Healthcare Improvement Scotland

What's happening across the UK with antimicrobial prescribing quality indicators?

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Antimicrobial Management Team Network Event
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SAPG QUALITY INDICATORS

HOSPITAL PRESCRIBING - Proposal for 2017-18

New standard with **quantitative** element (% reductions in total use, piptazo and carbapenems) – still under discussion

and **qualitative** element (4 measures focused on antibiotic review) with data collected using national antimicrobial app – starting 1st April

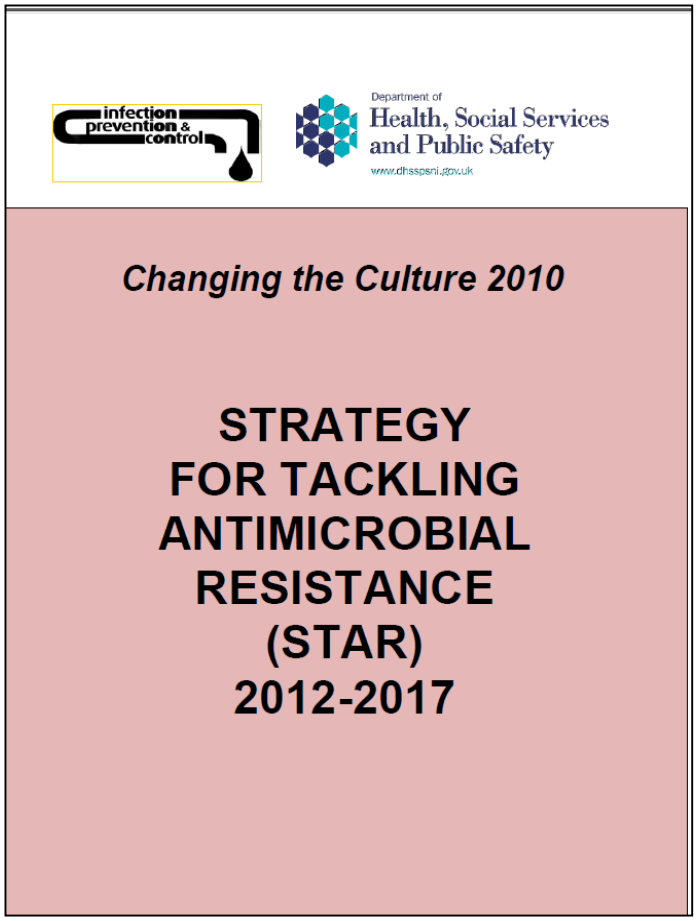
PRIMARY CARE PRESCRIBING

Best in class approach with target – 50% of GP Practices reach lowest quartile or make a defined acceptable move to lower prescribing rate

In **11 of 14** NHS boards ≥ 50% of practices at overall **67.2%** of practices met the target.

2017-18 Continue with target but reset baseline period to Jan-Mar 2016

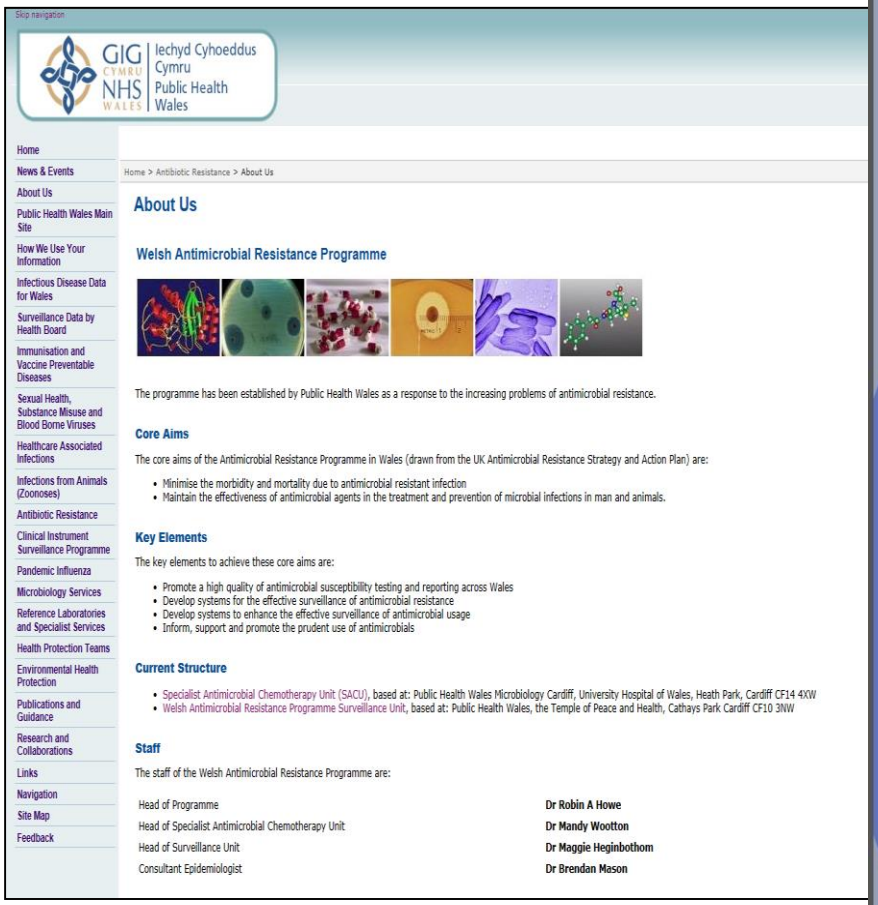
NORTHERN IRELAND

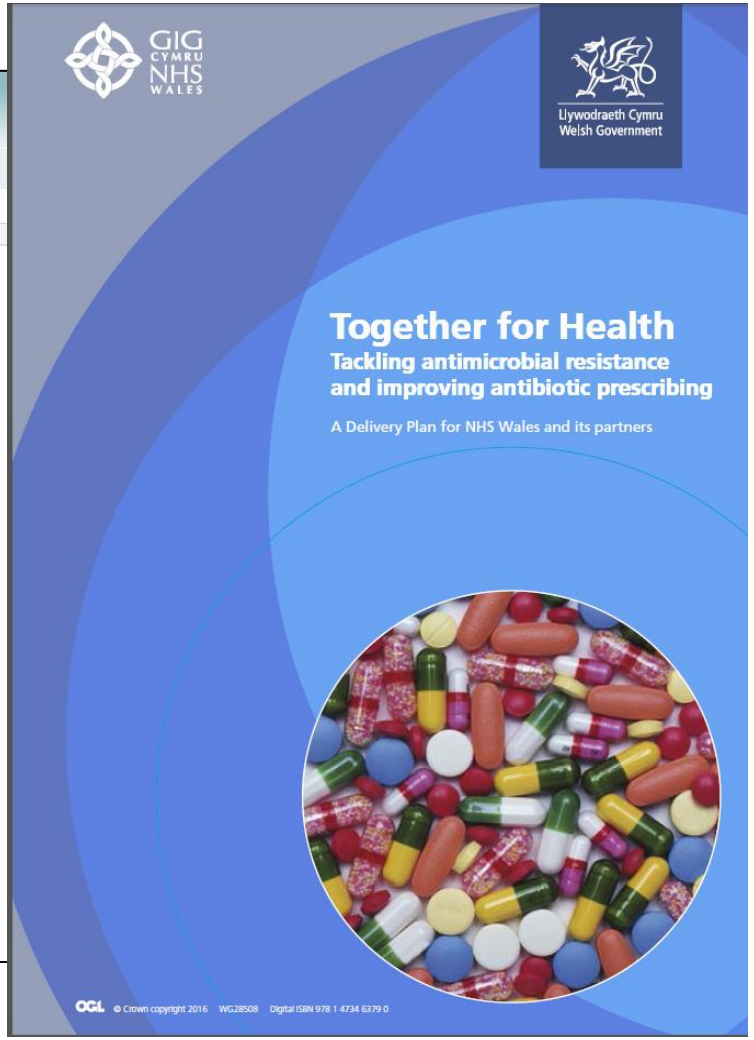


National Infection Management Guidance for Primary Care using Microguide

https://www.health-ni.gov.uk/sites/default/files/publications/dhssps/arac-strategy-for-tackling-antimicrobial-resistance-star-2012-17.pdf

NHS WALES





http://gov.wales/docs/dhss/publications/160330amr-dplanen.pdf

CENTRALISED ANTIMICROBIAL USAGE AND RESISTANCE DATA PROVIDED TO ALL HOSPITALS

- Historically followed English AMS guidance
- Comprehensive AMR surveillance and consumption system for a few years at health board and hospital level
- Just launched a two year plan in April 2016 based around the UK Five year AMR Strategy
- Aims to have local AMR plans

NHS WALES INDICATORS FOR 2017 – 18

Primary Care:

- Total antibacterial items per 1,000 STAR-PUs
- Co-amoxiclav items per 1,000 patients.
- Co-amoxiclav items as a percentage of total antibacterial items
- Cephalosporin items per 1,000 patients.
- Cephalosporin items as a percentage of total antibacterial items
- Fluoroquinolone items per 1,000 patients.
- Fluoroquinolone items as a percentage of total antibacterial items

Secondary Care:

- Proportion of elective colorectal patients receiving surgical prophylaxis for more than 24 hours

No targets as such and measures focused on CDI - still some areas of high CDI. Hope to include measures for resistance and ultra-broad spectrum agents in future

NHS ENGLAND
PRIMARY CARE

- NHS Primary care prescribing data existed (95%) from community pharmacy reimbursement but not private GP or dental Rx.
- Quality premium introduced as an incentive to reduce antibiotic prescribing
- 2015-6 Quality Premium: 1% reduction in primary care Rx & in broad spectrum antibiotics <10%
  (Achieved 7%↓ & 13%↓)
- 2016-7 Quality Premium: ≥4%↓or < 2013-4 mean & broad AB ≤10% or 20%↓ from 2014-5

COMMISSIONING FOR QUALITY AND INNOVATION (CQUIN) 2016-17

The CQUIN scheme is intended to deliver clinical quality improvements and drive transformational change focused on reducing inequalities in access to services, the experiences of using them and the outcomes achieved

Identification and Early Treatment of Sepsis	**Goal:** Systematic screening for Sepsis of appropriate patients and where sepsis is identified, to provide timely and appropriate treatment and review. **Rationale:** Sepsis is potentially a life threatening condition and is recognised as a significant cause of mortality and morbidity in the NHS, with around 32,000 deaths in England attributed to Sepsis annually. Of these it is estimated that 11,000 could have been prevented.
Antimicrobial resistance	**Goal:** Reduction in antibiotic consumption and encouraging focus on antimicrobial stewardship and ensuring antibiotic review within 72 hours **Rationale:** Reducing consumption of antibiotics and optimising prescribing practice by reducing the indiscriminate or inappropriate use of antibiotics which is a key driver in the spread of antibiotic resistance.

NHS England. Commissioning for Quality and Innovation (CQUIN). Guidance for 2016/17. March 2016. Available from: https://www.england.nhs.uk/wp-content/uploads/2016/03/cquin-guidance-16-17-v3.pdf. Last accessed October 2016.

NHS ENGLAND HOSPITAL CQUINS

- 2015-6 CQUIN sepsis screening & treatment (5%↑ ED IV AB)
- 2016-7 CQUIN (hospitals 0.25% income)

  1%↓ (DDD/admissions) from 2013-4 baseline for:

  - total antibiotic use (background of 12%↑ in past 4years),
  - carbapenems (36%↑ use & CPE↑)
  - piperacillin-tazobactam (55%↑ use & K. pneum-R 36%↑ E. coli-R 31%↑).

In reality, targets represented total 2.6%↓, carbapenems 3.3%↓ & pip-tazo 13%↓

- Documentation of day 3 review of empiric AB & submission of quarterly AB data.

QUALITY PREMIUM 17/18 – BLOODSTREAM INFECTIONS

Part a) reduction in the number of Gram negative blood stream infections across the whole health economy.

- 10% reduction (or greater) in all E coli BSI reported at CCG level based on 2016 performance data
- collection and reporting of a core primary care data set for all E coli BSI in Q2-4 2017/18 via PHE reporting system for E coli BSI

Part b) reduction of inappropriate antibiotic prescribing for UTI in primary care.

- a 10% reduction (or greater) in the Trimethoprim: Nitrofurantoin prescribing ratio based on CCG baseline data (June15-May16) for 2017/18.
- a 10% reduction (or greater) in the number of trimethoprim items prescribed to patients aged 70 years or greater on baseline data (June15-May16).

Part C) sustained reduction of inappropriate prescribing in primary care

- items per STAR-PU must be equal to or below England 2013/14 mean performance value of 1.161 items per STAR-PU.

REDUCING IMPACT FROM SERIOUS INFECTIONS CQUIN – 2017-9

2a. Sepsis screening of patient with red flags

2b. Antibiotics within 60 min ED & IP from diagnosis of sepsis

2c. Antibiotic review within Day 3 in sepsis patients

- 30 patients/quarter (10/mth) - % blood cultures and outcome. Evidence of IVOS tool applied & justification of continuing same IV AB if BC –ve or BC +ve
- Details of who review by: infection specialist Dr/Pharmacist/own team

2d. Antibiotic consumption

- Based on Jan-Dec 2016 use and compared to England median for FY13-14
- Above median = 2% reduction OR below = 1% reduction for total / carbapenem and pip-tazo based

ANTIBIOTIC USE COMPARED ACROSS THE UK HEALTH ADMINISTRATIONS

	Antibiotic items per 1000 population per day (community only)	DDD per 1000 population per day (hospital and community)		
		Total Antibiotics	Piperacillin-tazobactam	Carbapenems
England	1.79	21.90	0.11	0.08
Scotland	2.00	25.90	0.07	0.05
Wales	2.19	24.27	0.12	0.09

Piperacillin-tazobactam 2015: Scotland ↓8%, England ↑4%
Carbapenems 2015: Scotland ↑6%, England ↑1%

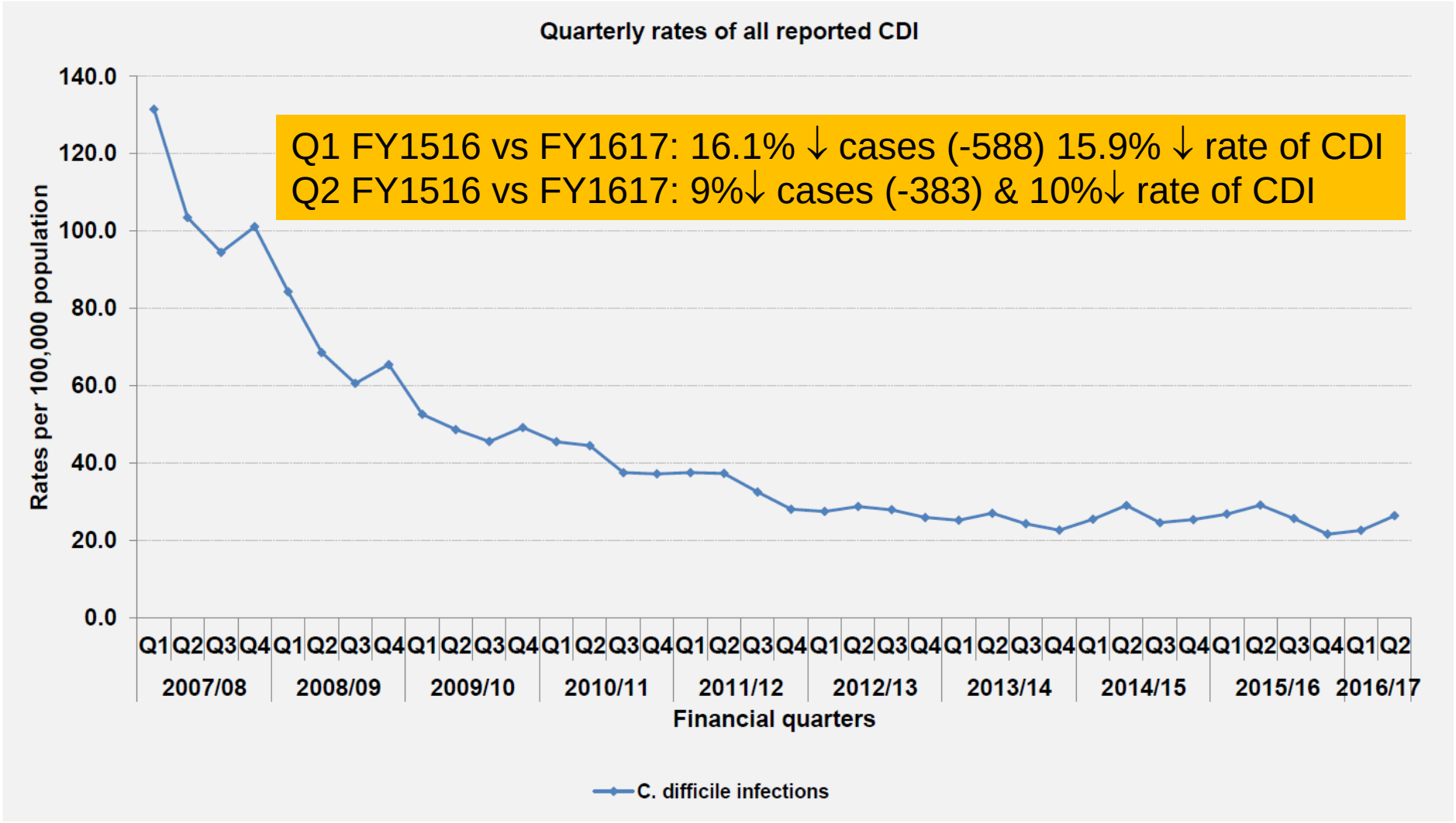
England: Q2 16/17: carbapenem ↓5% & pip-tazo ↓8%

HOW HAVE SOME TRUSTS MADE IMPROVEMENTS?

- Focused on their biggest challenge
- Use alternative antibiotics for piperacillin-tazobactam reductions e.g. amikacin + co-amoxiclav, aztreonam, temocillin, etc
- Improved follow up of protected antibiotics
- Improved antibiotic consumption surveillance
- AMS rounds targeting high users
- Improved system (prescriptions /reminders) to drive better prescribing
- Improve audit and feedback of sampling and day 3 review

UNINTENDED CONSEQUENCES OF AMR-CQUIN AND QUALITY PREMIUM

Figure 4: Quarterly rates of all reported CDI: April-June 2007 to July-September 2016

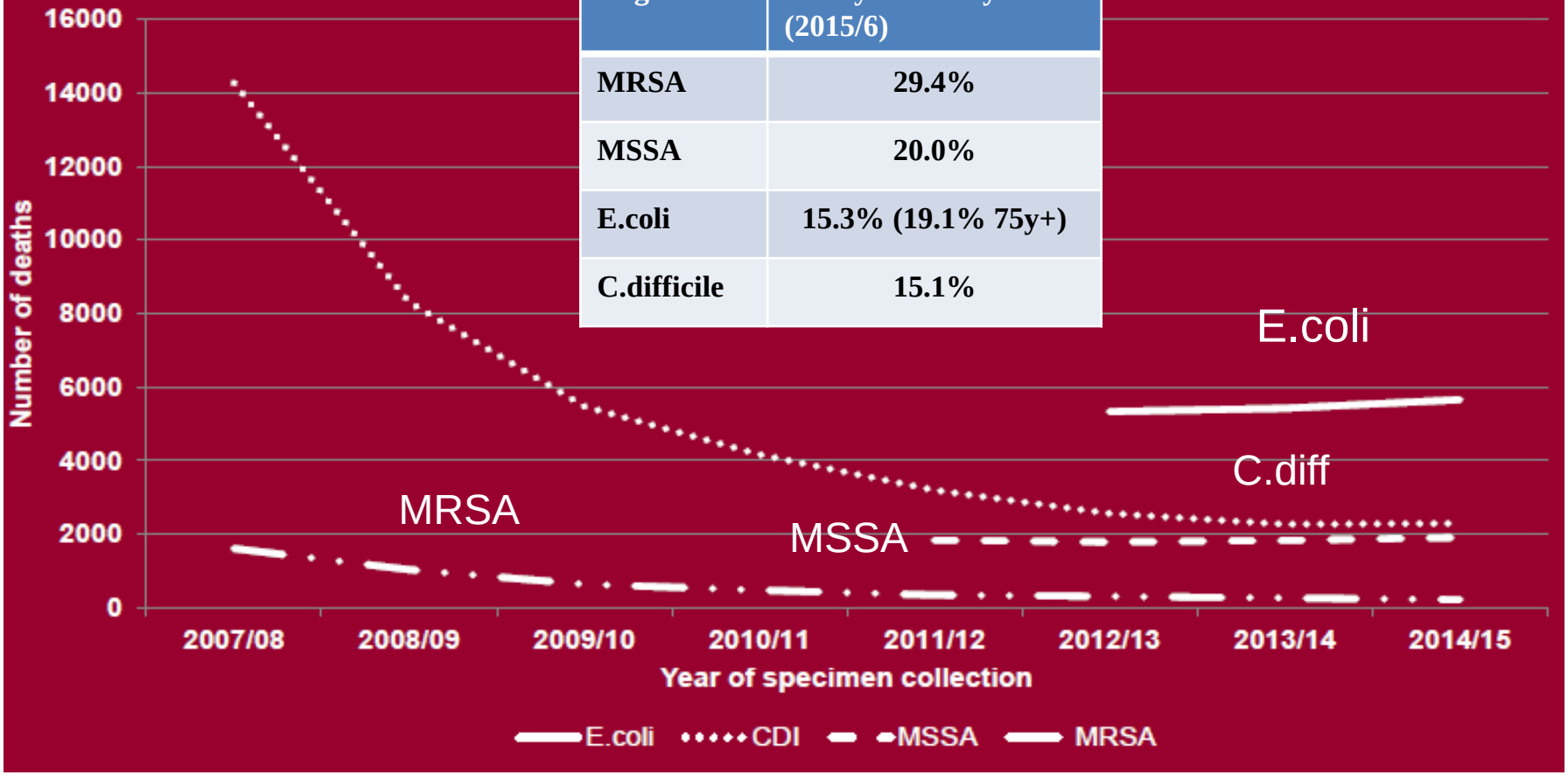


Public Health England

Mortality

Number of deaths within 30 days of specimen collection by infection

Bug	30 day mortality rate (2015/6)
MRSA	29.4%
MSSA	20.0%
E.coli	15.3% (19.1% 75y+)
C.difficile	15.1%



2020 AMBITIONS

- Reduce healthcare associated Gram-negative bloodstream infections in England by 50% by 2020
- Reduce **inappropriate antibiotic prescribing by 50%,** with the aim of being a world leader in reducing prescribing by 2020.
- Setting an overall target for antibiotic use in livestock and fish farmed for food. Strict oversight on critical AB for human use.

Government response to the Review on Antimicrobial Resistance. September 2016. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/553471/Gov_response_AMR_Review.pdf. Last accessed October 2016.