The Challenges and Successes of a Health and Social Care Task and Finish Group Reviewing *Clostridium difficile*

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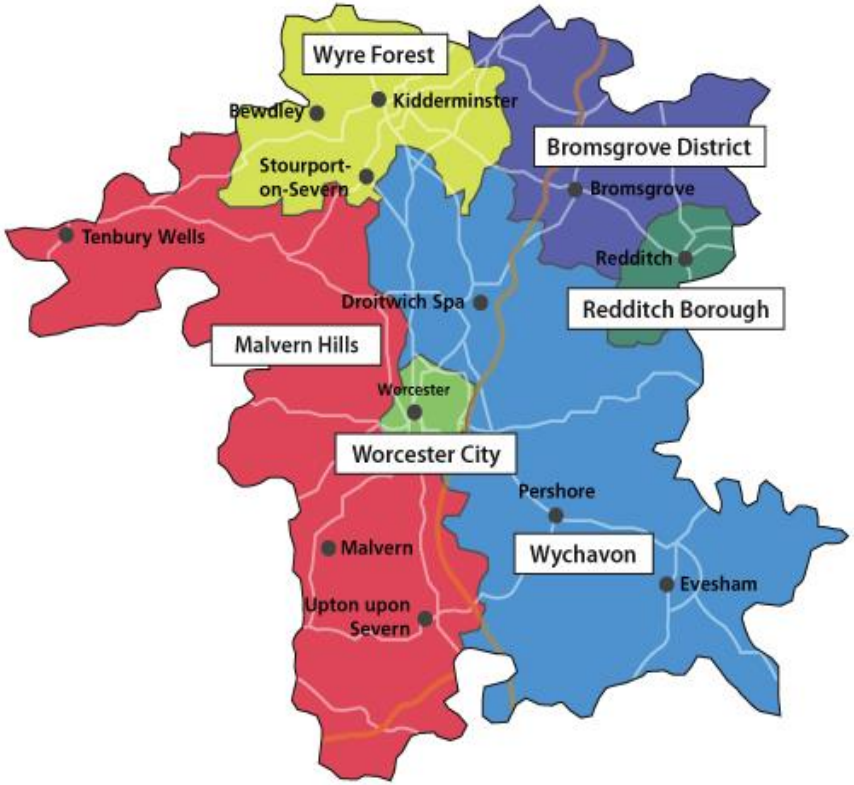
Plan...

- Introduction to Worcestershire
- The Last Three Years...
  - Events
  - Actions
  - Outcomes
- The Future
- Conclusion

Focus on Worcestershire...

- Population of 560,000
- County covering 600^{2}miles
- Urban/Rural mix
- Ageing population
- Healthcare:
  - Three CCGs
  - One Acute Trust
  - One Community and Mental Health Trust
  - Usual range of clinical service provision across Primary Care



Provider	2012/13		2013/14		2014/15
	Trajectory	Reported	Trajectory	Reported	Trajectory
South Worcestershire CCG	N/A		89	62	70
Redditch & Bromsgrove CCG	N/A		42	39	45
Wyre Forest CCG	N/A		36	21	22
NHS Worcestershire (Sum of 3 CCGs)	**176**	215 >22%	**167**	121 <27%	**137**
Worcestershire Acute Hospitals Trust	52	80 >53%	48	40 <20%	41
Worcestershire Health and Care Trust	12	9 <25%	10	5 < 50%	9


POLICE BOX

Any improvement requires a change…

- not every change is an improvement
- but we cannot improve something unless we change it

Goldratt (1990)

It's human nature to break the rules...how can we support people to do the right thing?

If you could see the germs, you'd wash your hands

September 2012




Health and Social Care Group

- REMIT:
  - address non compliance with *Clostridium difficile* trajectories
  - improve standards of quality and patient safety.

- CHALLENGE
  - performance stood at 42% above trajectory for NHS Worcestershire and 75% above trajectory for Worcestershire Acute Hospitals NHS Trust
  - Data contained a number of duplicates
  - 2011/2012 attributable cases not within trajectory with 218 cases recorded against an objective of 185.




Core Team and Membership

Core Team:

Dr Chris Catchpole Consultant Microbiologist

Carole Clive Nurse Consultant Infection Prevention and Control

Dr Claire Constantine Consultant Microbiologist

Dr Anne Dyas Consultant Microbiologist

Jane Freeguard/Anne Kingham Medicines Management Worcestershire CCGs

Jo Galloway Executive Nurse Redditch and Bromsgrove/Wyre Forest CCGs (Group Chair)

Mari Gay Executive Nurse SWCCG

Heather Gentry Lead Nurse Infection Prevention and Control WAHT

Alex Hill Planning & Performance NHS Worcestershire

Josie Mchale-Owen Infection Prevention Lead Nurse Worcestershire CCGs

Dr Jane Stockley Consultant Microbiologist and Community Infection Control Doctor

Further Group Membership:

Hardeep Cheema – Communications

Directors with Responsibility for Infection Prevention & Control (2)

Public Health England representation

Health Protection Agency representation

SHA/TDA representation

Out of Hours Provider

GP representatives (4)

Dental representative (1)

Social Care representation

Admin Support

Strategy (Nov 2012)

Vision and Aspiration: To reduce incidence of *Clostridium difficile* across the health economy consistently to upper quartile of best performance by March 2014 ✓ ACHIEVED

- **Strategic Priorities:**
  1. Identify risk factors - take actions to reduce
  2. Ensure prescribing practice compliant with evidence based guidelines
  3. Implement continuous surveillance
  4. Promote good practice and learning

Priorities within the Plan

- Reducing contamination/optimising infection prevention and control practices
- Antimicrobial stewardship and other evidence based prescribing
- Case follow through and actions
- Enhanced surveillance and further awareness raising
- Communication and development of strategy
- Epidemiology summary reviewing all cases 2012-13 (PHE and also IPCN data)
- External Review planned for January 2013...

NICHE

YOUR 5 MOMENTS OF PRESCRIBING TO PREVENT ANTIBIOTIC RESISTANCE

1 NEED
FOR AN ANTIBIOTIC

WHEN: BEFORE YOU PRESCRIBE AND AT ANY REVIEW – CONSIDER NOT PRESCRIBING OR DELAYED PRESCRIPTION IF PATIENT IS WELL, SELF-LIMITING INFECTION (E.G. UPPER RESPIRATORY TRACT) OR NO CLINICAL BENEFIT – ADDRESS PATIENT CONCERNS

WHY: PATIENTS EXPOSED TO ANTIBIOTICS ARE MORE LIKELY TO DEVELOP RESISTANT BACTERIA MAKING SUBSEQUENT INFECTIONS MORE DIFFICULT TO TREAT. PATIENTS WHO UNDERSTAND ABOUT THEIR INFECTION ARE LESS LIKELY TO RE-PRESENT

2 INVESTIGATIONS
CULTURES BEFORE PRESCRIBING

WHEN: WHEN FIRST-LINE THERAPY HAS FAILED, THE PATIENT HAS BEEN IN HOSPITAL RECENTLY, RECURRENT INFECTION, PREGNANCY OR KNOWN RESISTANCE. CONSIDER IN SEVERE/SERIOUS INFECTION, IMMUNOCOMPROMISED OR CO-MORBIDITY

WHY: CULTURES ARE NECESSARY TO CONFIRM ANTIBIOTIC SUSCEPTIBILITY AND GUIDE YOU IN CHOOSING THE MOST APPROPRIATE THERAPY. THEY ALSO HELP US TO UNDERSTAND THE EPIDEMIOLOGY OF ANTIBIOTIC RESISTANCE

3 CHOICE
SPECTRUM OF ANTIBIOTIC

WHEN: BEFORE YOU PRESCRIBE AND AT ANY REVIEW – CONSULT LOCAL OR NATIONAL GUIDELINES – IF A POSITIVE MICROBIOLOGY TEST IS AVAILABLE, USE THE NARROWEST-SPECTRUM EFFECTIVE ANTIBIOTIC

WHY: USE OF BROAD-SPECTRUM ANTIBIOTICS (E.G. CEPHALOSPORINS, CO-AMOXICLAV AND FLUOROQUINOLONES) LEADS TO THE EMERGENCE OF HIGHLY RESISTANT BACTERIA

4 HOW LONG
IS YOUR PRESCRIPTION FOR?

WHEN: BEFORE YOU PRESCRIBE AND AT ANY REVIEW – CONSULT LOCAL OR NATIONAL GUIDELINES – DOCUMENT YOUR PLANNED LENGTH OF THERAPY – IF NO SERIOUS INFECTION (E.G. SEPTIC ARTHRITIS), CAN YOU STOP IF PATIENT IS BETTER?

WHY: THE LONGER YOU EXPOSE BACTERIA TO AN ANTIBIOTIC, PARTICULARLY AT LOW CONCENTRATIONS, THE MORE LIKELY BACTERIA ARE TO BECOME RESISTANT – DOSING CORRECTLY IS IMPORTANT TO ACHIEVE ADEQUATE CONCENTRATIONS

5 EVALUATE
YOUR PATIENT AND PRESCRIPTION

WHEN: AT ANY REVIEW – IS YOUR PATIENT CLINICALLY IMPROVING? ARE ANY MICROBIOLOGY TESTS POSITIVE? MODIFY ANTIBIOTIC THERAPY ACCORDING TO LOCAL OR NATIONAL GUIDELINES AND THE PRINCIPLES OF NICHE

WHY: IT MAY BE APPROPRIATE TO CHANGE THE ANTIBIOTIC FOR PATIENTS WITH POSITIVE TESTS. PATIENTS NOT IMPROVING MAY REQUIRE MORE TESTS, A DIFFERENT ANTIBIOTIC OR HOSPITAL REFERRAL. CAN YOU STOP IF PATIENT IS BETTER?

AT ANY REVIEW CONSIDER ALL OF THE NICHE COMPONENTS TO LIMIT THE RISK OF YOUR PRESCRIPTION CONTRIBUTING TO RESISTANCE

BSAC The British Society for Antimicrobial Chemotherapy

EUROPEAN ANTIBIOTIC AWARENESS DAY

COMMUNITY VERSION

choose your POO!

THE BRISTOL STOOL FORM SCALE (for children)

		looks like:
type 1		rabbit droppings Separate hard lumps, like nuts (hard to pass
type 2		bunch of grapes Sausage-shaped but lumpy
type 3		corn on cob Like a sausage but with cracks on its surface
type 4		sausage Like a sausage or snake, smooth and soft
type 5		chicken nuggets Soft blobs with clear-cut edges (passed easily
type 6		porridge Fluffy pieces with ragged edges, a mushy sto
type 7		gravy Watery, no solid pieces ENTIRELY LIQUID

Concept by Professor DCA Candy and Emma Davey, based on the Bristol Stool Form Scale produced by Dr KW Heaton, Reader in Medicine at the University of Bristol

Antimicrobial Prescribing

- Prudent prescribing of appropriate antimicrobials reflecting local needs
- Antimicrobial Stewardship

Worcestershire Guidelines For Primary Care Antimicrobial Prescribing

Fourth Edition January 2011

Amended October 2013

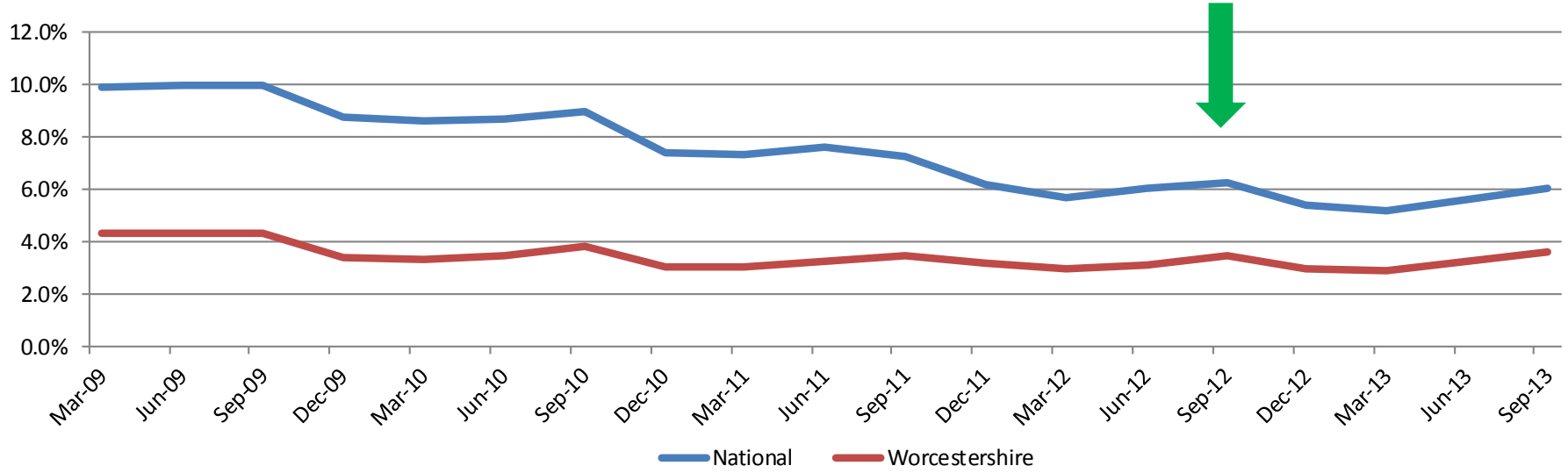
Always consider if antibiotic treatment is necessary

Prescribing antibiotics for viral or mild self limiting infections such as coughs and colds is unlikely to improve the course of the illness, puts patients at risk of side effects and encourages further consultations. Antibiotics should be targeted at those patients who are most likely to benefit. The Clinical Knowledge Summaries (CKS) Library contains many patient leaflets that support appropriate use of antibiotics (www.cks.library.nhs.uk). The Department of Health website gives details of the Public Health campaign and available leaflets (www.dh.gov.uk/en/publichealth/antibioticresistance)

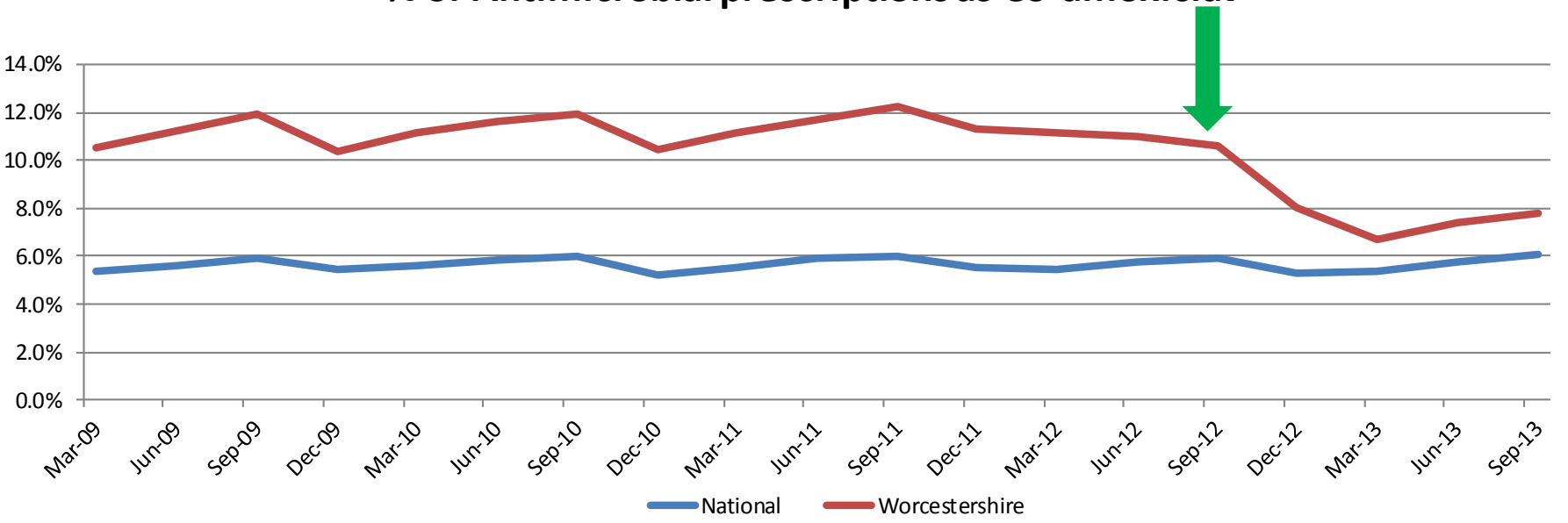
Actions

- Antibiotic Stewardship and Public Engagement
- Use of CDI passport
- PPI – review of use and drive to ensure appropriate prescribing of PPIs
- Review antimicrobial prescribing guidance
- Review use of NSAID Diclofenac/Naproxen
- Continue to consider immune suppressants and laxative use on risk assessments
- Detailed literature search of potential benefits of probiotics

% of Antimicrobial prescriptions as cephalosporins or quinolones

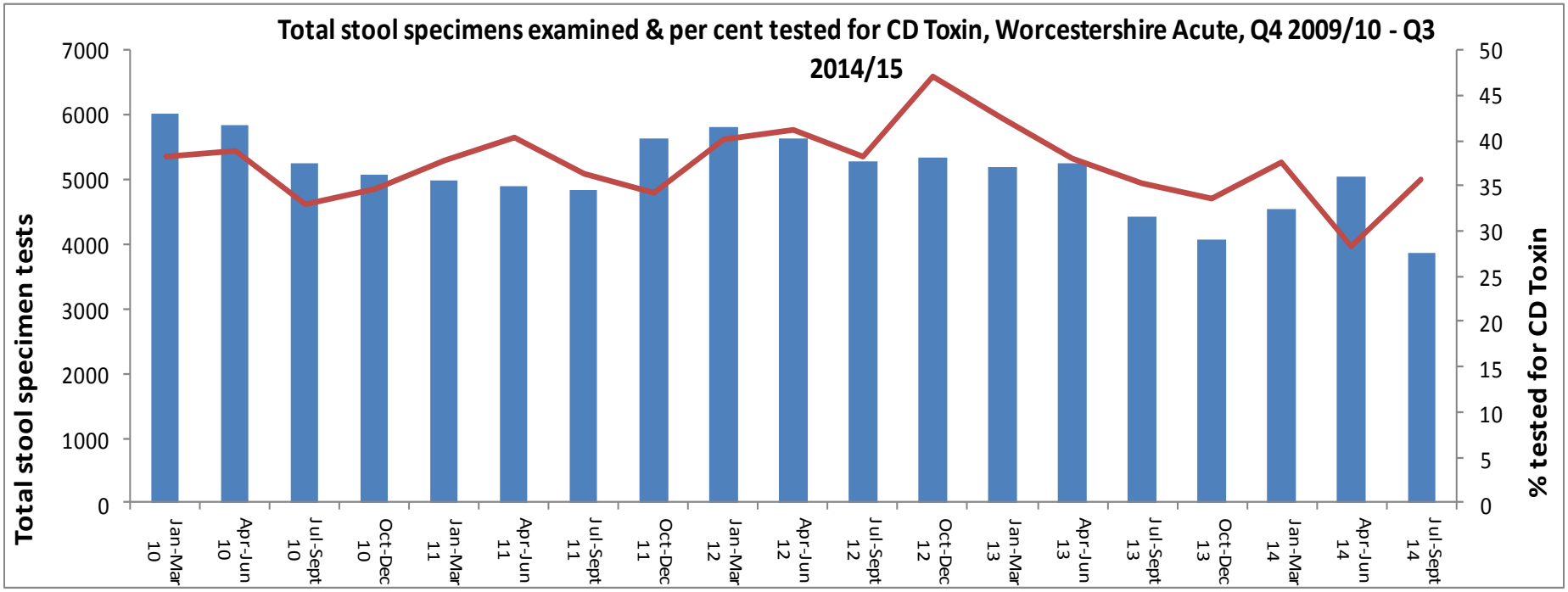


% of Antimicrobial prescriptions as Co-amoxiclav



Actions

- Education and awareness raising with all key clinical and care groups
- Nominated champions
- Root cause analysis of **all** cases and timely feedback of findings to clinicians
- Environmental audit, assurance visits and prompt feedback of findings
- Introduce HPV into acute settings and replace all commodes
- Specimen guidance and education campaign


Total stool specimens examined & per cent tested for CD Toxin, Worcestershire Acute, Q4 2009/10 - Q3 2014/15
Total stool specimen tests
% tested for CD Toxin
7000
6000
5000
4000
3000
2000
1000
0
50
45
40
35
30
25
20
15
10
5
0
Jan-Mar 10
Apr-Jun 10
Jul-Sept 10
Oct-Dec 10
Jan-Mar 11
Apr-Jun 11
Jul-Sept 11
Oct-Dec 11
Jan-Mar 12
Apr-Jun 12
Jul-Sept 12
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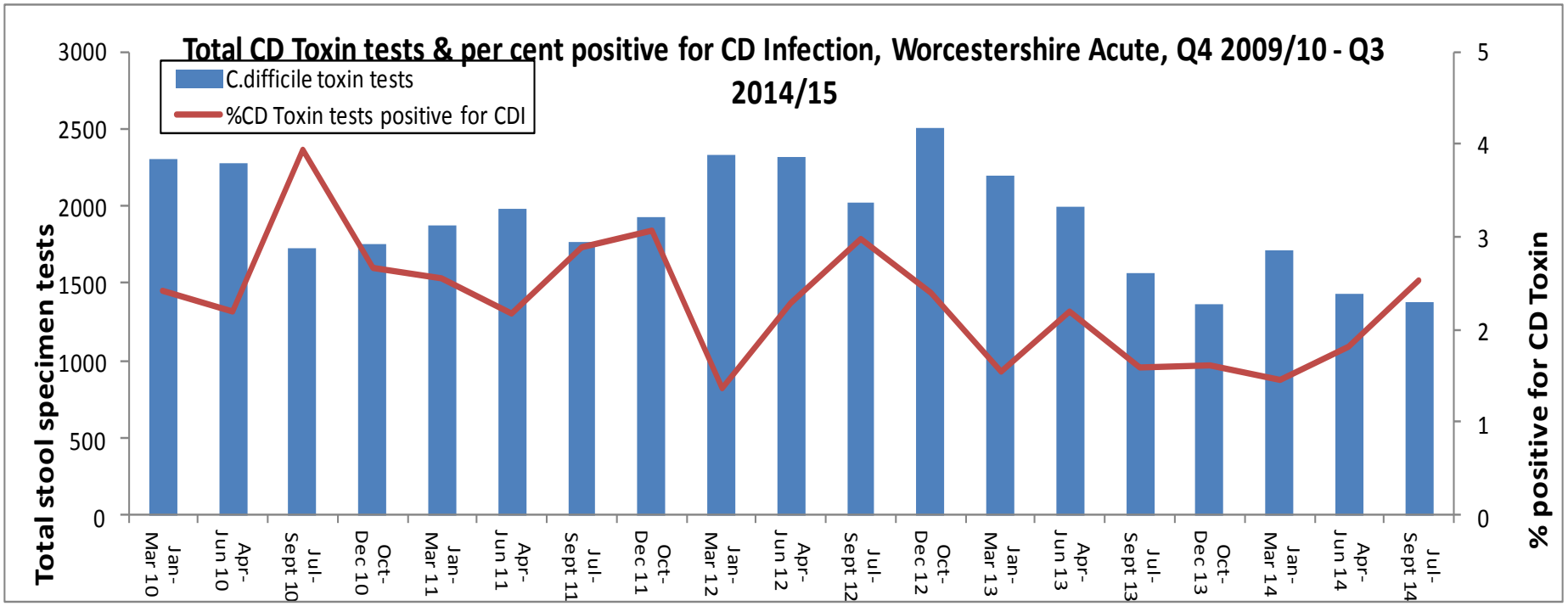
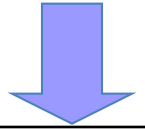
Jul-Sept 13
Oct-Dec 13
Jan-Mar 14
Apr-Jun 14
Jul-Sept 14


Total CD Toxin tests & per cent positive for CD Infection, Worcestershire Acute, Q4 2009/10 - Q3 2014/15
C.difficile toxin tests
%CD Toxin tests positive for CDI
Total stool specimen tests
% positive for CD Toxin
3000
2500
2000
1500
1000
500
0
5
4
3
2
1
0
Jan-Mar 10
Apr-Jun 10
Jul-Sept 10
Oct-Dec 10
Jan-Mar 11
Apr-Jun 11
Jul-Sept 11
Oct-Dec 11
Jan-Mar 12
Apr-Jun 12
Jul-Sept 12
Oct-Dec 12
Jan-Mar 13
Apr-Jun 13
Jul-Sept 13
Oct-Dec 13
Jan-Mar 14
Apr-Jun 14
Jul-Sept 14

Review of Trends

	2011-2012	2012-2013	2013-14	TREND
% of cases that have had a recent hospital stay	69	79	**65**	
% of cases that have had a recent course of antibiotics	86	89	**90**	
% of cases that have recently had or were on PPIs	59	47	**53**	
% of cases that have had a course of antibiotics and on PPIs	48	38	**42**	
% of cases on either/or antibiotics/PPIs	88	94	**95**	
% of cases recently had cytotoxic drugs	8	11	**6**	
% of cases with recent or continued use of laxatives	28	26	**24**	


POLICE BOX

Key Influences

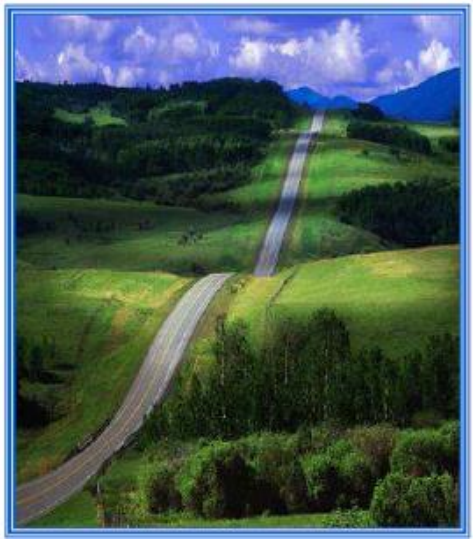
- Health economy commitment and multi-agency engagement
- Leadership
- Communications campaign
- Public Engagement and awareness
- Education ensuring understanding of the infection and key influencing factors
- Antibiotic Stewardship and ownership
- Timely diagnostics and clinical reviews
- Learning from RCA's, external reviews and epidemiology

Sustainability; Benefits and Challenges:

- Partnership working to ensure continued focus on outcomes, audits, prescribing etc.
- Sustained high level engagement
- Model to learn and share best practice
  - Commissioner involvement in RCAs-Feedback
- Targets 2015/16 have been set; Are we at irreducible level?
- Infection Prevention Strategy 2013/16 inclusive of Health and Social Care with focus on clean environment, antibiotic prescribing, information sharing and education

Challenge

Consider how best to make progress...



- Is everybody absolutely clear who is responsible for the provision of each aspect of infection prevention and control?
- Is there a consistent approach that is also consistent across the county?

THERE WILL BE OBSTACLES.
THERE WILL BE DOUBTERS.
THERE WILL BE MISTAKES.
BUT WITH HARD WORK,
THERE ARE NO LIMITS.