulting in a 27% reduction in overall antibiotic in-patient consumption from pre - pocket guide (2006/07) to present (2013/14). Compared with 2012/13 there has been a 2% reduction in oral usage but an 8% increase in intravenous usage. This can be partly attributed to an increase in resistant pathogens requiring intravenous treatment.

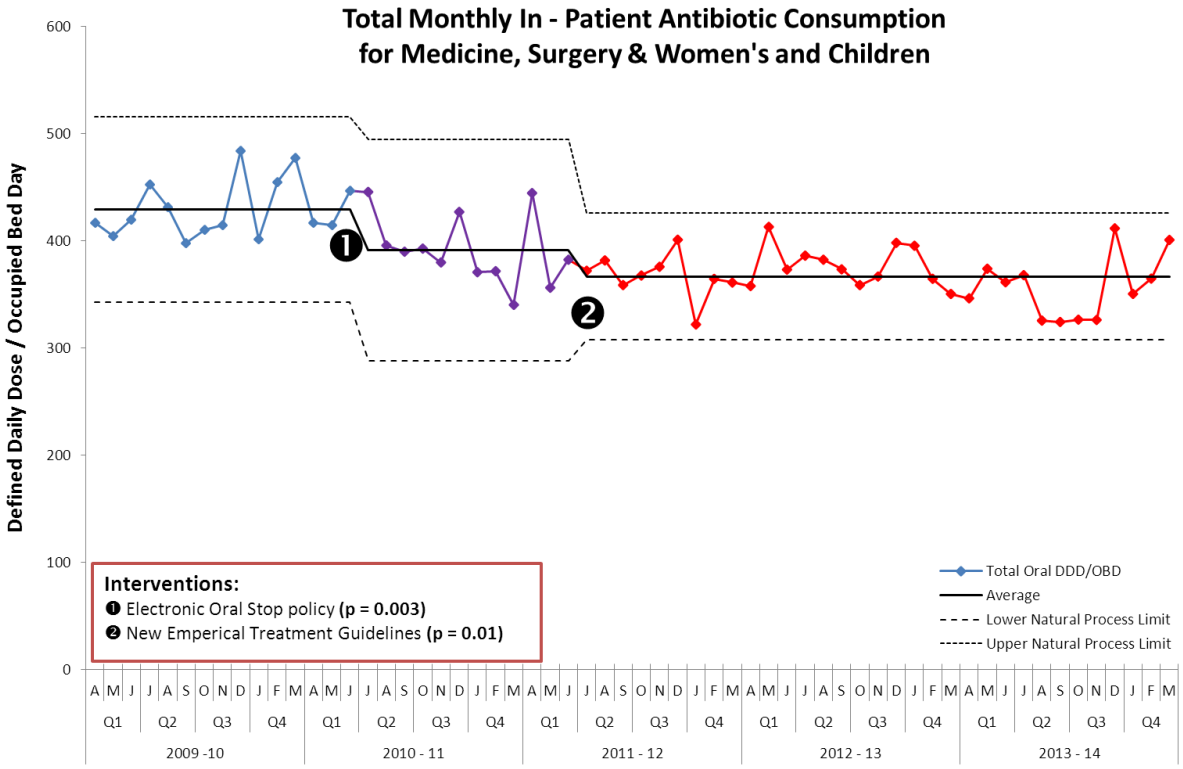


Figure 4: Total Monthly In-patient Antibiotic consumption for Medicine, Surgery & Women and Childrens Divisions.

The Trust has seen a 9% increase (£59k) in antibiotic expenditure in 2013/14 compared with the previous financial year. This is mainly accounted for due to an increase in multi-drug resistant organisms requiring more expensive and prolonged treatment courses and an expanding ambulatory care service which requires the use of more expensive once daily treatments in order to minimise / prevent hospital admission, providing cost savings in other parts of the healthcare economy.

The TSAG secured funding to support the development of a smartphone app to aid user access to guidelines and further improve antimicrobial stewardship. This app is currently in the testing phase, with an anticipated launch date of May 2014.

Key developments and achievements of the antimicrobial pharmacists during 2013/14 include:

4.9.2 Specialist Advice/ Support/ Ward Rounds:

- Continued daily antimicrobial 'virtual' ward rounds with medical microbiology – ensuring prudent use of restricted antibiotics at individual patient level, resulting in 3300 reviews during the year, alongside thrice weekly antimicrobial stewardship ward rounds on the Acute Admissions Unit (AAU) with the Microbiology SpR, resulting in approximately 200 patient reviews per month.

- Active member of the CDI team; the team undertake bedside reviews of every case of CDI within the trust (within 24hrs during working week of a C. diff positive result) and ensure appropriate infection control measures and treatments are in place. The antimicrobial pharmacist also sits on the review / root cause analysis panel for each CDI case.

4.9.3 Guidelines:

- Developed and update a range of surgical and medical prophylaxis guidelines
- Reviewed and updated annual influenza diagnosis and treatment guidelines
- Reviewed and updated the TSAG Terms or Reference and the Antimicrobial Strategy
- Updated the empirical antibiotic treatment guidelines for NWL CCG

4.9.4 Audit:

- An audit to assess time to first dose of antibiotics in sepsis in adult patients in ED at Chelsea and Westminster Hospital NHS Foundation Trust.
- An audit to assess time to first dose of antibiotics in sepsis in adult inpatients at Chelsea and Westminster Hospital NHS Foundation Trust.
- Use of symbiotic tool to audit adherence to antibiotic guidelines in adult inpatients at Chelsea and Westminster Hospital NHS Foundation Trust.
- Monthly antimicrobial prescribing audits for CNWL NHS Foundation Trust.

4.9.5 Monitoring:

- Quarterly review of antibiotic consumption data and expenditure with feedback to the directorates
- Yearly review of Trust sensitivity / resistance data to support guideline writing and to aid monitoring of resistance patterns
- Monthly proton pump inhibitor monitoring with feedback to the directorates

4.9.6 Teaching:

- Led a BSAC (the British Society of Antimicrobial Chemotherapy) clinical workshop on the “Diagnosis and treatment of Bone and Joint Infections”
- Taught on the Imperial MSc course for infection pharmacists
- ICLP teaching: provided teaching sessions to the ICLP courses on “Clostridium difficile diarrhoea”, “the role of the antimicrobial pharmacist” and “nurse antibiotic stewardship”
- Junior Doctors: F1 and F2 teaching sessions on prudent antibiotic prescribing
- Junior Doctors: CT teaching based on case-studies to highlight areas of poor management of patients with infection
- Pharmacists: In house teaching sessions on a variety of antibiotic topics, including TDM of Vancomycin and Gentamicin, basic microbiology and treatment of common infections
- Pharmacists: Questionnaire on infection control & then feedback on common infection control issues faced by pharmacy staff
- Implemented antibiotic based CBDs for resident pharmacists
- Inductions for new junior doctors and pharmacists
- Presentation at clinical governance sessions and senior theatre nurses meeting on surgical prophylaxis
- Educational supervisor for JPB Diploma for General Pharmacy Practice
- Provided teaching sessions to pharmacists and nursing staff at CNWL NHS Foundation Trust on “antimicrobial stewardship” and “the treatment of common infections”
- Provided teaching on antimicrobial stewardship to ICU nurses
- Undergraduate medical students: two teaching sessions delivered to 3rd year medical students on the diagnosis and management of infections focusing on prudent antibiotic use

- Presented at the AntiMicrobial Pharmacists Programme conference on "Electronic Prescribing; Local Experience, Solutions & Pitfalls"
- Provided teaching on Antimicrobial Stewardship to SpRs at the University Hospital of Wales (Cardiff)

4.9.7 Developments:

- Antibiotic viewer function created in Lastword to allow users to easily see all microbiology results and antibiotics prescriptions over the last 90 days
- Secured funding in conjunction with infection control nurses for ICNet package including antimicrobial module (ABxAlert)
- Antibiotic prescriptions reviewed with Lastword team to ensure recommended doses are suggested and to remove fluid coupling
- Provide specialist antimicrobial services to Central North West London Mental Health Trust
- Member of ambulatory care implementation group and MDT – now established with a growing service and range of treatments

4.9.8 Trust / External Committees:

- Infection Prevention Commissioning and Liaison Group
- Infection Prevention and Control Committee
- Trust Antimicrobial Steering Group
- Trust Strategic Flu group
- North West London Antibiotic Pharmacist Group
- CNWL Infection Control Group

4.9.9 Conferences / Education:

- Specialist Pharmacist - Antimicrobials completed the infection control course
- Specialist Pharmacist - Antimicrobials completed "Improving search skills" course
- Specialist Pharmacist - Antimicrobials completed the ICH GCP training
- Lead Clinical Pharmacist – microbiology completed the AHP course
- Lead Clinical Pharmacist – microbiology completed the ICH GCP training
- Attended the Antimicrobial Pharmacists Programme conference (July 2013)
- Attended the BSAC clinical workshop on the Diagnosis and treatment of Bone and Joint Infections (Oct 2013)

4.9.10 Proton Pump Inhibitor (PPI) Prescribing:

The inhibition of gastric acid secretion by PPIs could be an important mechanism in the increasing incidence of difficile infections because it is thought to suppress a fundamental physiologic defense mechanism against ingested bacteria and spores. C&W pharmacy department have worked with trust medical colleagues and primary care colleagues to address the inappropriate overuse of PPIs at C&W. Since proactive interventions (marked 1, 2 and 3 on figure 5) have been introduced, the Trust has realised a 30% reduction in PPI usage in 2013/14 compared with 2009/10 with the trend now stabilising. Through regular monthly audit and feedback on PPI prescribing, the Trust has seen large improvements in appropriate PPI prescribing, rising from 29% in 2011/12 to 74% in 2012/13. This coincides with a fall in the number of patients prescribed a PPI, with those prescribed a PPI falling from 30% in 2011/12 to 25% for this financial year.

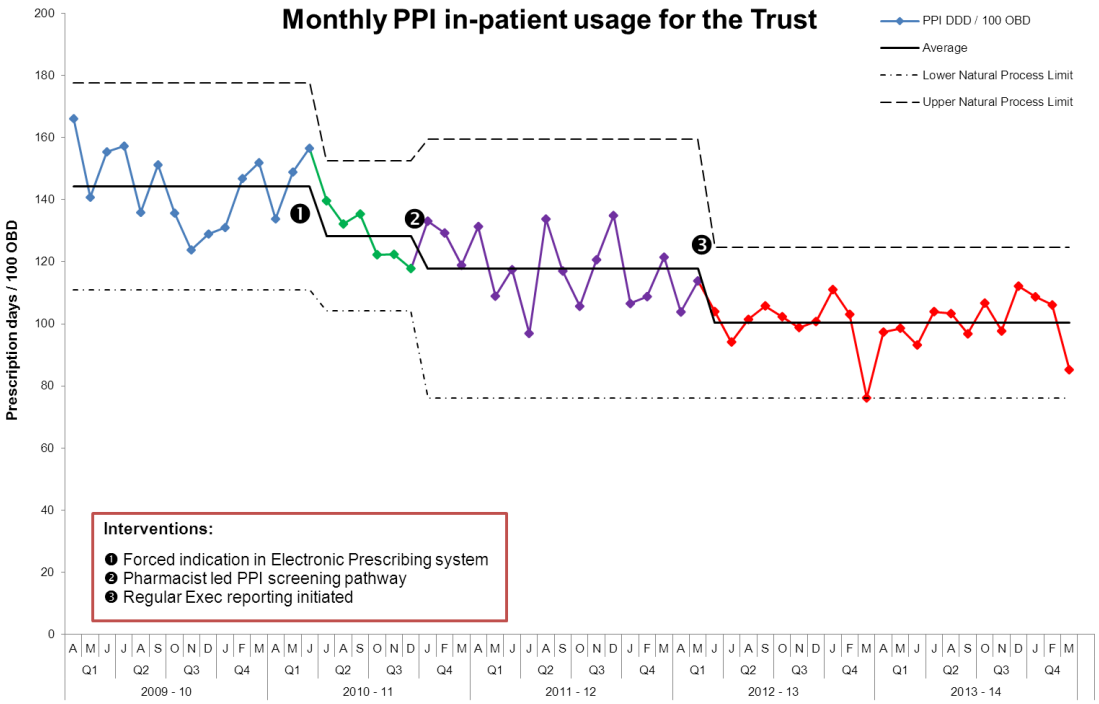


Figure 5: Trust PPI Usage by Month April 2009 – March 2014

5. Auditing

IPCT auditing activities have focused on hand hygiene (see Section 4.4.2) and Saving Lives Care Bundles (relating to invasive devices: peripheral, central and urinary). In addition monitoring of the patient's environment (The Daily Hygiene Code /CQC Checklist) (Appendix 6) and the monthly Matron's Audit (address key aspects of the Health and Social Care Act (2008). This data is entered onto Synbiotix at ward level. Audit reports are presented to the Infection Prevention and Control Committee where recommendations are discussed and agreed.

5.1 Saving Lives Care Bundle Audits: Invasive Devices

A target of 90% was set for each of the *Saving Lives* care bundles. Compliance against the target and actions to address identified deficits are agreed in the IPCC. Figures 4 & 5 show the average Trust compliance for both Adult and Paediatric Peripheral lines (PVC) and Central lines (CVC) compliance (respectively) for the year April 2012-March 2013. Below are the average compliance scores:

Adults:

PVC: 84.5% compared to 79% in 2012-13
CVC: 92.1% compared to 94% in 2012-13
Urinary catheters: 92.91% compared to 92.1% in 2012-13

New Care Bundles for Paediatrics were launched in 2012:

Paed PVC: 82.3% in 2013/14
Paed CVC: 92.91% in 2013/14

(NOTE: Paediatrics do not audit urinary catheter on-going care because urinary catheters are very rarely used.)

Aspects of the care bundles where both Adult and Paediatrics need to improve include documentation of the insertion of the PVCs in the medical notes and labelling the lines with

either date of insertion or the coloured day-of-the-week sticker which indicates when the line should be removed.

What is a care bundle?
A care bundle is the end result of an extensive review of the literature which identifies the key elements/aspects/interventions of care which, in these care bundles, prevent infections. If all elements are performed, the risk of infection is minimised. If not all elements are performed the risk of infection increases. In this Trust we have implemented the following care bundles: continuing care of: peripheral venous lines, central lines, and urinary catheters.

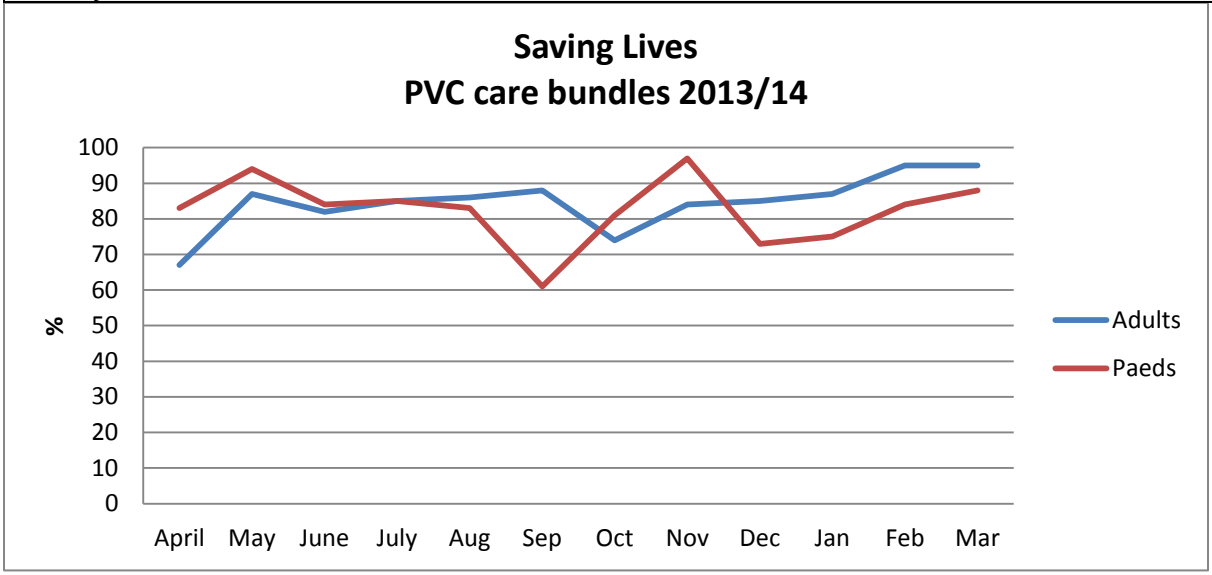


Figure 6: Compliance with PVC Care Bundles 2013/14

Actions to improve compliance and data accuracy of the PVC Care Bundles have included:

- Ensuring insertion sites are labelled with the day-of-the-week sticker in the operating theatre department (in the anaesthetic room at the time of insertion then double checked in Recovery prior to the patients returning to the wards).
- PVC insertion pack training for new junior doctors and revision of online training for doctors.
- Making auditing of care bundles mandatory for all inpatient areas
- Setting a minimum of five peripheral lines to be audited per month per area
- Reviewing the compliance trends and comparing Paediatric against Adult trends at the Infection Prevention and Control Committee.
- Setting up a Paediatric Care Bundle review group.

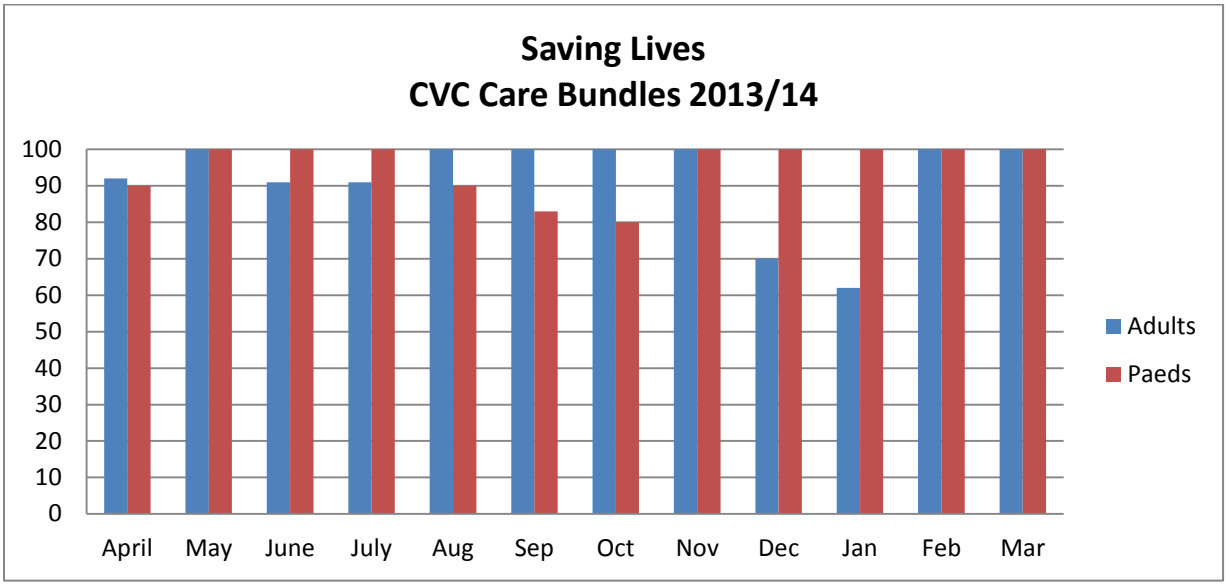


Figure 7: Saving Lives CVC Continuing Care Bundle; Adult and Paediatric April 2013-March 2014

6. Policies

All existing Infection Control policies are reviewed on a three yearly basis and when national guidance changes. All are uploaded onto Datix with a hyperlink to them on the intranet. Policies are revised by the IPCT and ratified by the IPCC.

Policies ratified or updated 2013/14 are listed below:

- Linen Policy
- Food hygiene Policy

Policies in the process of being ratified at the time of writing this report included the

- MRSA Policy

7. Healthcare Associated Infection Statistics and Progress Against Targets

All NHS Trusts are required to report the following healthcare acquired infections:

- Methicillin Resistant Staphylococcus aureus (MRSA) bacteraemias (Section 7.1) - reported in real-time to the PHE via a national web based database.
- Clostridium difficile (CDT) (Section 8.2) - reported in real-time to the DH via the same national web based database.
- Orthopaedic surgical site infections - reported quarterly via a separate national website (Section 8.3).
- Glycopeptide Resistant Enterococci (GRE) - reported quarterly by the microbiology laboratory. (Section 8.4)
- Serious Untoward Incidents and Outbreaks - reported PHE and Health Protection Agency (HPA) as they occur (Section 8.8).
- Methicillin Sensitive Staphylococcus aureus bacteraemias (MSSA) (Section 8.5)
- E.Coli Bacteraemias.(Section 8.6)

7.1 Mandatory MRSA Bacteraemia Reporting

The DH MRSA Target for 2013-2014 was zero hospital acquired cases. The Trust had five cases which were hospital acquired. Table 4 shows the number of cases we have had since the targets began. In 2013/14 we had 5 cases which is a significant increase on the last two years. Three of these were in our Burns Unit which partly reflects an increase in the of number of patients with big burns (more than 35% skin loss) being admitted. In addition we now accept non burns patients with large skin loss (TENS) being admitted onto our Burns Unit for specialist wound care.

Table 3: Trust MRSA Bacteraemia Rates 2004-2013

Year	*Numbers of MRSA Bacteraemias*
2004/05	*47 cases*
2005/06	*28 cases*
2006/07	*23 cases*
2007/08	*16 cases*
2008/09	*5 cases*
2009/10	*10 cases*
2010/11	*6 cases*
2011/12	*2 cases*
2012/13	*1 case*
2013/14	*5 cases*

An example of this is our first case of the year who was transferred from another hospital with 65% skin loss which was the result of an allergic reaction to a new prescribed drug. Two of the five MRSA bacteraemia cases were contaminations i.e. the patients did not have a blood stream infection rather, the blood specimen became contaminated in the process of taking it. There has been a lot of learning as a result of the Serious Untoward Incident Investigations (SUI) and from the post infection reviews (PIR) See Appendix 6 for a summary of each case and the lessons learned that will improve patient care.

What are MRSA bacteraemias?
Since April 2001, all acute NHS Trusts in England have reported Staphylococcus aureus bacteraemia rates including the methicillin resistant strains (MRSA). PHE collate this data, expresses them as cases per 10,000 bed days and separates into categories to enable comparisons to be made. The Chelsea and Westminster Hospital is in the 'Acute Teaching Hospital Trusts' category.

Acute Teaching Hospital Trusts are likely to have higher infection rates because the patients require more invasive therapies and spend longer in hospital.

MRSA bacteraemias (bloodstream infections with MRSA) are used as a benchmark of infection control practice standards. Patients most at risk of MRSA bacteraemia are those with underlying diseases and those with invasive devices in place e.g. intravenous lines, urinary catheters, artificial ventilation and patients with large wounds.

MRSA bacteraemia rates should be interpreted with caution; they may be affected by the nature and volume of specialist procedures carried out in a Trust.

7.2 Clostridium difficile (C. difficile) Rates:

Our *Clostridium difficile* target set by the Department of Health for 2013-2014 was 13 hospital-acquired (HCAI) cases. A case is determined as hospital acquired if the stool sample is 72hours after admission (first day of admission = day 1).

At the end of the financial year 2013/14 we had **9** toxin positive cases of Clostridium *difficile*. The target for 2014-15 is no more than **8** HCAI toxin positive Clostridium *difficile cases*.

What is *Clostridium difficile* (*C. difficile)*?
C. difficile is a type of bacteria found in the gut that can cause diarrhoea if it overgrows. It produces a toxin that can cause a spectrum of symptoms from mild antibiotic-associated diarrhoea to very severe colitis. It is able to persist in the environment for months and therefore poses an infection control risk in healthcare facilities. Patients over 65 years, in hospital, who have previously received antibiotics, are most at risk of developing *C. difficile* diarrhoea. It can be controlled by good antibiotic prescribing, isolation precautions and high standards of cleaning.

Figure 8 below shows the number of HCAI cases of C. *difficile* that has been separated into gene and toxin positive cases (reportable to the HPA) and gene positive toxin negative cases (not reported to the HPA). All cases are treated according to the Trust C *difficile* treatment protocol and isolated if symptomatic.

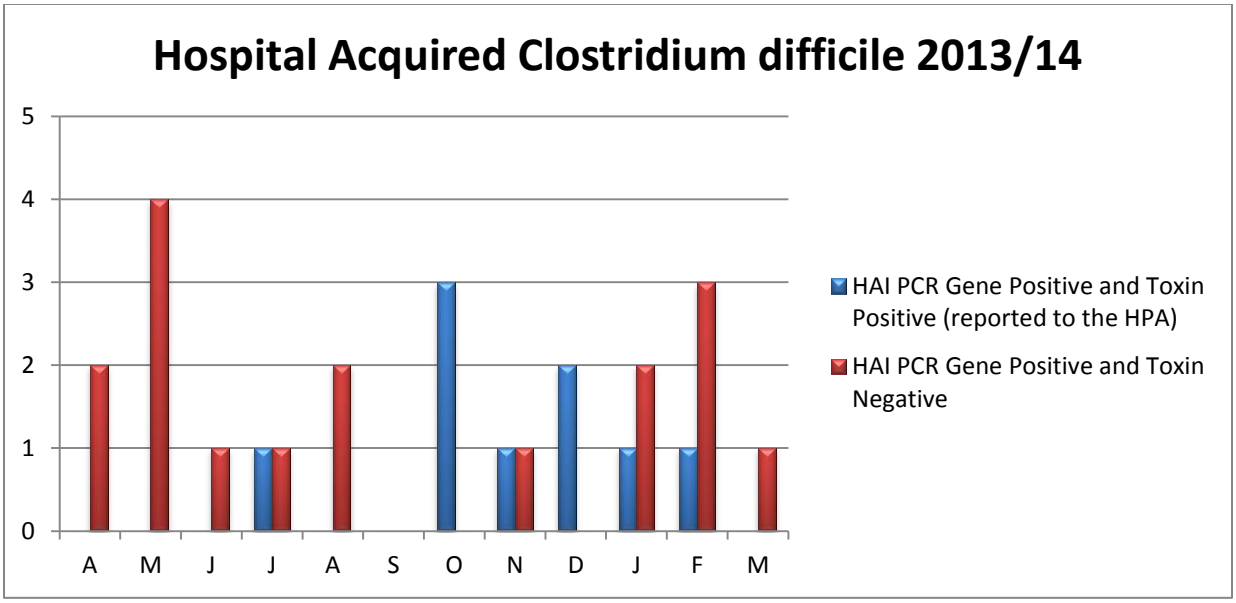


Figure 8; Clostridium difficile rates between 2013-2014 Hospital Acquired Toxin Positive and Toxin Negative cases

To help reduce incidence of *C. difficile* diarrhoea. Antibiotic and Proton Pump Inhibitors (PPI), prescribing is closely monitored by the antimicrobial management team (antibiotic pharmacists and microbiologists). To minimise the risk of cross infection the IPCT works closely with the clinical site managers to enable the most appropriate use of side-rooms. Patients with diarrhoea are always prioritised for side-rooms. If they cannot be isolated it is reported as a clinical incident.

7.3 Orthopaedic Surgical Site Infection Surveillance (OSSIS):

The Trust is required to collect data on either hip or knee prosthetic surgery for at least one quarter per year using criteria set by the PHE. We have monitored all patients who have prosthetic hip replacements and repair of neck of femurs for all four quarters. The IPCN collect the data in liaison with the ward staff, then enter it on to the national OSSIS website.

These patients continue to be monitored for infections in their surgical wound for a year after their surgery. Data presented within this report therefore may be subject to change. The report produced is shared with the orthopaedic surgeons and is presented to the IPCC.

Hip Replacement:

The table below shows that for the calendar year Jan to December 2013 (PHE use calendar year rather than financial year for data presentation) we performed 203 elective hip replacement operations, three of these patients developed wound infections caused by the following bacteria: *Escherichia coli, Pseudomonas aeruginosa,* and Methicilllin Sensitive *Staphylococcus aureus*. One of the three was superficial; the other two were deep wound infections. Our infection rate (at the time of writing this report) for the last reported four quarters was 1.5% (check calculation 2 out of 203 is ~ 1% unless you count the superficial one) against the national average of 0.7%

To address this led we introduced a wound assessment form in which nurses record daily wound observations until the patient is discharged. A flagging system was also introduced on the Electronic Patient Records, (Last Word) to capture patient's readmissions. Regular meetings were also set up with the Orthopaedic specialist nurse to closely monitor all patients at risk of developing infections.

Since these changes were introduced we have seen no further infections.

Repair of Neck of Femur:

The Trust also collected data on repair of neck of femur between Jan-Dec 2013. We reported 134 procedures to the PHE for this period of which there was one deep wound infection. This may change as some of the patients are still within one year of the procedure and are thus still under surveillance. This puts us slightly above the national average of 0.7% for the last 5 years.

The daily wound assessment form is helping to address this by enabling closer monitoring of the patients whilst they are still in hospital. In addition the electronic flag alerts staff to inform the IPCT when the patient is in outpatients or is readmitted. We can then liaise with the orthopaedic doctors to review the infection status. We have had no further infections since introducing these changes, but as it was only one infection it will take time to evaluate the efficacy of these changes.

7.4 Glycopeptide Resistant Enterococci (GRE)

Vancomycin Resistant Enterococci (VRE) are the most frequently occurring GRE bacteraemias and are reported to the DH as part of the mandatory surveillance scheme. Between April 2014 and March 2015 we had no VRE bacteraemia. VRE is rare at the Chelsea and Westminster NHS Foundation Trust, partly because there is no inpatient haematology or renal unit where Vancomycin is frequently prescribed.
There is no target associated with GRE.

What are Glycopeptide Resistant Enterococci?
Enterococci are bacteria that are commonly found in the bowel of normal healthy individuals. They can cause a range of illnesses including urinary tract infections, bacteraemia (blood stream infections) and wound infections.

During the mid-1980s enterococci with resistance to glycopeptide antibiotics such as

Vancomycin emerged, and have been termed Glycopeptide Resistant Enterococci (GRE). An example of this group of organism is Vancomycin Resistant Enterococci (VRE).

Infections caused by GRE mainly occur in hospital patients although it can be community acquired. It is seen mostly in departments where Vancomycin is frequently used e.g. renal or haematology units

7.5 Mandatory Reporting of Methicillin Sensitive *Staphylococcus aureus* (MSSA):

The DH requires mandatory surveillance of MSSA bacteraemias. Figure 8 below shows that we had 10 HCAI and 18 CAI MSSA bacteraemias in 2013-14. The target set by PHE was of no more than 15 HCAI cases in 2013-14. The target for April 2014- 2015 has been set at

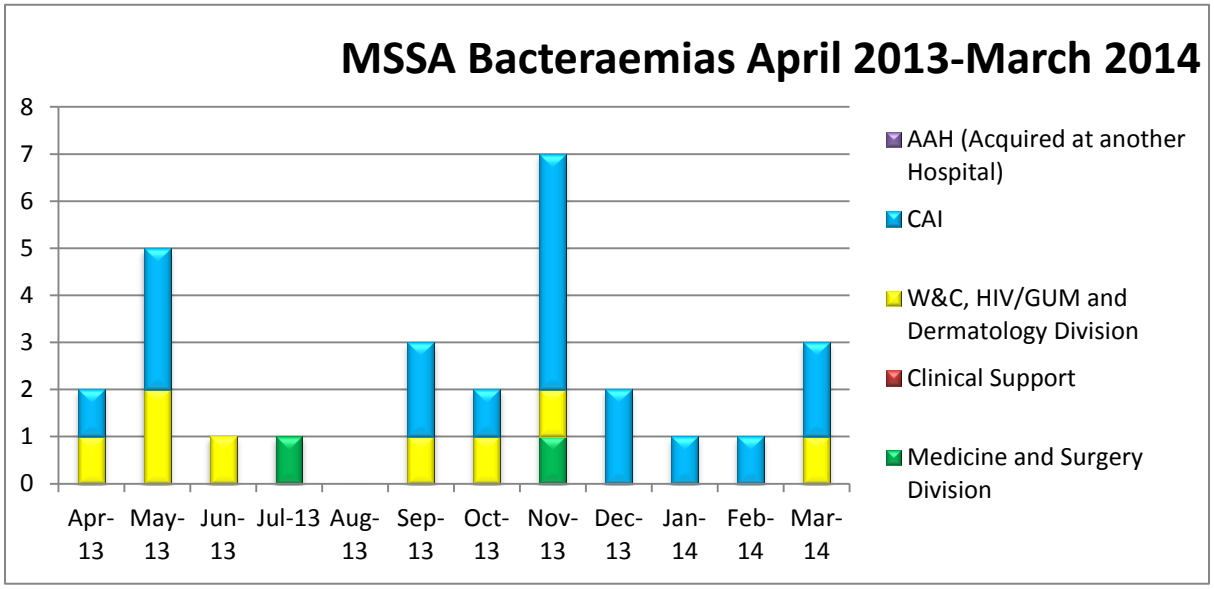


Figure 9: MSSA Bacteraemias April 2013- March 2014

What is MSSA?
MSSA is Methicillin Sensitive Staph aureus. This is a common organism which is present on the skin of approximately 30% of the population. It lives on the skin frequently without causing the host any harm. However if it enters the blood stream it can cause blood infections i.e. MSSA bacteraemias which require treatment with antibiotics. People most at risk are patients with invasive devices in place or those with wounds. Infections commonly associated with it are skin infections e.g. boils, abscesses, rashes, chest infections and food poisoning. Unlike MRSA it is sensitive to most antibiotics. Therefore, infections caused by this organism are easier to treat.

7.6 Mandatory Reporting of *Escherichia coli* (*E.coli*) Bacteraemia:

Since June 2011 the DH has introduced mandatory surveillance of *E.coli* Bacteraemia. There are no targets associated with this. Figure 8 shows that we had 73 blood culture positive cases 2013-14. Sixteen of these were likely to have been HCAI. Next year the internal target agreed with our commissioners is no more than 11 '**likely** to be HCAI' cases.

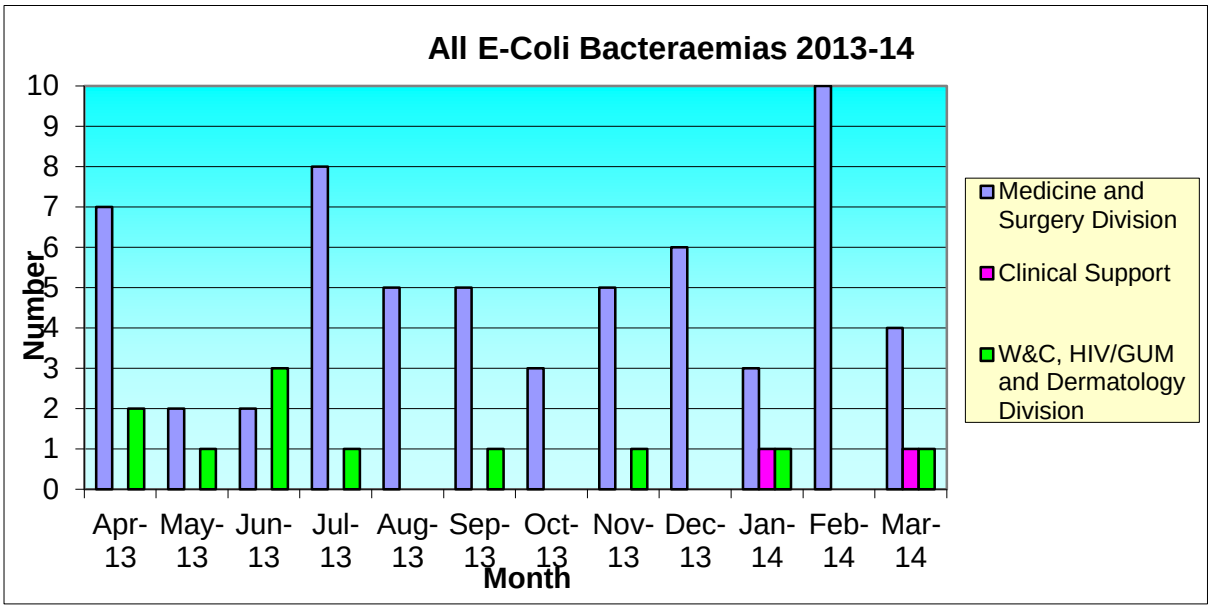


Figure 10. E.coli Bacteraemias April 2013 – March 2014

What is *E-Coli* ?

Escherichia Coli is commonly found in the gut of all mammals. Some types of E.coli form part of the normal flora of the human gut and have several beneficial functions, such as the production of vitamin K2. They also prevent harmful bacteria from establishing themselves in the intestine.

If E.coli gets into the blood stream it is defined as an *E-coli* bacteraemia. Without treatment sepsis will develop making the person very ill. A rise in rates were indicated in 2010 in the UK so Public Health England commenced mandatory surveillance but as yet there are no national target.

7.7 Resistant Gram Negative Bacteria:

NHS Trusts have not been required to report rates of resistant Gram-negative organisms to DH. The IPCT however closely monitor local incidence as shown in figure 10 below.

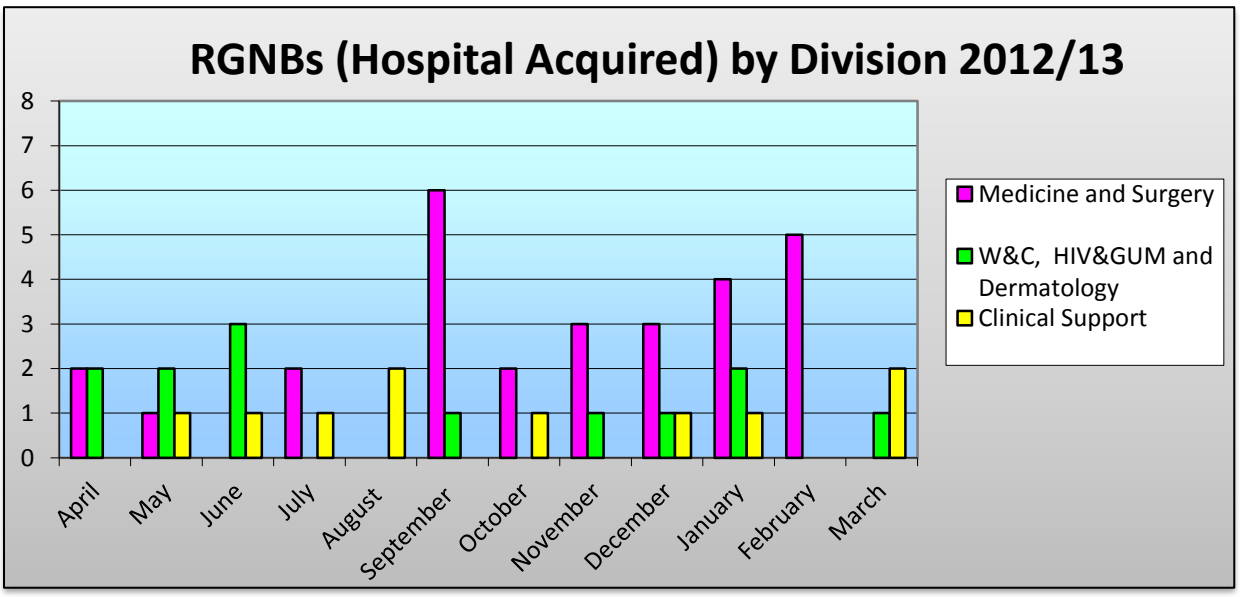


Figure 11: Resistant Gram Negative Bacteria Specimens 48 Hours After Admission, April 2012 – March 2013

Over the year most of the Trust's resistant Gram negative organisms have been Extended-Spectrum Beta-Lactamases (ESBLs). This correlates with a national trend reported by the HPA.

What is a RGNB
Multi Resistant Gram-Negative bacteria are often organisms that live in the gut e.g. *E coli, Pseudomonas, Klebsiella and Acinetobacter* species. These organisms often live in or on the bodies of humans and do no harm to the host. However, they have the ability to become resistant to many of the commonly used antibiotics and can very quickly become a problem in hospitals.

Most of the ESBLs are colonisations rather than infections i.e.; the organism is present in their urine but is causing them no harm. There have been very few hospital acquired ESBLs in the Trust; most are acquired in the community.

What is an ESBL?
ESBLs (Extended Spectrum Beta-Lactamases) are enzymes that can be produced by bacteria that make them resistant to cephalosporins which are the most widely used antibiotics in UK hospitals. ESBLs are present in a wide range of organisms, most frequently Klebsiella and E-coli species. Since 2003 a particularly virulent strain of ESBL has emerged and caused outbreaks across the UK. These ESBL-producing organisms are able to resist commonly used antibiotics and are found most often in urinary tract infections.

7.8 Serious Incidents (SUIs), Outbreaks, Clusters, Exposures and Incidents:

In 2013-14 there were:

- Noro virus identified forcing the closure of two wards due to diarrhoea and vomiting in staff and patients.
- Outbreak Strain of EMRA1 in Burns identified.
- Five incidents.
- Two serious untoward incidents (SUI).
- See Appendix 6 for the SUI Investigation Reports. See Appendix 7 for table of Outbreaks, Clusters, exposures, incidents and SUIs.

8. Decontamination

The National decontamination programme is implemented in the Trust and all invasive medical devices (surgical instruments and flexible endoscopes) are decontaminated in the Trust's centralised Sterile Services Department and Endoscope Decontamination Unit.
Both units successfully passed an annual audit by the Notified Body in July 2013 and are compliant with the requirements of the Medical Devices Directive 93/42EEC and ISO EN 13485,ISO 9001.

The QMS addresses the requirements of the Medical Devices Directive 93/42/EEC (including the amendments of 2007/47/EC) The system covers all the activities undertaken by both the Sterile Services Department (SSD) and Endoscope Decontamination Unit (EDU) relevant to the quality of the products and services provided by the department.
Decontamination issues are discussed quarterly during the Decontamination Committee meetings. The chair of the committee reports quarterly to the IPCC and bi-annually to Risk Management Committee: issues discussed:

- Traceability of instruments and endoscopes-mandatory compliance

- CJD Policy and assessment carried out before surgery and endoscopy
- Loan instruments to another hospitals
- Single use devices and why we do not reuse them
- Water quality for final rinse of endoscopes-challenges
- Devices challenging for decontamination:
- Da Vinci Robot instruments
- Ultrasound probes
- Ph Manomentry catheters

9. Body Fluid Exposures

Figure 12 shows that there were 121 body fluid exposures between Jan and Dec 2013, 89 were Percutaneous and 32 Mucocutaneous. There has been a decrease in the number of percutaneous injuries in 2013 - in comparison with the injuries sustained in 2012. There was a slight increase in mucocutaneous injuries.

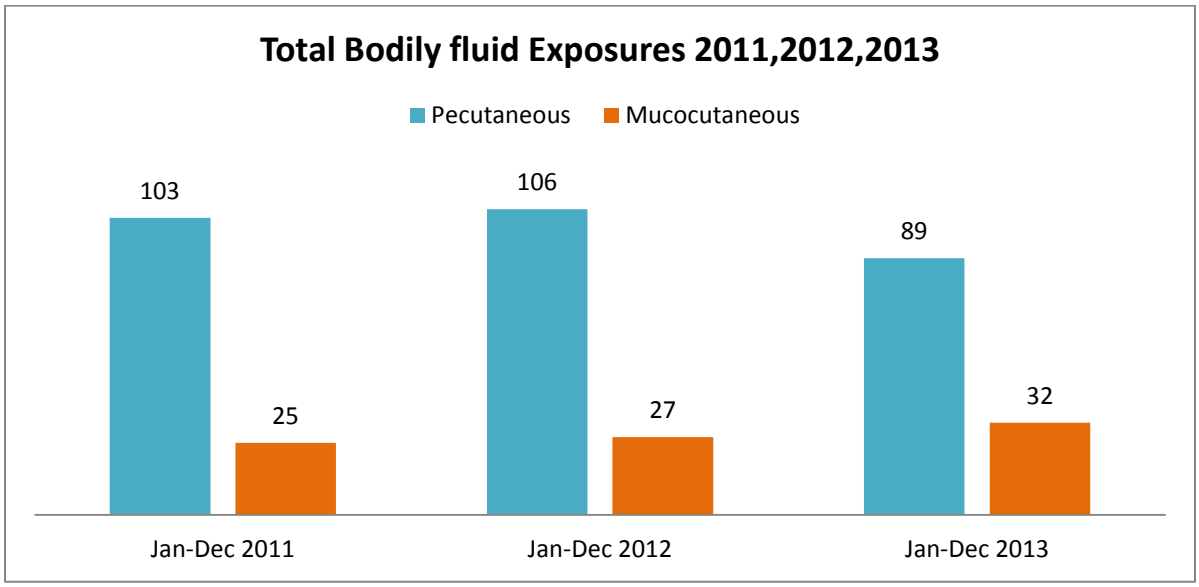


Figure 12: Body Fluid Exposure 2013 in Comparison with 2011 and 2012

Table 4 shows that nurses are the staff group with the highest percutaneous injury rate although doctors are a smaller group of staff and therefore are proportionately higher. Nurses have the highest mucocutaneous injuries (Figure 14).

Table 4: Percutaneous Injuries to Staff January-December 2013 by Staff Group

Job Role	Percutaneous	Mucocutaneous
Doctors	30	10
Nurses (all grades inc HCA's)	38	14
Midwives (all grades inc MSW)	8	6
Housekeepers	1	0

Students	6	0
Other staff groups	6	2

The injuries occurred in the following circumstances:

- 46 happened during the procedure
- 21 occurred on disposal of the instrument
- 4 occurred after disposal
- 19 other incidents were related to a combination of practitioner to practitioner injuries and from bite/scratch injuries.

The level of percutaneous injuries occurring after disposal have reduced for this reporting year however, the increase of injuries from practitioner to practitioner and bite/scratch injuries has increased.

Figure 12 shows that the purpose of the devices responsible for causing most percutaneous injuries was injections, suturing and withdrawal of blood. This again indicates the priority to introduce safety needles as this might help to reduce injuries occurring, in particular during injection procedures.

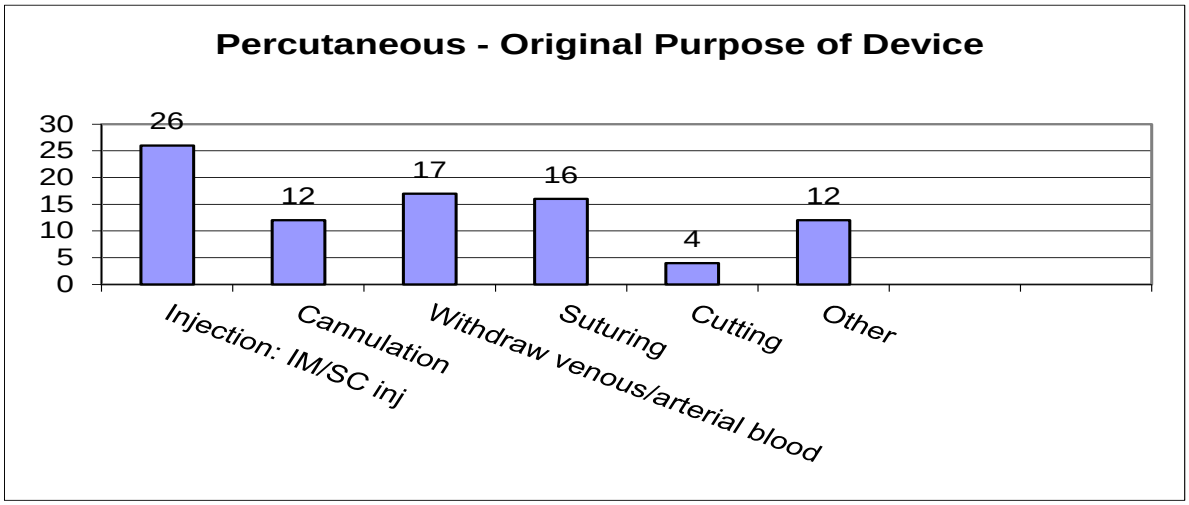


Figure 13: Percutaneous Exposure: Original Purpose Of Device causing injury January 2013-December 2014

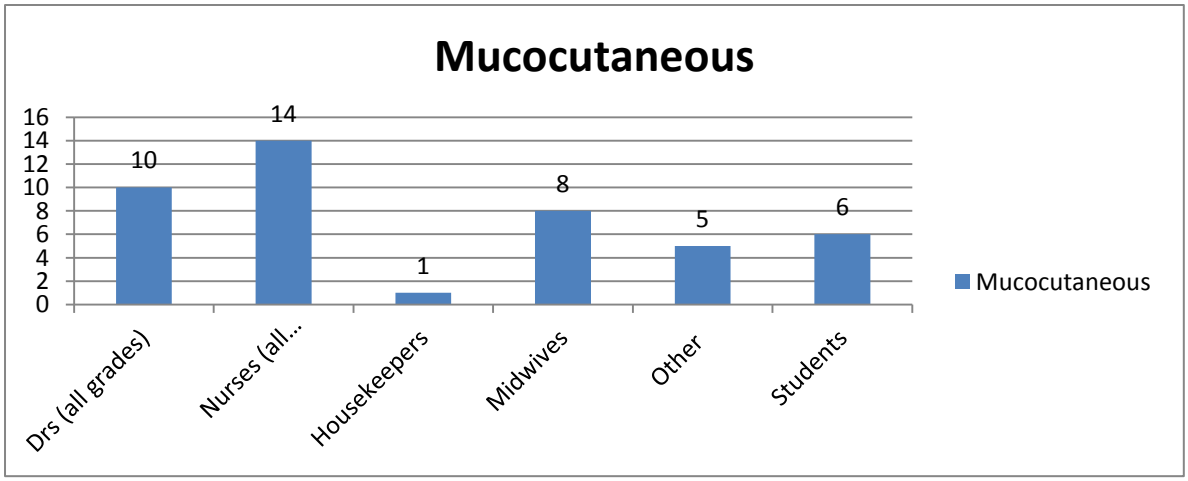


Figure 14: Mucocutaneous exposures to staff January-December 2013 by staff group

Figure 14 shows comparatively similar proportions of patients with organism specific blood borne virus risks between 2012 and 2013. The level of staffing commenced on PEP also remains comparable. This could be as a result of historical training that the ED department on risk assessing the need for PEP has received.

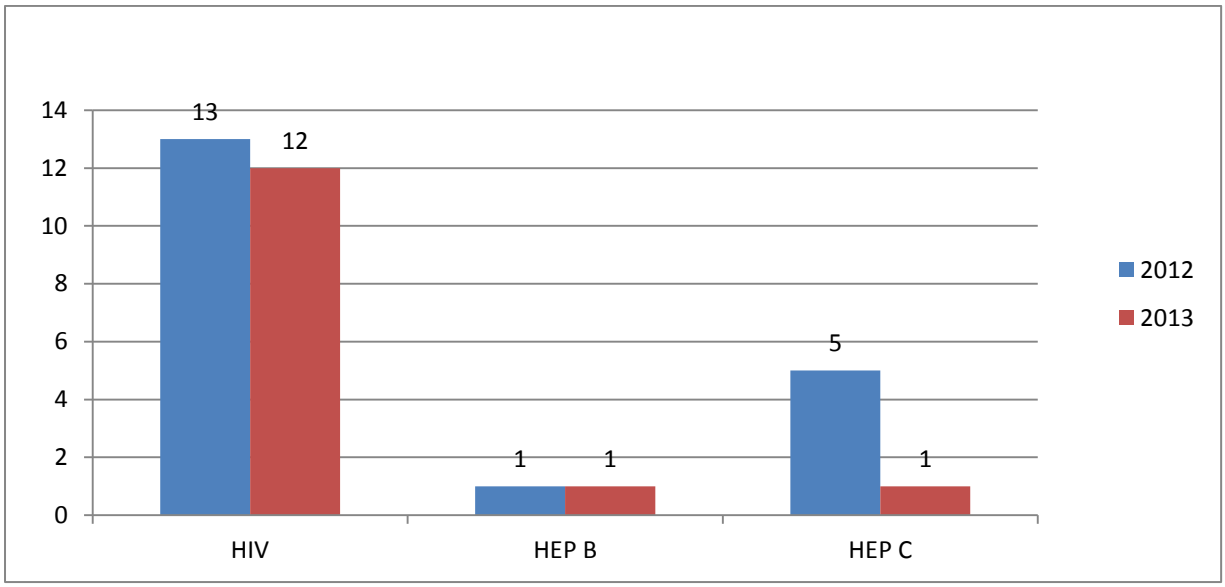


Figure 15: Body Fluid Exposure Comparison 2012 with 2013

10. ISS Facility Services – Healthcare

10.1 Management Arrangements:

ISS Facility Services – ISS Healthcare are responsible for the cleaning, catering, portering, security, helpdesk, pest control, waste management and linen services within the Trust. The contract is monitored by a combination of internal and external ISS Healthcare auditors and by the Soft Services Facilities Manager who is employed by the Trust.

The Trust in partnership with ISS Healthcare has continued to improve cleaning standards throughout the hospital; hence their excellent rating in cleanliness was maintained in the PEAT audit. ISS Healthcare cleaning department completes an annual deep cleaning programme in clinical areas and that includes, de-cluttering, wall and ceiling washing, which complies with the government initiative on improving cleanliness and infection control document, issued November 2007.

In addition to maintaining and improving cleanliness throughout the hospital, the Trust and ISS Healthcare have been focusing on raising staff awareness and competence in control of infection, with particular focus on hand hygiene.

10.2 Monitoring Arrangements:

The cleaning is closely monitored in all areas of the Trust through comprehensive auditing in line with the national specifications for cleanliness in the NHS using the 49 elements of the National Standards of Cleanliness Auditing Tool. In 2013, 1451 cleanliness audits were conducted across all risk categories with 97.2% of these audits being jointly conducted with a Trust member of staff maintaining the 1.2% improvement achieved from previous year. All auditors are trained in auditing using the national tool. The average cleaning score for 2013/2014 was 97.99%, this score is slightly lower than last year but includes all new refurbished areas.

These results are presented monthly at the PLACE Group and also to the Infection Control Committee each month.
The annual PLACE audit took place in April and we await the results.

11. Estates and Maintenance

The Trust continues its programme of Legionella control to include testing and control of the Pseudomonas bacteria. This was a mandatory change required by Protection Health England following incidents and outbreaks at other UK Hospitals.

We enhanced our monthly reporting process with the support and guidance of Dr Azadian to include a greater depth of information and assurance. We reported monthly at the Water Management Group and the Infection Control Committee, also provided assurance at the quarterly Facilities Committee.

Schematic diagrams of pipework and outlets were verified and updated in a thorough assurance process which included the completion of the mandatory bi annual Water Risk Assessment.

Legionella and Pseudomonas bi-annual sampling continued throughout the year and testing is still been carried out by Public Health England on behalf of the Trust. Any issues that have arisen have been minor and contained by following the actions in our written scheme of controls and HTM04-01 part B & HTM04-01 addendum.

We also continued our programme to remove sections of pipework that could harbour bacteria as areas were redeveloped or altered in 2012/13 and the start of 2014. The Hydrotherapy pool was refurbished and new controls installed which will provide better levels of automatic control and dosing, the pool was returned to use in June 2013.

Water temperature and quality monitoring by Norland has continued with 22,972 tests being completed, through the use of the ZetaSafe system. We are able to report that the overall ratio for required temperatures being achieved within the specified time period was 98%, consistent with the prior year with the St Stephens building achieving 7 continuous months of 100% compliance.

12. Building Works

In 2013/2014 the following projects were completed:

- 5th Floor- Adult Burns Unit.
- AZ ward
- NG ward
- Mercury Ward

13. Infection Control Annual Programme

13.1 Actions Achieved Between April 2013 – March 2014

Table 5 describes three key objectives and their associated actions that were achieved in 2013-2014. The Trust Infection Prevention and Control Team under the leadership of the DIPC and Chief Nurse has overseen the work over the past year. It demonstrates a year of continuing improvement in the practice and standards of infection prevention and control within the organisation.

Table 5. Actions achieved against the annual programme for 2013-14

Objective	Method	Actions	Status	lead
Improve patient safety and clinical effectiveness i	Zero tolerance for mrsa bacteraemia	• RCA and SUI investigations for any MRSA bacteraemias to identify learning and drive up standards of care.	Achieved	Roz Wallis
		• Set up a vascular access group to improve performance with the care bundles.	Ongoing in Paediatrics	Holly Ashforth Margaret Kafanyanga
		• Care Bundles: ○ Audit a minimum of 5 peripheral lines per month ○ Action plans to be completed if compliance below target.	Achieved	Divisional lead nurses Divisional lead nurses Holly Ashforth
		• Set up an Aseptic Technique Group to roll out train-the- trainer mandatory training in Aseptic Technique	Achieved	Holly Ashforth
		• Update mandatory training for doctors to include a comprehensive section on blood culture technique	Achieved	Roz Wallis
		• Monitor compliance of MRSA screening programme at the Infection Prevention and Control Committee (IPCC)	Achieved	Dr Berge Azadian
		• Facilitate achieving 95% MRSA screening compliance through the MRSA Screening Taskforce	Achieved	Holly Ashforth
		• Work with Performance to improve the quality of the	Achieved	Holly Ashforth

Objective	Method	Actions	Status	lead
		MRSA screening reporting system.		
		• Monitor compliance with Trust blood culture procedure	Achieved	Dr Berge Azadian
		• Audit use of 2% Chlorhexidine for skin decontamination and set up training to address area of low compliance	Achieved	Roz Wallis
		• To achieve 100% Hand Hygiene audit completion every month	Ongoing	Roz Wallis
		• To achieve local targets for the Saving Lives Care Bundles: CVC: 90% PVC : 90% urinary catheters: 90% every month	On going	Roz Wallis
	Keep C diff rate below maximum tolerance level of 13 cases.	Monitor compliance against the National standards of Cleanliness	Ongoing	
		To ensure high risk patient equipment e.g. commodes are intact and fit for purpose.	Achieved	
		• Stool charts for all inpatients from admission to discharge.	Achieved	Roz Wallis
		• Isolation of patients with Type 6 or & 7stools in siderooms with on-suite facilities where at all possible.	Achieved	Holly Ashforth
		• Refresh isolation room signage	Ongoing	Holly Ashforth
	Prevention and early detection /treatment of blood stream infections	• Learning from incidents. Implement recommendations of SUI and RCA panels that result from blood stream infections e.g. MRSA, MSSA.	Achieved	Roz Wallis
		• To collate and submit data on E.coli bacteraemias in accordance with DH requirement	Achieved	Roz Wallis
		• To collate and submit data on MSSA bacteraemias in accordance with DH requirements	Ongoing	
	Prevention of orthopaedic surgical site infections s/b keeping C&W	• To collate and submit data on orthopaedic surgical site infections in accordance with DH requirements	Achieved	Roz Wallis
		• To feedback results to orthopaedic surgeons and nurses and work with them to action issues that arise	Achieved	Roz Wallis

Objective	Method	Actions	Status	lead
	infection rates within or below the national norms	from the surveillance.		
	Policy Update	• Ensure policies are up-to-date and reflect changes in the national guidance.	ongoing	Roz Wallis
	Improve the efficiency of the Infection Prevention and Control Team	• Write a business cases for an infection control software package	Achieved	Roz Wallis
	Prevention of cross infection in staff and patients where there are cases of infectious diseases e.g. chicken pox and measles.	• All cases of chickenpox and measles to be escalated to Chief Nurse	ongoing	Roz Wallis
		• Occupational health to commence staff immunity checks as soon as they are alerted to a possible case of measles	Achieved	Roz Wallis
	Improve compliance with Bare Below the Elbows	• Audit staff compliance with Uniform Policy	Achieved	Roz Wallis
		• Include bare below the elbows (BBE) in all IPC mandatory training.	Achieved	Suzanne O'Reilly
		Feedback of hand hygiene results to all clinical areas	Achieved	Holly Ashforth
		• Refresh poster campaign	Ongoing	Roz Wallis
		• Write article for Trust News	Ongoing	Dr Berge Azadian
		• Medical Director to write letter to all consultants to remind about BBE	October 2013	Roz Wallis
	Demonstrate continuous improvement to meet and exceed the National Standards of Cleanliness for the NHS and fully	• Cleanliness auditing programme	Achieved	Roz Wallis
		• Monitoring of ISS contract		Dr Zoe Penn/ Dr Berge Azadian
		• Monitoring of Norlands contract	Achieved	Mark Butcher???

Objective	Method	Actions	Status	lead
	contribute to the requirements of the Code of Practice for the Prevention and Control of Health Care Association Infection.			
Improve the patient experience	The IPCT to take a patient centred approach	• Develop a Patient/Users forum for Infection Prevention and Control	Achieved	David Butcher
Deliver excellence in teaching and research	The provision of professional development for ICLPs	• To develop an ICLP refresher course for ICLPs who have been trained for more than 2 years	Ongoing	David Butcher
		• To develop an annual ICLP education event		Roz Wallis
		• To develop an annual ICLP award		Roz Wallis
		• To develop a bespoke ICLP professional development course		
	All staff will receive IPC training at mandatory induction and updates	• Refresh the IPC approach to teaching and training – providing a flexible teaching package	Achieved	

Table 6. Annual Plan for 2013-2014

14. References

1. The Health and Social Care Act 2008: Code of Practice for the NHS on the prevention and control of healthcare associated infections and related guidance
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_093762

2. Nice Guidelines: Prevention and Control of healthcare associated Infections, Quality improvement guide
http://www.nice.org.uk/nicemedia/live/13763/59578/59578.pdf

3. **Care Quality Commission (CQC) Inspection Report 2012**
http://www.chelwest.nhs.uk/about-us/transparency/quality-safety/links/CQC-Final-Report-Sep-2012.pdf

4. NHSLA (2013)

http://www.nhsla.com/safety/Documents/Chelsea%20and%20Westminster%20Hospital%20NHS%20Foundation%20Trust%20-%20October%202013.pdf

4. DH (2007) **Saving Lives**
http://webarchive.nationalarchives.gov.uk/20101125133833/clean-safe-care.nhs.uk/index.php?pid=0

5. DH (2004) **Standards for Better Health**
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4086665

6. DH (2012) **Updated guidance on *Cdifficile* testing**
http://www.dh.gov.uk/health/2012/03/clostridium-difficile-6-march-2012/

7. DH (2009) High Impact Actions for Nursing & Midwifery
http://www.institute.nhs.uk/building_capability/general/aims/

8. Monitor Compliance Framework 2011 – 12
http://www.monitor-nhsft.gov.uk/home/our-publications/browse-category/guidance-foundation-trusts/mandatory-guidance/compliance-frame-0

9. DH (2008) MRSA Screening Operational Guidance 2
.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Dearcolleagueletters/DH_092844

10. DH (2010) MRSA Screening – Operational Guidance 3.
http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Dearcolleagueletters/DH_114961

Appendix1

Chelsea and Westminster Hospital NHS

NHS Foundation Trust

Infection Prevention and Control Committee

Terms of Reference

The Infection Prevention and Control Committee (IPCC) is responsible for developing policies and procedures related to infection control in the hospital and for acting as a source of expertise on matters relating to infection. The Committee advises the Chief Executive (or Trust Executive) of the Trust through the Director of Infection Prevention and Control.
It will:

- Report on the incidence and prevalence of 'alert' organisms, and novel or important infectious diseases
- Report on the occurrence and nature of any outbreaks of infection, and on incidents involving microbiological hazards (e.g. needle injuries)
- Develop and maintain policies for the promotion of good infection control standards in the hospital
- Review outbreaks of infection and advise managers on how outbreaks might be prevented
- Assist in the planning and development of services and facilities in the hospital on issues which are relevant to infection control
- Monitor and advise on specific areas of hygiene and infection control, catering, CSSD, ventilation and water services, occupational health, pharmacy, operating theatres, endoscopies, decontamination etc.,
- Develop programmes for the education of staff and students about infection control practices and policies
- Report on the progress with the Targets and the Annual Programme.
- Review progress against hand hygiene action plans

Reporting Committees

- The IPCC reports in to the Quality Committee.
- Committees that report in to the IPCC are: Decontamination Committee; PEAT; Pandemic Influenza Planning Committee; IV Access Group.

Key Relationships:
Quality Committee

Membership:
Director of Infection Prevention and Control (DIPC) (Chair)
Other microbiologists of consultant status
The Consultant Nurse Infection Prevention and Control
The Chief Executive or deputy
Executive Director – Nursing
Infection Control Nurses
Antibiotic Pharmacist
A consultant Virologist
The Consultant in Communicable Disease Control
The Director of Public Health.
Senior medical representative from each division
Senior nurse representative from each division
Occupational Health
A Committee Administrator
Trust Facilities Representative for Soft and Hard Services

Facilities contractors representatives (currently ISS for soft services and Norland for hard services)
Health and Safety Consultant
Head of Decontamination Services
Clinical Risk Manager
If a member is unable to attend, a deputy should be sent.

Invited Attendance
The following may be invited by the Chairman to attend specific items as indicated by the agenda:

A consultant Physician or Surgeon
A Nurse Manager
The Supplies Manager
The Catering Manager
The Chief Pharmacist

In addition, trainees in medical microbiology or public health medicine may be invited to attend as observers.

Quorum
The Chairman, an infection control nurse, the administrator plus five attending members will be considered a quorum.

Frequency of Meetings: Meetings are held monthly.

Attendance requirements
Members are expected to attend two thirds of the meetings per year.

Circulation requirements for papers
The agenda will be sent out up to 7 days before each IPCC meeting. Minutes will be uploaded onto the intranet together with the PowerPoint agenda and documents related to the agenda within 7 days after each IPCC meeting.

Role of the committee members
The following outlines the key responsibilities of the Infection Control Divisional Lead (ICDL):

1. To participate as a member of the Trust Infection Prevention and Control committee

2. To report any Divisional issues or challenges relating to infection prevention and control to the Infection Control Committee

3. To contribute to the achievement of the key objectives of the Trust annual infection prevention and control annual programme.

4. To ensure that Divisional Board members are informed of current issues and developments relating to infection prevention and control and that this information is cascaded to relevant directorates

5. To provide Divisional Board members with a monthly summary of performance indicators relating to infection prevention and control (See appendix 1)

6. To liaise with the Director of Infection Prevention and Control (DIPC), the Executive Lead for infection control and the designated Infection Control Nurse in developing strategies to prevent and control infection.

7. To participate in the local implementation of infection prevention and control initiatives in liaison with relevant Divisional and Directorate staff.

NHS Litigation Authority risk management standards reporting requirements
NHSLA Standard 4 Criterion 6 - Hand Hygiene Training.
The organisation has an approved documented process for ensuring the delivery of effective hand hygiene training to all staff groups that is implemented and monitored.

Infection Control Link Professionals (ICLPs) are responsible for undertaking the monthly hand hygiene audits using the observation audit tool (Refer to Trust Hand Hygiene Policy) to assess compliance and report the outcomes of the audits to the divisional board meetings. The Divisional Infection Prevention and Control representative reports in to the monthly Infection Prevention and Control Committee.

Audits scoring less than 90% require an action plan. The IPCC is the forum for verifying the action plans and monitoring completion. The results will be reported in to the Divisional Boards. The ICLPs are responsible for delivery of hand hygiene training as identified in the action plans.

Routine agenda items

These will include the following on a monthly basis

- Progress against Targets & other mandatory surveillance
- Hand Hygiene Assurance
- Antibiotic Pharmacy Update
- Alert Organism Surveillance
- Outbreaks, Clusters, Incidents & Exposures
- Infection Prevention and Control Team Activities
- Policy Issues

Other routine reports received by the committee

On a quarterly basis the following will be included in the agenda:

- Body Fluid Exposures Report
- Decontamination Update
- Pandemic Influenza Plan (when in season)
- Facilities Update: Soft Services, Hard Services, Projects Team
- Health Protection Agency CCDC Update

Emergency Meetings and Outbreak Control
The Chairman may call an emergency meeting of the Infection Control Committee at any time and all members or their alternatives will be notified by telephone. Emergency meetings are arranged for the control of outbreaks of infection, when the Infection Prevention and Control Team requires additional support and notification of the problem, in accordance with the Major Outbreak Policy. The Chairman will chair all emergency meetings, and is in charge of the outbreak control measures. If the outbreak has particular significance for the non-hospital community or involves other hospitals, the CCDC or Director of Public Health may act as Chairman.

Review date for the terms of reference: June 2014

Approved by: Quality Committee

Date of terms of reference: May2013

Appendix 2

INFECTION CONTROL COMMITTEE

CURRENT MEMBERS 2014

Core members

Holly Ashforth	Interim Deputy Chief Nurse
Dr Jo Atkins	Consultant, Burns
Dr. Mark Atkins	Consultant, Virology
Dr. Berge Azadian (**Chair**)	DIPC/Infection Control Doctor/Microbiologist
Colin Barnes	Infection Control Nurse
Sheena Basnayake	Lead HIV Clinical Nurse Specialist
Nebil Behar	Consultant, Surgery
Simon Black	Norlands Managed Services
Wendy Carnegie	Nurse Manager, Theatres
Nick Cooley	Antimicrobial Pharmacist
Michelle Das	Clinical Lead Nurse, Burns
Elli Demertzi	Associate Specialist Microbiology
Rochelle Gee	Manager ISS
Orla Geoghegan	Antimicrobial Pharmacist
Dr Delphine Grynzspan	CCDC NWL HPU
Jane-Marie Hamil	CNL – ICU
Anneliese Hayes	Senior Occupational Health Nurse
Louise Magee	Lead Nurse, Outpatient Services
Elizabeth McManus	Director of Nursing
Kathryn Mangold	CNL for Gynaecology and the Assisted Conception Unit
Chris McGlynn	Directorate Nurse, HIV/GUM
Dr. Enitan Ogundipe	Consultant, Neonates
Dr. Michael Pelly	Consultant, Medicine
Dr. Anton Pozniak	Consultant – HIV/GUM
Lyn Ronnie	CNL for NICU
Sarah Ross	Infection Control Nurse
Vanessa Sloane	Divisional Nurse, Women and Children
Olga Sleigh	TSSU Manager/Decontamination Lead
Roz Wallis	Consultant Nurse, Infection Control

Appendix 3

Director of Prevention, Infection and Control Annual Reporting Requirements
The Chief Medical Officer's report *Winning Ways* required all NHS organisations to produce an annual report reflecting the following key areas:

1) Executive summary - Overview of Infection Control Activities in the Trust
• Organisation
• Activities
• Infection control Action Plan for the year
• Progress in *Winning Ways* and *Towards Cleaner Hospitals and Lower Rates of Infection*

2) Description of Infection Control Arrangements
• Infection Prevention and Control Team
• Infection control committee
• Reporting line to the Trust Board
• Links to Prescribing and Formulary Committee
• Links to Clinical Governance/Risk Management/Patient Safety

3) DIPC Reports to the Trust Board – Summary
• Number and frequency
• Annual Action Plan
• Board decisions
• Outbreak reports

4) Budget Allocation to Infection Control Activities
- Staff
- Medical
- Nursing
- Scientific
- Administrative
- Support (IT etc)
- Training

5) HCAI Statistics
- Results of mandatory reporting
- MRSA bacteraemia
- GRE bacteraemia
- *Clostridium difficile*
- *MSSA bactereamia*
- *E-Coli bactereamia*
- Orthopaedic surgical site infection

• Trends in HCAI statistics
• Untoward incidents including outbreaks
• Antimicrobial resistance
• Goals identified locally

6) Hand Hygiene and Aseptic Protocols
• Implementation of '*cleanyourhands*'
• Timing
• Coverage in Trust
• Future plans
• Application of aseptic no-touch clinical protocols
• IV catheters
• Urinary catheters
• Wounds etc

7) Decontamination
• Arrangements

• Audit
• Incidents/failures investigated

8) Cleaning Services

• Management arrangements (in-house or contracted out)
• Monitoring arrangements
• Budget allocation
• Clinical responsibility
• Clinical access
• PEAT/Patient forum inspection results
• User satisfaction measures

9) Audit

• Extent of audit programme
• Reasons for audit focus
• Adoption of ICNA audit tool or alternative
• Antibiotic prescribing (report from Antimicrobial Pharmacist)
• Changes and benefits as a result of audit

10) Targets and Outcomes

- For SHA performance managements
- MRSA bacteraemia
- *Winning Ways* and *Towards Cleaner Hospitals* implementation
- Cleaner hospitals (PEAT scores)
- Healthcare Commission self-assessment
- Local targets

11) Training Activities

• Induction for all staff
• CPD for all staff
• CPD for clinical staff
• For infection control specialists
• For DIPC

Appendix 4 – Hand Hygiene Audits – Raw Data 2012-14

	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	YEAR
Clinical Support	96.75%	88.55%	98.95 %	97.78 %	99.06 %	91.84%	98.16 %	83.60 %	77.50 %	98.0 0%	97.65 %	93.1 6%	93.42 %
DIAGNOSTICS	98.75%	100.00 %	100.00 %	98.75 %	100.00 %	100.00%	98.75 %	100.0 0%	98.75 %	98.3 3%	97.50 %	98.7 5%	99.13 %
ECG	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	95.00 %	100.0 0%	95.00 %	95.0 0%	95.00 %	95.0 0%	97.92 %
Endoscopy	95.00%	100.00 %	100.00 %	95.00 %	100.00 %	100.00%	100.0 0%	100.0 0%	100.0 0%	100. 00%	95.00 %	100. 00%	98.75 %
Phlebotomy	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	100.0 0%	100.0 0%		100.0 0%	100. 00%	100.00 %
Radiology	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	100.0 0%	100.0 0%	100. 00%	100.0 0%	100. 00%	100.00 %
ICU	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	100.0 0%	95.00 %	100. 00%	95.00 %	70.0 0%	96.67 %
ICU / HDU ward	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	100.0 0%	95.00 %	100. 00%	95.00 %	70.0 0%	96.67 %
Outpatient	95.71%	82.86%	97.50 %	97.50 %	98.75 %	99.17%	100.0 0%	85.00 %	42.86 %	95.0 0%	100.0 0%	90.0 0%	90.36 %
Beta Cell Diabetes Centre	95.00%	90.00%	95.00 %	95.00 %	95.00 %	100.00%	100.0 0%	100.0 0%	100.0 0%				96.67 %
Eye Clinic	80.00%	90.00%						0.00 %	0.00 %			50.0 0%	44.00 %
Fracture Clinic	100.00%	100.00 %	100.00 %	100.00 %		100.00%	100.0 0%	100.0 0%	0.00 %	90.0 0%	100.0 0%	100. 00%	90.00 %
Gynaecology Outpatients										95.0 0%	100.0 0%	100. 00%	98.33 %
Lower Ground Floor Outpatients										100. 00%		100. 00%	100.00 %
OP2	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	95.00 %	100.0 0%				99.44 %

OPD 1	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	100.0 0%	0.00 %				88.89 %
OPD3	95.00%	100.00 %	95.00 %	90.00 %	100.00 %	95.00%	100.0 0%	100.0 0%	0.00 %				86.11 %
Plastic/ Dermatology/ OPD	100.00%	0.00%	95.00 %	100.00 %		100.00%	100.0 0%	100.0 0%	100.0 0%		100.0 0%		88.33 %
Plastics OPD												100. 00%	100.00 %
SURGERY											90.00 %	85.0 0%	87.50 %
Burns Theatre												85.0 0%	85.00 %
Burns Theatres											90.00 %		90.00 %
THEATRES	98.57%	85.71%	99.29 %	98.33 %	100.00 %	85.00%	95.71 %	70.71 %	97.86 %	99.2 9%	97.86 %	97.8 6%	93.85 %
Decontamination Services	100.00%	100.00 %	100.00 %	95.00 %	100.00 %	100.00%	75.00 %	100.0 0%	90.00 %	100. 00%	100.0 0%	90.0 0%	95.83 %
Main Theatres	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	95.00%	100.0 0%	0.00 %	95.00 %	95.0 0%	95.00 %	95.0 0%	89.58 %
Paediatric Theatres	100.00%	0.00%	95.00 %	95.00 %	100.00 %	100.00%	95.00 %	100.0 0%	100.0 0%	100. 00%	100.0 0%	100. 00%	90.42 %
Pre-Assessment	100.00%	100.00 %	100.00 %			0.00%	100.0 0%	0.00 %	100.0 0%	100. 00%	100.0 0%	100. 00%	80.00 %
Recovery	95.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	100.0 0%	100.0 0%	100. 00%	100.0 0%	100. 00%	99.58 %
Recovery Paeds	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	100.0 0%	100.0 0%	100. 00%	95.00 %	100. 00%	99.58 %
Treatment Centre	95.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	95.00 %	100.0 0%	100. 00%	95.00 %	100. 00%	98.75 %
Therapies	80.00%	91.00%	100.00 %	90.00 %	90.00 %	55.00%	100.0 0%	82.00 %	75.00 %	95.0 0%	100.0 0%	85.0 0%	86.92 %
Therapies	80.00%	91.00%	100.00 %	90.00 %	90.00 %	55.00%	100.0 0%	82.00 %	75.00 %	95.0 0%	100.0 0%	85.0 0%	86.92 %

MEDICINE AND SURGERY	98.15%	95.62%	90.77 %	97.25 %	92.92 %	98.50%	95.92 %	88.54 %	88.85 %	96.9 2%	98.89 %	96.9 2%	94.94 %
MEDICINE	97.29%	96.00%	84.29 %	98.57 %	89.17 %	98.33%	96.00 %	83.00 %	97.14 %	97.1 4%	100.0 0%	98.5 7%	94.63 %
AAU Ward	100.00%	95.00%	100.00 %	100.00 %	35.00 %	90.00%	100.0 0%	90.00 %	90.00 %	95.0 0%		95.0 0%	90.00 %
Adult ED	100.00%	96.00%	95.00 %	100.00 %	100.00 %	100.00%	95.00 %	96.00 %	100.0 0%	100. 00%	100.0 0%	95.0 0%	98.08 %
David Erskine Ward	95.00%	90.00%	95.00 %	90.00 %			85.00 %	95.00 %	90.00 %	90.0 0%		100. 00%	92.22 %
Edgar Horne Ward	90.00%	100.00 %	0.00%	100.00 %	100.00 %	100.00%	100.0 0%	100.0 0%	100.0 0%	100. 00%	100.0 0%	100. 00%	90.83 %
Medical Day Unit	96.00%	91.00%	100.00 %	100.00 %	100.00 %	100.00%	96.00 %	100.0 0%	100.0 0%	100. 00%	100.0 0%	100. 00%	98.58 %
Nell Gwynne Ward	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%		0.00 %	100.0 0%	100. 00%		100. 00%	90.00 %
Paediatric ED	100.00%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	100.0 0%	100.0 0%	95.0 0%	100.0 0%	100. 00%	99.58 %
SURGERY	99.17%	95.17%	98.33 %	95.40 %	96.67 %	98.75%	95.83 %	95.00 %	79.17 %	96.6 7%	98.00 %	95.0 0%	95.26 %
Burns Ward	100.00%	95.00%	95.00 %	95.00 %	90.00 %	95.00%	95.00 %	90.00 %	100.0 0%	95.0 0%	95.00 %	90.0 0%	94.58 %
Chelsea Wing Ward	100.00%	100.00 %	100.00 %		100.00 %	100.00%	100.0 0%	100.0 0%	100.0 0%	100. 00%	100.0 0%	100. 00%	100.00 %
David Evans Ward	95.00%	95.00%	100.00 %	95.00 %	100.00 %		95.00 %	95.00 %	100.0 0%	100. 00%		100. 00%	97.50 %
Lord Wigram Ward	100.00%	91.00%	100.00 %	92.00 %	95.00 %		90.00 %	90.00 %	0.00 %	90.0 0%	100.0 0%	95.0 0%	85.73 %
Mars Ward	100.00%	95.00%	95.00 %	95.00 %	95.00 %	100.00%	100.0 0%	100.0 0%	75.00 %	95.0 0%	95.00 %	85.0 0%	94.17 %
Rainsford Mowlem Ward	100.00%	95.00%	100.00 %	100.00 %	100.00 %	100.00%	95.00 %	95.00 %	100.0 0%	100. 00%	100.0 0%	100. 00%	98.75 %
WOMEN'S, NEONATOLOGY, CHILDREN'S AND YOUNG PEOPLE'S,	94.83%	88.00%	96.14 %	97.05 %	95.80 %	94.33%	96.46 %	95.13 %	87.21 %	95.5 3%	96.33 %	96.9 0%	94.48 %

HIV, SEXUAL HEALTH AND DERMATOLOGY													
CHILDREN'S AND YOUNG PEOPLE'S SERVICES	**95.57%**	**97.00%**	**98.57 %**	**98.33 %**	**97.40 %**	**88.43%**	**98.57 %**	**97.43 %**	**97.86 %**	**98.33%**	**97.57 %**	**98.00%**	**96.92 %**
Apollo	**95.00%**	**100.00 %**	**100.00 %**	**95.00 %**	**100.00 %**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**99.17 %**
Jupiter Ward	**94.00%**	**100.00 %**	**95.00 %**	**100.00 %**	**92.00 %**	**96.00%**	**95.00 %**	**92.00 %**	**95.00 %**	**95.00%**	**88.00 %**		**94.73 %**
Mercury Ward	**100.00%**	**90.00%**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**95.00 %**	**95.00%**	**98.33 %**
Neptune Ward	**90.00%**	**89.00%**	**100.00 %**	**95.00 %**	**95.00 %**	**90.00%**	**100.00%**	**90.00 %**	**95.00 %**	**100.00%**	**100.00%**	**100.00%**	**95.33 %**
Paed Dental	**100.00%**	**100.00 %**	**100.00 %**			**38.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**		**93.11 %**
Paed Out patients												**100.00%**	**100.00 %**
Paed Outpatients	**90.00%**	**100.00 %**	**95.00 %**	**100.00 %**		**95.00%**	**95.00 %**	**100.00%**	**100.00%**		**100.00%**		**97.22 %**
Saturn Ward	**100.00%**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00%**	**100.00%**	**100.00%**	**95.00 %**	**95.00%**	**100.00%**	**95.00%**	**98.75 %**
HIV/SEXUAL HEALTH AND DERMATOLOGY	**94.29%**	**94.29%**	**94.57 %**	**97.00 %**	**93.83 %**	**94.29%**	**92.86 %**	**91.57 %**	**79.71 %**	**90.00%**	**93.33 %**	**93.00%**	**92.39 %**
Dean St	**100.00%**	**95.00%**	**100.00 %**			**100.00%**	**95.00 %**	**100.00%**	**100.00%**				**98.57 %**
Dean Street Express													
Dermatology	**95.00%**	**95.00%**	**95.00 %**	**100.00 %**	**95.00 %**	**95.00%**	**95.00 %**	**95.00 %**	**95.00 %**	**95.00%**	**95.00 %**	**95.00%**	**95.42 %**
John Hunter	**95.00%**	**95.00%**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00%**	**100.00%**	**100.00%**	**95.00 %**	**100.00%**	**100.00%**	**95.00%**	**98.33 %**
Kobler Day Care Centre	**100.00%**	**95.00%**	**85.00 %**	**100.00 %**	**94.00 %**	**80.00%**	**95.00 %**	**70.00 %**	**85.00 %**	**90.00%**	**90.00 %**	**95.00%**	**89.92 %**
Kobler OPD	**95.00%**	**95.00%**	**95.00 %**	**95.00 %**	**95.00 %**	**95.00%**	**95.00 %**	**95.00 %**	**0.00 %**	**95.00%**	**95.00 %**	**95.00%**	**87.08 %**
Ron Johnson Ward	**95.00%**	**85.00%**	**87.00**	**87.00**	**79.00**	**90.00%**	**84.00**	**86.00**	**83.00**	**70.0**	**80.00**	**83.0**	**84.08**

			%	%	%		%	%	%	0%	%	0%	%
West London Clinic	80.00%	100.00%	100.00%	100.00%	100.00%	100.00%	86.00%	95.00%	100.00%	90.00%	100.00%	95.00%	95.50%
WOMEN'S AND NEONATAL SERVICES	94.70%	77.30%	95.38%	96.22%	96.22%	98.50%	97.50%	96.00%	85.00%	97.86%	97.50%	98.89%	94.26%
ACU	95.00%	90.00%		100.00%	100.00%	100.00%	95.00%	100.00%	100.00%		100.00%	100.00%	98.00%
Anne Stewart Ward	95.00%	91.00%	95.00%	95.00%	91.00%	100.00%	100.00%	100.00%	65.00%				92.44%
Annie Zunz Ward	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	95.00%	100.00%	100.00%	100.00%	99.58%
Antenatal Outpatients	70.00%	96.00%			90.00%	90.00%	95.00%	95.00%	95.00%	95.00%	95.00%	100.00%	92.10%
Josephine Barnes Ward	100.00%	100.00%	91.00%	90.00%	90.00%	100.00%	90.00%	95.00%	0.00%				84.00%
Kensington Wing Ward	100.00%	100.00%	100.00%	100.00%	95.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	95.00%	99.17%
Labour Theatres	96.00%	96.00%	96.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.00%
Labour Ward	100.00%	0.00%	91.00%	90.00%	100.00%	100.00%	95.00%	100.00%	100.00%	100.00%	100.00%	100.00%	89.67%
Maternity Inpatients										90.00%		100.00%	95.00%
NICU	95.00%	0.00%	95.00%	95.00%		95.00%	100.00%	70.00%	95.00%		85.00%		81.11%
NICU – ITU ward												95.00%	95.00%
Simpson Unit	96.00%	100.00%	95.00%	96.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	98.92%
TRUST	96.26%	89.93%	95.83%	97.35%	96.17%	94.23%	96.93%	89.58%	84.18%	96.70%	97.30%	95.54%	94.17%

Appendix 5 Daily Hygiene Code/CQC Checklist (example)

	DAILY AUDIT - ADULT ED						
	15/06/13	16/06/13	17/06/13	18/06/13	19/06/13	20/06/13	21/06/13
1. Commodes are clean, check under seat and marked with indicator tape.	√	√	√	√	√	√	√
2. Hand washing soap and gel dispensers are filled, in working order,	√	√	√	√	√	√	√
3. Alcohol gels are in place at every bedspace/ patient area	√	√	√	√	√	√	√
4. Ward/Department visually clean and clutter free including fire exits	√	√	√	√	√	√	√
5. Toilets and bathrooms (where relevant) visually clean	√	√	√	√	√	√	√
6. Isolation facilities maintained appropriately i.e. doors closed, /relevant equipment inside / single patient use equipment and poster on the door	√	√	√	√	√	√	√
7. Check Central Line(s); are they labelled and within date, record any concerns in the observations section below.	√	√	√	√	×	√	√
8. Ward staff wearing uniform and bare below the elbows as per policy, with identity badge.	√	√	√	√	√	√	√
9. Staff know where to access patient information	√	√	√	√	√	√	√

	leaflets on infection control issues (on the Trust website)						
10.	Medical devices & equipment (e.g. pumps, IV drip stands) are visibly clean when in use and labelled as clean when not used.	√	√	√	√	√	√	√
11.	MRSA Screening has taken place for all elective, adult emergency admission & high risk admissions (paed & maternity). Check 5 random patients have been screened.	√	√	√	√	√	×	√
12.	Staff are aware of the CQC, its role and their responsibilities in reducing healthcare associated infections	√	√	√	√	√	√	√
13.	Sharps bins are labelled, dated and signed, and not over-filled. Lids are in half closed position	√	√	√	√	√	√	√
14.	All areas are suitable for purpose, kept clean, and are in good physical repair and condition: check bed frames/trolley, bathrooms, showers, high and low surfaces, toilets, computer keyboards, toys, ledges, curtains and blinds, fans, floors ceiling tiles.	√	√	×	√	√	×	√
15.	There are a minimum of x5 blood culture packs in the designated area in the Treatment/Clean	√	√	√	√	√	√	√

Utility Room.							

appendix 6. MRSA Bactereamias Summary

MRSA Bactaereamia 1:

A 47 year old lady who was transferred from the Royal Berkshire Hospital (RBH) to the Burns Unit for supportive management of Toxic Epidermal Necrolysis (TENS). She was successfully treated on the unit, and was transferred back to RBH 17 days later. On the day of discharge a blood culture was taken and reported by the lab be MRSA positive 4 days later. On follow up at the RBH 10 days after transfer the patient had demonstrated no signs of sepsis. The cause of the MRSA positive blood culture is difficult to establish. It is highly unlikely that MRSA would survive intravasculary as clinically therapeutic levels of Vancomycin had been maintained for 8 consecutive days, and the patient was not colonised with MRSA. The conclusion therefore is that it was a contaminated specimen rather than a clinically significant bacteraemia, possibly due to technique when taking the blood culture.

Lessons Learnt:

- Blood cultures must only be taken by staff that have completed their induction training.

Proposed Actions:

- Full MRSA Screens for all high risk long stay patients on a weekly basis
- Address inconsistent documentation of invasive devices & promote care bundle approach
- Ensure all new doctors complete their online induction training prior to commencing clinical duties
- Ensure latest edition of Infection Control InductionTraining is uploaded on to Training Tracker. This will enable clinicians to learn how to the use of the blood culture checklist and evidence of learning will be recorded.
- The junior doctors will be required to write evidential statements detailing their actions taken leading to the incident and their learning outcomes, copies of which will be held in their training records.
- Ensure all BNU patients who are prescribed Vancomycin should be given continuous infusions rather than bolus doses to maintain levels within the therapeutic range.
- HR to alert the nominated divisional lead for medical training for new starters. They will ensure online training is completed prior to commencing clinical duties

MRSA Bacteraemia 2

The patient was a 56 year old man whose HIV was well controlled under the care of West London Sexual Health Clinic. He had abnormal liver function tests and was booked in for a liver biopsy at Kobler Daycare in March 2013. Two weeks prior to the biopsy his condition deteriorated and by the time of his booked admission on 26 March 2013 he was too unwell for the liver biopsy. He was diagnosed with acute on chronic liver disease, and renal dysfunction, initially requiring HDU. The patient remained very unwell and was transferred to Kings Liver Unit on 13 April 2013 for assessment of suitability for a liver transplant however he was not considered to be a suitable candidate and was transferred back on the 25 April to Ron Johnson Ward for management of his symptoms. He had gross abdominal ascites requiring intermittent drainage. The patient had regular MRSA screening performed which had all been negative, however a He had been MRSA negative on all his screens but by 13/5/12 he became septic due to an MRSA bacteraemia. He was treated with vancomycin directly

after the blood culture was taken and the symptoms of sepsis resolved by 17/5/13. But he remained encephalopathic, with gross ascites and died on 21/5/13. Cause of death 1a. Hepatic Failure 1b Cirrohosis 2. Renal failure sepsis.

Lessons Learnt

- Improvement needed in Asceptic techniques
- Improvement needed in Equipment availability

Proposed Actions:

- Full MRSA Screens for all high risk long stay patients on a weekly basis
- Address inconsistent documentation of invasive devices & promote care bundle approach
- Ensure all new doctors complete their online induction training prior to commencing clinical duties
- Ensure latest edition of Infection Control InductionTraining is uploaded on to Training Tracker. This will enable clinicians to learn how to the use of the blood culture checklist and evidence of learning will be recorded.
- The junior doctors will be required to write evidential statements detailing their actions taken leading to the incident and their learning outcomes, copies of which will be held in their training records.
- Ensure all BNU patients who are prescribed Vancomycin should be given continuous infusions rather than bolus doses to maintain levels within the therapeutic range.

.

MRSA Bacteraemia 3

A 26 year old lady who was originally transferred from the John Radcliffe Oxford to the Burns Unit on 10th July 2013 under the joint care of Mr Leon Villapalos and Dr Jonathon Handy. She had 65% burn and inhalation injuries. She was MRSA negative on her first two MRSA screens (11th and 15th July 2013) but was both MRSA and *Pseudomonus aeruginosa* positive 12 days later (22nd July 2013) in wound swabs. On 25th August 2013 (Day 46) she developed a clinically significant bacteraemia after removal of a femoral central line. The blood culture was positive to both MRSA and *Pseudomonus aeruginosa* . The symptoms of sepsis resolved following commencing appropriate antibiotic therapy. KB's condition improved and her wounds healed despite being colonised with both MRSA and pseudomonas species. The cause of the MRSA positive blood culture is likely to be MRSA colonisation of the skin/wounds which was inoculated into KBs blood on removal of a femoral central line.

Proposed Actions:

- Audit documentation of insertion and removal of all invasive devices in medical/electronic notes and nursing documentation

- Include documentation of PVCs in face to face induction with junior doctors

- Undertake a Risk Assessment on what is required for a Ward Move, identifying all relevant hazards and risks including infection control and subsequently to agree a Checklist for Ward Moves incorporating Handover Documents.

MRSA Bacteraemia 4

A 35 year old gentlemen who was admitted to our Burns Unit on 3rd Nov 2013 from St Mary's Paddington ED with 35% burns to his face, both hands, legs. He was MRSA negative on admission but became positive in a wound 8 days later. Further wound specimens and skin screens indicated widespread MRSA colonisation. 10 days post admission he exhibited signs of sepsis. Blood cultures were MRSA and *Pseudomonas aeruginosa* positive.Both organisms were treated with the appropriate antibiotics and his 'two organism sepsis' resolved several days later.

Proposed Actions:

- MRSA screen burns, ICU and other staff that have had direct contact with burns patients.
- MRSA suppression therapy of intact skin in patients with small burns using Octenisan. Patients with small burns should be defined as patients who are able to shower for their dressing changes.
- Patients colonised with the outbreak strain of MRSA (MRSA 1) will be decolonised using Naseptin and chlorhexidine
- Revise the MRSA policy to include MRSA suppression therapy of burns patients.
- To review compliance with ANTT in BNU

MRSA Bacteraemia 5

A patient was admitted into an open bay on Nell Gwynne ward with a known MRSA colonisation. This was due to a lack of isolation facilities. Unfortunately he did not receive decolonisation whilst on the ward .The patient did not require treatment for the MRSA bacteraemia indicating a contamination of the blood culture sample rather than a blood stream infection.

Lessons Learnt:

- Change of practice and policy to include suppression therapy.
- IC Lastword Flag to flag per each access of patient details. It was identified that the Infection Control Flag only flagged once per day per patient and it was being missed by clinical teams. This is now being actioned via IT.

.

Appendix 7: Incidents, Outbreaks, Exposures and Clusters Reported to the Infection Control Committee April 2013 - March 2014

Month	Directorate	Category (clusters/incident/exposure)	Details	Action/Outcome
April 13	M&S	1st MRSA bacteraemia (Incident) 4th April 2013	The Patient was transferred from another hospital (RBH) to the Burns Unit for supportive management of Toxic Epidermal Necrolysis (TENS). She was successfully treated on the unit, and was transferred back to the RBH 17 days later. On the day of discharge a blood culture was taken and reported by the lab be MRSA positive 4 days later. On follow up at the RBH 10 days after transfer the patient had demonstrated no signs of sepsis.	The SUI conclusion: contamination, Root Cause of Contamination: blood culture technique. Future actions include Junior Doctors training on blood culture taking and the Saving Lives Care Bundles to be better enforced on their induction.
	W&C		On Apollo Ward (PHDU) there was one infected chickenpox/infective Group A Strep in a child who went to theatres.	Infection control team carried out a risk assessment and advised appropriately to mitigate risk.
May 13	W&C	2nd MRSA bacteraemia (Incident) 13th May 2013	A 56 year old man was admitted with worsening liver disease. He was transferred to Kings but was not considered to be a suitable candidate for a Liver transplant and was transferred back to RJW on 25/4/13 for on-going management of his liver failure. He continued to have gross ascites for which he had 5 procedures to drain (x3) or tap (x2) the ascites prior to the MRSA positive blood culture on 13/5/13. The patient had been tested regularly for MRSA and had been previously negative.	SUI conducted and found that the cause of the bacteraemia was thought to be the ascitic drain wound site.
June 13	M&S	Measles case (exposure)	Measles case in ED Urgent care centre 22/6/13. Symptoms typical of measles. Rash. Triaged and sat in waiting room for 30 minutes until the Registrar reviewed and immediately put in side room.	Infection control team were informed and thereafter carried out a risk assessment and advised appropriately to mitigate risk. Other patients in the same vicinity were risk assessed by the Registrar. Two pregnant ladies both have been vaccinated.
July 13	M&S	Effluent leak (Incident)	There was an effluent leak on Edgar Horne Ward 05/07/2013 which was resolved by outside contractors	Infection control team were informed and thereafter carried out a risk assessment and advised appropriately to mitigate any further risk.
	W&C	Group A Strep bacteraemia	There was a Group A Strep	PHE (Public Health England) were informed to

		(Incident/exposure)	bacteraemia on Josephine Barnes Ward	aid in community tracing and infection control team carried out a risk assessment and advised appropriately to mitigate any further risk.
	M&S	Chicken pox (Incident/exposure)	A medical registrar had been diagnosed with Chicken pox	Staff and patient contacts traced with the support of occupational health
	W&C	Amp C Positive Enterobacter cloacae (Incident)	2 new cases of Amp C Positive Enterobacter cloacae identified on NICU- totalling 7 cases	Infection control team were informed and thereafter carried out a risk assessment and advised appropriately to mitigate any further risk. All 7 patients were isolated and isolates were sent for typing. PHE results showed they were different genotypes and thus were un-related.
August 13	Clinical support	MRSA colonisation (Incident)	Four MRSA colonisation cases identified in ICU	Specimens sent to PHE. All genetically different strains and thus were un-related.
	M&S	3rd MRSA bacteraemia (Incident) 25th August 2013	A 26 year old lady transferred from the John Radcliffe Oxford to the Burns Unit on 10th July 2013 with 65% burns and inhalation injuries. She was MRSA negative on her first two MRSA screens (11th and 15th July 2013) but was both MRSA and Pseudomonas aeruginosa positive 12 days later (22nd July 2013) in wound swabs. On 25th August 2013 (Day 46) she developed a clinically significant bacteraemia after removal of a femoral central line. The blood culture was positive to both MRSA and Pseudomonas aeruginosa. The symptoms of sepsis resolved following appropriate antibiotic therapy.	SUI panel findings were: Septic shower of both Gram negative and positive organisms following removal of a femoral CVC line.
September 13		Outbreak of EMRSA1 in Burns (Incident)	Total cases to date: 13. 9 were isolated between July and September of which 1 was an MRSA bacteraemia (see above)	All clinical care areas on the burns unit have undergone a deep clean, supported by Facilities, ISS and Norlands.
October 13		Continuation of EMRSA1 outbreak in Burns (Incident)	By the end of October there had been 25 cases to date.	The Unit has continued to be on high alert and there have been a number of measures undertaken including: cleaning,

				increased, staffing numbers of nursing and cleaning staff, restricted access to the affected side-rooms, having different coloured scrubs for the Burns ITU staff, better storage, higher standards of practice particularly with IV line care, suppression therapy and a register to enter BICU & theatre
November 13	M&S	4th MRSA bacteraemia (incident) 12th November 2013	A 35 year old gentleman was admitted to our Burns Unit on 3rd Nov 2013 from St Mary's Paddington ED with 35% burns to his face, both hands, legs. He was MRSA negative on admission but became positive in a wound 8 days later. Further wound specimens and skin screens indicated widespread MRSA colonisation. 10 days post admission he exhibited signs of sepsis. Blood cultures were MRSA and Pseudomonas aeruginosa positive. The MRSA was appropriately treated with IV Vancomycin and his sepsis resolved several days later.	The actions from the SUI were: • Consider the use of mid lines or PICC lines rather than PVC in patients requiring continued IV therapy and/or difficult to cannulate. • MRSA suppression therapy of intact skin in patients with small burns • Revise the MRSA policy to include MRSA suppression therapy of burns patients. To review compliance with ANTT in BNU.
		? Middle Eastern Respiratory Syndrome – a type of Corona Virus. (incident)	A US citizen who came to the ED with Flu like symptoms.	Patient later that day was transferred to the Royal Brompton Hospital where she died 2 days later. PHE identified it to be a PVL.
December 13	M&S	New location EMRSA1 (Isolate) as the outbreak strain on Burns unit. (Incident)	A patient on Rainsford Mowlem Ward was found to have the same strain of MRSA1 (Isolate) as the outbreak strain on Burns unit.	Infection control team were informed and thereafter carried out a risk assessment and advised appropriately to mitigate any further risk.
	M&S	Effluent leak (Incident)	2 toilets on AAU blocked resulting in a sewage pipe break over NNU (HDU) pouring sewage water into NNU overnight. The HDU was closed and the babies were put in a room on Josephine Barnes.	Infection control team were informed and thereafter carried out a risk assessment and advised appropriately to mitigate any further risk. All equipment cleaned with toothbrush and chlorclean.
	W&C	Paediatric staff reporting sick due to vomiting. (Incident)	Several staff from the Paediatric department phoned in sick due to episodes of vomiting whilst at home. (None vomited at work)	Infection control team were informed and thereafter carried out a risk assessment and advised appropriately to mitigate any further risk. Please do not attend your clinical area until you are free from either diarrhoea or vomiting for 72hr after your last episode.

January 14	M&S	Flu A patient	Flu A patient aged 82 admitted on 17/1/13. Was briefly on AAU then HDU then s/r ICU.	Infection control team were informed and thereafter carried out a risk assessment and advised appropriately to mitigate any further risk. Patients contacts in AAU were followed up, with no further cases identified.
February 14	M&S	Vomiting and diarrhoea	Edgar Horne and Nell Gwynne wards closed due to vomiting and diarrhoea in patients and staff. On Nell Gwynn 14 patients were affected and 9 staff. On Edgar Horne Ward (EH), there were 13 patients with symptoms of diarrhoea and/or vomiting and 4 staff.	The wards were closed for a period of 10 days, infection prevention and control protocol was instigated immediately.
	M&S	New EMRSA1 (colonisation) case on Burns unit.	There was a confirmed case of the EMRSA1 strain in burns unit.	The same measures as per October 2013 were taken which involved: An emergency meeting was held, the Unit continued to be on high alert and a number of measures were undertaken including: cleaning increased, staffing numbers of nursing and cleaning staff increased, restricted access to the affected side rooms.
March 14	M&S	5th MRSA bacteraemia (incident) 12th March 2014	A patient was admitted into an open bay on Nell Gwynne ward with a known MRSA colonisation. This was due to a lack of isolation facilities. Unfortunately he did not receive decolonisation whilst on the ward.	The patient did not require treatment for the MRSA bacteraemia indicating a contaminant. The patient was known to be MRSA colonised, and suppression therapy may have prevented this contamination. MRSA policy to be changed, to indicate a change in practice.

Objective	Outcome	Actions	Proposed Start Date:	Responsible:
Improve patient safety and clinical effectiveness	Zero tolerance for MRSA bacteraemia	To achieve 100% Hand Hygiene audit completion every month.	Monthly	Roz Wallis
		To achieve local targets for the Saving Lives Care Bundles: CVC: 90% PVC : 90% urinary catheters: 90% every month via a minimum of 5 devices audited per month. (With the exclusion of CVCs if there are not enough devices to audit) • CVC • Urinary catheters • PVC	Monthly	Roz Wallis
		Set up a vascular access group to improve performance with the care bundles.	August 2014	Holly Ashforth
		Care Bundles: Audit a minimum of 5 peripheral lines per month per relevant clinical area	Monthly	Roz Wallis
		Review Care Bundles: to reflect the latest EPIC guideline changes	September 2014	Roz Wallis
		Monitor compliance with Trust blood culture procedure	Continuously Monitored.	Dr. Azadian
		Liaise with Synbiotix to revise care bundle compliance displays all wards –making clear which areas have not audited/how many have devices have been audited	July 2014	Roz Wallis
		PIR investigations for any MRSA bacteraemias to identify learning and drive up standards of care.	As Required	Dr. Azadian

	Keep C diff rate below maximum tolerance level of 8 cases	Monitor compliance against the National standards of Cleanliness	Continuous	David Butcher Rochelle Gee
		To audit commodes to ensure they are intact and fit for purpose and appropriately labelled.	December 2014	Roz Wallis
		Monitor compliance of stool charts for all inpatients from admission to discharge via daily checklist audit.	From August 1st 2014	Holly Ashforth
		Six monthly stool chart audit.	July 2014 February 2015	Roz Wallis
		Monitor the use of C diff packs including checklist with doctor's signature.	Continuously Monitored.	Dr. Azadian
		Audit staff awareness of C diff packs and the availability of 5 packs per ward.	July 2014 January 2015	Roz Wallis
		Audit to ascertain that all patients with query/confirmed infectious type 6 or & 7 stools are isolated in side rooms with en-suite facilities.	August 2014	Roz Wallis
		Trust wide point prevalence survey of all patients with Diarrhoea to include if a medical assessment and appropriate Stool Testing have been performed.	August 2014	Roz Wallis
	Prevention and early detection /treatment of blood stream infections	Learning from incidents. Implement recommendations of SUI and RCA/PIR panels that result from blood stream infections e.g. MRSA, MSSA or C diff.	As required.	Dr. Azadian Rox Wallis
		To collate and submit data on E.coli bacteraemias in accordance with DH requirement	As required.	Dr. Azadian Roz Wallis
		To collate and submit data on MSSA bacteraemias in accordance with DH requirements and to implement learning	As required	Dr. Azadian Roz Wallis

		from RCA panels.		
	Prevention of surgical site infections s/ keeping C&W infection rates within or below the national norms	To collate and submit data on orthopaedic surgical site infections in accordance with DH requirements	Quarterly	Roz Wallis
		To feedback results to orthopaedic surgeons and nurses and work with them to action issues that arise from the surveillance.	Quarterly	Roz Wallis
	Policy Update	Ensure policies are up-to-date and reflect changes in the national guidance.	As Required	Roz Wallis
	Demonstrate continuous improvement to meet and exceed the National Standards of Cleanliness for the NHS and fully contribute to the requirements of the Code of Practice for the Prevention and Control of Health Care Association Infection.	Ensure there is Cleanliness auditing programme which is monitored by the IPCC.	Monthly	Dr. Azadian David Butcher Rochelle Gee
		Monitoring of ISS contract	Monthly	David Butcher
		Monitoring of Norlands contract	Monthly	David Butcher

	Reduce the risk of infections from emerging pathogens	Instigate an action plan to implement the CRE Toolkit.	30th June 2014	Dr. Azadian
Improve the patient experience	The IPCT to take a patient centred approach	Attend monthly PLACE meetings and participate in the annual PLACE assessment	Monthly/Annually.	Roz Wallis
		Consult patient and public infection control forum (FIT: Fighting Infection Together) for infection control material that is publically available.	Continuous.	Roz Wallis
Deliver excellence in teaching and research	The provision of professional development for ICLPs	To develop an ICLP refresher course for ICLPs who have been trained for more than 2 years	December 2014	Roz Wallis
		To develop an annual ICLP educational event	March 2014	Roz Wallis
		To develop an annual ICLP award	December 2014	Roz Wallis
		To develop a bespoke ICLP professional development course in liaison with Teaching and development department.	March 2014	Roz Wallis
		To include waste management as an ICLP responsibility	May 2014	Roz Wallis
Ensure financial and environmental sustainability		ICLP assistance in waste streaming trust initiative implementation.	May 2014	Roz Wallis
		Work closely with Procurement to ensure best value for money to support best practice.	Continuous	Roz Wallis
		To liaise closely with the IT project manager to deliver an online Infection Prevention and Control package (ICNet	IC net launch January 2015	Roz Wallis

		NG) which will improve the delivery of infection control service.		