

TRUST BOARD

Date of Meeting: 30/4/2013	Agenda Item No: 5.3	Enclosure: 6
Intended Outcome:		
For noting	For information	For decision ✓
Title of Report: Service Improvement Plan : <i>Clostridium difficile</i>		
Aims:		
<p>To outline to the Board those measures we need to take to reduce the incidence of <i>Clostridium difficile</i> at North Cumbria University Hospital in order to achieve our trajectory for 2013-14.</p> <p>To inform the board of the findings of a recent Trust Development Authority visit and those actions we are taken to deal with the outcomes of the visit.</p>		
Executive Summary:		
<p>There were policies and audits in place and if acted upon by all team members, we would be in a better place. This is an organisational culture issue. The TDA report supports this view and Clinical Policy Group in April confirmed the report should be agreed in full.</p> <p>The Trust was over trajectory for 2012-13, that is 56 cases versus a target of 40. Urgent action is required to achieve its target for 2013-14 (29).</p> <p>The key measures identified from the root cause analyses and best practice with immediate effect are:</p> <p>Cleaning: Implementation of Chlorine Dioxide based cleaning programme and Hydrogen Peroxide Vapour Ensure regular and reactive cleaning is fit for purpose</p> <p>Antimicrobial Use: Ensure Antibiotic guidelines are compatible with Northumbria and that use of cephalosporins and fluoroquinolones are minimised. Ensure monitoring of antibiotic guidelines is adequate and interventions taken where deficiencies are identified.</p>		
Specific implications and links to the Trust's Strategic Aims:		
We deliver excellent clinical outcomes along closely integrated pathways		✓
We provide excellent patient-centred services		✓
We deliver excellence in safety, quality and regulatory compliance		✓
We deliver efficient care and work within budgets		✓

Recommendations:

The Board is requested to approve this report.

Prepared by:

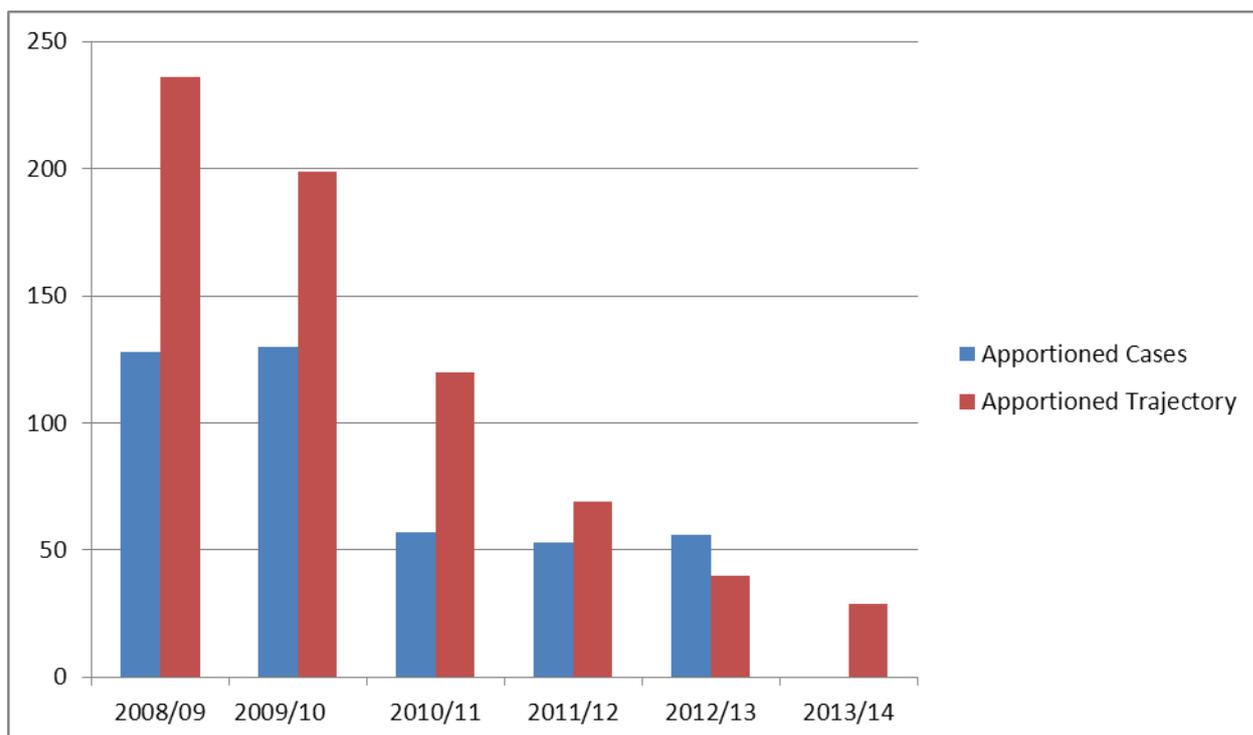
Dr Clive Graham
Clinical Business Unit Director
Clinical Support

Presented by:

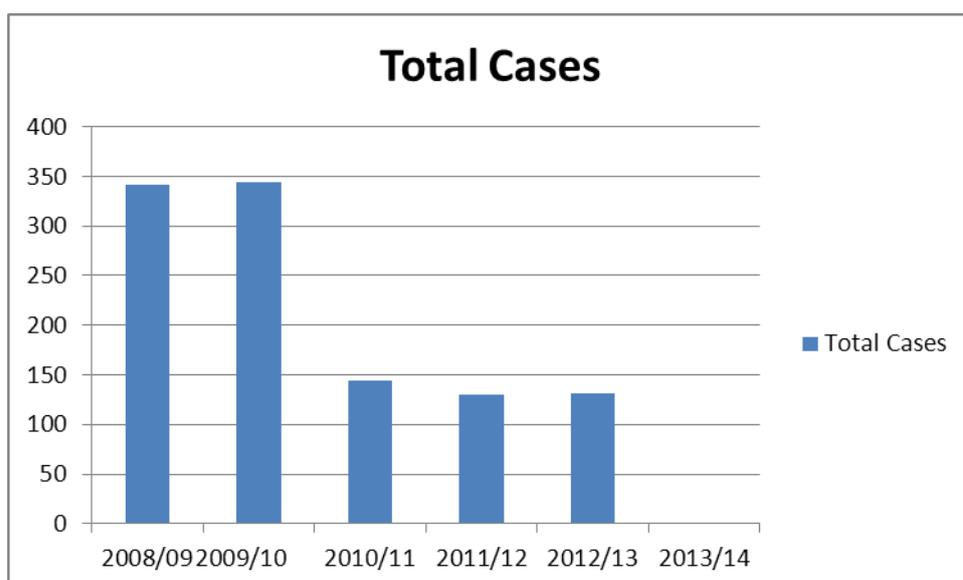
Dr Bryan Marshall
Consultant Microbiologist
Northumbria Healthcare

Background

The Trust had fifty-six apportioned *Clostridium difficile* cases in 2012-13, a value significantly greater than the trajectory for that year, in fact the number of cases of *C difficile* have levelled off over the last three years (both in the Acute and across the Health Economy) whilst national targets have consistently fallen.



Total Number of Cases Across the Health Economy

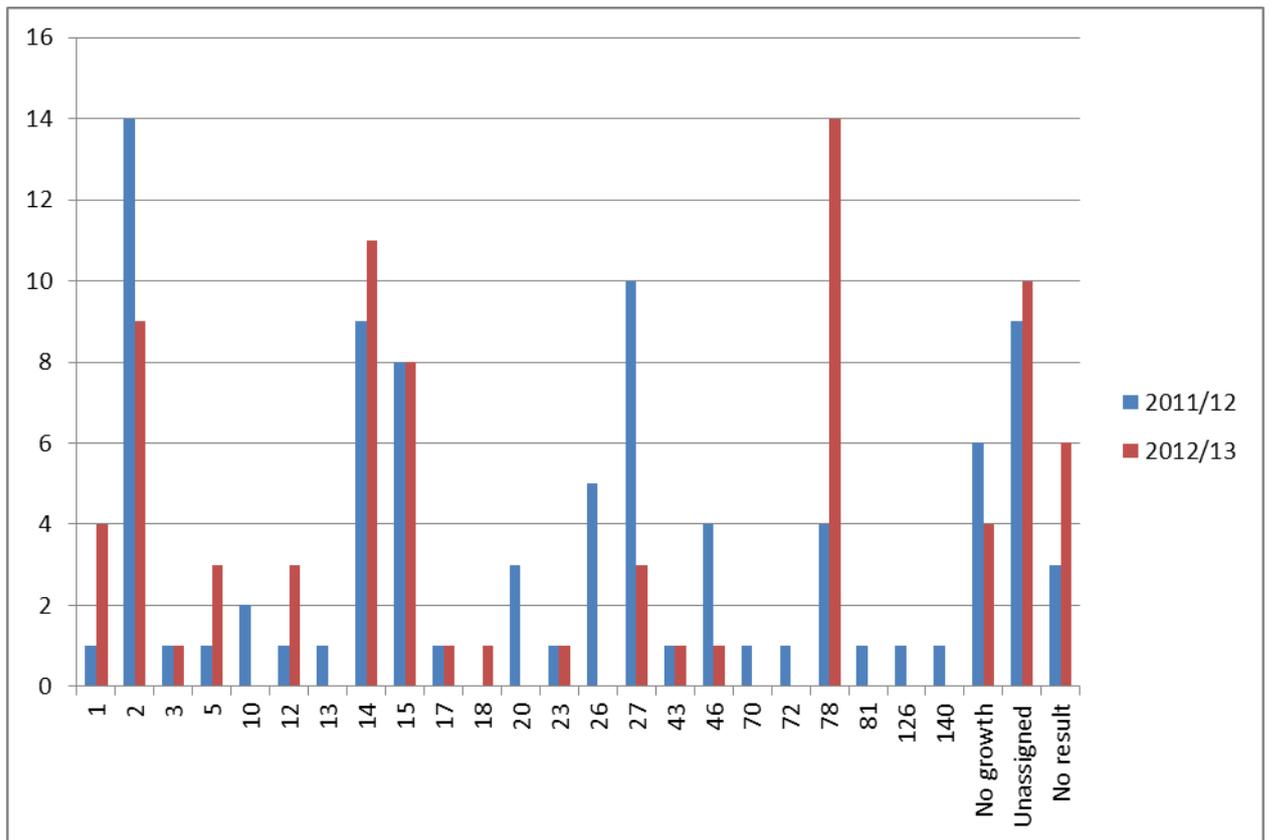


Investigation show that cases are clustered around certain ward areas and peaked in the latter half of 2012 although the incidence remains higher than it should be given the need to achieve a trajectory of 29 in 2013-14.

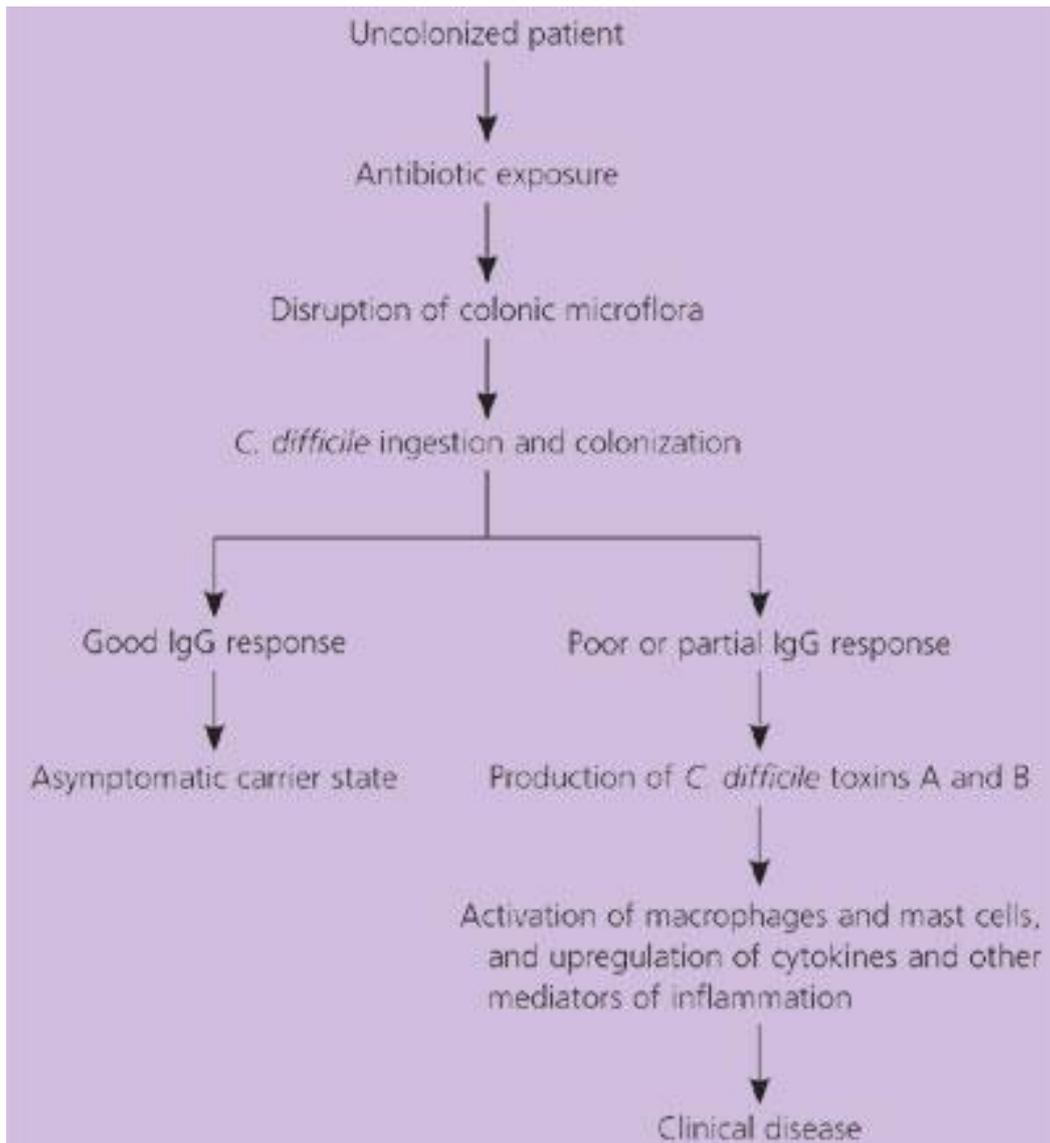
SITES	CUMBERLAND INFIRMARY														WEST CUMBERLAND HOSPITAL											CUMULATIVE POST 48 HRS								
	A&E	ASP	BA	BB	BC/D	EA	EB	EC	L/A/B	LC/D	MB	MC/D	WA	WB	WC	WD (CCU)	ITU	A&E	C (Jenkin)	Dalegarth	Kirkstone	Gable	Honister	Overwater1	Overwater2		PAT	PIL	RDU	U	ITU	CCU	TOT	MONTH TOTAL
Aprpre48																																0		
Aprpost48																		1														1	1	
Maypre48																																0		
Maypost48							1											1														2	2	
June pre 48								1																								1		
June post 48					1		1											1														3	4	
July pre 48								1																		1						2		
July post 48					1	1	1		1							1		1														6	8	
Aug pre 48															1																	1		
Aug post 48							1	1								1																3	4	
Sept pre 48								1										1				1										1	4	
Sept post 48							2	1																								3	7	
Oct pre 48								2			1																					3		
Oct post 48				1								1											1									1	4	7
Nov pre 48			1		1																												2	
Nov post 48			2	1			1		2			1											1										8	10
Dec pre 48								1					1													1							3	
Dec post 48			1	1	1	1	2		1			1				1						1	1	1								1	2	15
Jan 13 pre 48													1										1										2	
Jan 13 post 48								1	1															1	1								4	6
Feb 13 pre 48																																	0	
Feb 13 post 48			1		1	1				1														1									5	5
Mar 13 pre 48									1															1									2	
Mar 13 post 48				1		1						1	1			1																	5	7
Post 48	0	0	4	4	4	4	3	7	3	5	0	0	4	1	0	0	4	0	0	0	1	5	2	0	0	0		0	0					
	43														13																			

Investigation into some of the periods of increased incidence have identified links between cases with some isolates being identical indicating cross transmission, most cases remain sporadic.

A broad guide to changes in ribotype is given below but not all isolates are typed. The key change is an increase in Ribotype 078, of those that have been additionally typed no link has been identified between cases. This strain is associated with increased virulence.



At this point it is useful to remind you of the pathogenesis of *Clostridium difficile*, this is indicated in the diagram below. The important points to note in control of the spread of this organism are controlling antibiotic exposure and environmental cleaning. This organism forms spores so it can persist in the environment furthermore only certain cleaning agents are active against this organism.



Key Findings from Trust Development Authority Visit

Purpose:

To review CDI management and assurance processes

Background:

The performance has seen no improvement for 3 year and is 40% over trajectory at year end (56/40).

Leadership

Full engagement of CEO

Development of the Matron and the IPC team

Engagement of the clinical teams including medical nursing and support services

Revision and relaunch of the IPCC with executive leadership

Multiagency approach to outbreak management

Clean and appropriate environment

Cleaning specifications and out of hours services need to be aligned for both sites

Introduction of HPV immediate with effect

Cleanliness on both sites poor (equipment esp)

Declutter of ward areas necessary

Estates intervention and action to repair outstanding requests urgently

No clear audit trail with actions completed

Information to service users and visitors

Good engagement of patient representatives and would be beneficial to utilise in audit process

Website information is outdated (2011)

Suitable accurate information on infections

The data analysis is minimal and the Team would benefit from a dedicated analyst.

Board assurance needs to be more robust

An HCAI dashboard would demonstrate trends in performance and should include RCA recommendations and actions

It is not embedded in the culture of the organisation

Data and Audit

Some evidence of audit for – ICN environmental audit, antimicrobial prescribing, but not systematically collated and reported to board or ICC

No clear outcomes following audits – accountability / responsibility

No evidence/audit trail of timely follow up of audits that failed to meet standard by area

No systematic audit of C difficile pathway or isolation received

No evidence of KPI's or dashboard at directorate or corporate level

Prompt Identification

A health economy approach would be beneficial to review

Recovery

Death attributed to CDI on part 1 of death certificate (plus 30 day all cause)

Relapse

Discharge

Sex distribution

Staff Engagement

The executive should ensure the IPC is detailed in every job description from CEO across the organisation

Local ownership of infection with clinical engagement

IPCT as expert advisers (facilitating not doing)

Secure isolation facilities

Isolation facilities are limited on both sites
Limited information on breaches in isolation policy
Unable to securely isolate bays in event of outbreak
Poor compliance in practice

Appropriate policies and assurance

The CDI policies to be updated within the next month to reflect National Guidance (2012) **(Please note the IPT disagree with this finding)**
Training and assurance required on compliance to Trust and national policy
COSHH; HACPP non compliance to guidance

Policy

Pathway does not indicate treatment regimens, referral / role of gastroenterologist
Pathway for patients who relapse unclear
Isolation Policy to be reviewed as ineffective if not audited against breaches

Assurance HCW free from Harm and protected and educated

The CDI policies to be updated within the next month to reflect National Guidance (2012)
Training and assurance required on compliance to Trust and national policy
COSHH, HACPP non compliance to guidance
Occ health should have more robust links with IPCC and IPCT

Governance

Investigation, reporting, learning and action of RCA's is not appear systematic, complete or robust. Still no systematic medical engagement
Unclear where audits are reported and accountability held
Risks and actions are not clear within minutes of the ICC or within IC reports
Attendance at outbreak meetings was in line with policy
No evidence of review or monitoring of delivery plans – corporate or divisional

Antimicrobial point prevalence

Antimicrobial prescribing
No Antimicrobial pharmacist post additional funding for ward based pharmacists
Reporting to ICC and board should commence at the next ICC
Incomplete data on use of antimicrobials used for more than 5 days
Incomplete data of prescriptions with increased course length were deemed inappropriate
Incomplete data of antimicrobials prescribed were non-compliant with guidelines

Of those that were non compliant with guidelines incomplete data on which were deemed inappropriate

Reviews and look back exercises

Findings - no evidence of internal review
 Poor record keeping
 Delay in isolation, failure to record date and time of isolation
 High incidents of patient movement
 RCA not robust
 Pace of actions not timely
 Failure to follow policy and best practice
 Outcomes and actions taken not clear

Proposed Action Plan

Action	Specifics	Responsible person(s)	Target date	Ongoing developments	Risk status
Cleaning & decontamination	Cleaning Programme Development of out of robust cleaning programme	Val Wright	Jun-13		High
	Commode cleanliness Ensure clean commodes throughout Trust	ICT, ward staff, modern matrons	Weekly audit		Mod

<p>Macerator cleanliness Ensure clean macerators through the Trust and documentation complete</p>	<p>ICT, ward staff, modern matrons</p>	<p>Monthly audit</p>		<p>Mod</p>
<p>HPV Ensure HPV cleaning performed following discharge of C.difficile positive patients and on identification of cluster of cases</p>	<p>Alan Davidson</p>	<p>April-13</p>		<p>High</p>
<p>Frequently touched areas Ensure clean throughout the Trust and cleaning schedules in place Enhanced cleaning of patient areas Full cleaning and HPV to be undertaken for areas when C.difficile positive patient identified</p>	<p>Alan Davidson</p>	<p>Mar-13</p>		<p>High</p>
<p>Handwashing facilities To ensure adequate hand hygiene facilities for staff and that issues raised in staff survey adequately addressed To ensure patients have opportunity to wash hands prior to meals</p>	<p>ICT</p>	<p>April 2013 and then monthly</p>	<p>Any immediate problems identified would have been addressed at the time audit done. The audit complete CIC site. The audit on the WCH site was postponed due to the weather and is being rearranged for next week.</p>	<p>High</p>

	Domestic Cover Introduce and establish Trustwide system for monitoring domestic cover	Carol Johnson	Mar-13		High
	Chlorine Dioxide Introduce Chlorine Dioxide based cleaning product for all routine cleaning in clinical areas on CIC site	ICT Interserve Carol Johnson	May -13	Widespread trial of both products on CIC site SMT business case approved Implementation dates agreed with Difficil-S and Interserve Still need to agree change order	High
	Chlorine Dioxide Review implementation of the above on the CIC site		Sept -13		High
	Decant area Decant area to be identified to allow deep clean and HPV	Denis Burke/Alyson Raine	May-13	To be agreed by the Clinical Business Unit	High
Microbiology	Procalcitonin testing Review appropriate antibiotic usage	Dr Clive Graham	May-13	Review clinical utility of procalcitonin and if adequate evidence develop a business case to support it's implementation	Mod

	<p>Specimen collection To ensure appropriate specimen collection</p>	ICT, ward managers, modern matrons	May-13	Red/Amber/Green Protocol agreed Need for appropriate sampling discussed at Senior Nurses Meeting, to be cascaded to nursing teams.	High
	<p>Isolation of patients Ensuring appropriate isolation of patients suspected of having infective cause of loose stools</p>	Ward staff	Monthly audit	Ward staff to isolate patients when collecting stool specimen if infective cause suspected. System now working much better - links with appropriate specimen collection. Still not robust.	High
	<p>Root cause analysis feedback All Cases</p>	ICT and Clinical Teams	Monthly	ICT to communicate root cause analysis with weekly HCAI meeting group. Trends and themes communicated monthly	Mod
	<p>SUI/RCA process Ensure appropriate reporting and investigation of C.difficile deaths</p>	ICT, Clinical Governance Leads	Mar-13	If C.difficile documented on part 2 of death certificate, RCA investigation only. If documented on part 1, full SUI investigation to be carried out. System working well. SUI's fed back at C.diff steering group and local clinical governance Combined acute and community rapid review being reviewed	Low
Organisational	<p>Ownership and Accountability Review membership and Terms of Reference of IPCC and associated Infection Prevention and Control Meetings</p>	Dr Clive Graham	May-13		High
	<p>Review all internal reporting arrangements to ensure risks are appropriately identified</p>	Dr Clive Graham	June-13		High

	<p>and highlighted</p> <p>Review IP Staffing Structure</p> <p>Review information systems to ensure they are compatible with Northumbria and safe from day 1</p> <p>OD training for IPC team and organisational team</p>				
Training & Development	C.diff training Service to provide C.diff training to Trust staff	ICT	Monthly audit	Ensure all relevant staff aware of changes in above process. Infection control training standards to exceed 90%.	Mod
Antibiotics	Compliance with prescribing standards	Clare Hamson/Jan Forlow	Quarterly audit	<p>Safe Antibiotic Prescribing Thermometer Commenced February 2013 on EA, BCD, Pillar/Patterdale, Overwater. Undertaken by ward pharmacy teams and displayed on ward. EA achieved 100% compliance on 21/3/13. Promotion via A3 posters on wards (displayed), screensaver and newsletter (sent to communications)</p> <p>Intensive antibiotic review week on admission wards by Microbiologist / Pharmacist (CIC April 9th, WCH April 29th)</p> <p>Antimicrobial stewardship presentations to Postgraduate Medical meeting (15th May, by visiting Consultant Pharmacist from York), Medical Grand Round (9th May), and Link Nurse Group (1st May)</p> <p>Feedback of audit results to clinicians and ward managers to encourage ownership and action</p> <p>Ward pharmacy teams to take active role in auditing prescriptions on their wards using AuditR</p>	Low

	<p>Antimicrobial formulary / consumption Accessibility of NCUHT antimicrobial formulary on the Intranet Unrestricted use of cephalosporins (both within and out-with formulary indications) Point prevalence survey showed respiratory tract infections are the most frequent indication for antibiotics and co-amoxiclav is the most commonly prescribed antibiotic</p>	<p>Clare Hamson/Jan Forlow</p>	<p>Quarterly audit</p>	<p>Actions Antimicrobial formulary review in conjunction with Northumbria colleagues Restriction of cephalosporins (exceptions include paediatrics, maternity, meningitis) and revision of guidelines to include alternative recommendations Development of quick guides for antimicrobial prescribing for respiratory infections, sepsis, treatment indications, surgical prophylaxis to be visible in relevant clinical areas (wards, theatres, sepsis boxes) Benchmarking of antimicrobial consumption – pharmacy team to look into enrolling on national benchmarking scheme</p>	<p>Mod</p>
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