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Impact of public health practice in dental antimicrobial prescribing in Wales

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Background

- Tooth decay is mostly present in the deprived population.
- High tooth decay (both adult and child population) level in Wales

Dental surveys (Wales)

- 47% of adults in Wales had obvious tooth decay (2009/10)
PUFA = 8% (an indication for urgent care), current dental pain = 8%
- 72.8% of older people in care homes had obvious tooth decay
PUFA = 26.5% ; current pain = 12.9%
- 35.4% of five year olds in 2014/15 had experienced tooth decay



Background



Background

Around 7000 GAs/year for children (mainly for tooth extraction)

Evidence/guidance based prescribing

The number of occasions on which prescription of antibiotics is required in routine dentistry is relatively small if current guidance is followed

Problems

Generally GDPs and UG dental students are aware of AMR and the guidance

Factors associated with antibiotic prescribing when there is no infection

- Failure of previous operative treatment
- Shortage of clinical time for operative treatment
- Patients who are unwilling or unable to accept operative treatment
- Patient requests for antibiotics
- Acute periodontal conditions

Ref: Cope A et. Al. Antibiotic prescribing in the UK general dental practice :a cross sectional study. Community Dentistry and Oral Epidemiology DOI: 10.1111/cdoe.12199; 27 October 2015

Problems

Dental Consultations in the GMS

- The average rate of dental consultations was 6.06 consultations per 1000 patient-years.
- An antibiotic was prescribed in 57.1% of consultations
- Antibiotics were more likely to be prescribed during consultations in December and on a Monday or a Friday.

Cope A et. al. Dental consultations in UK general practice and antibiotic prescribing rates: a retrospective cohort study, British Journal of General Practice, DOI: 10.3399/bjgp16X684757 Published 30 March 2016

Problems

Antibiotics: In 2008, 9% of antibiotics prescribed in primary care were prescribed by dentists

2007 = 239,982

2008 = 243,178

1 item of antibiotic for every 3.4 dental patients

Report published in October 2009 which recommended introduction of individualised prescription pads for dentists in Wales.

Ref: Karki A, Holyfield G, Thomas D, Dental prescribing in Wales and associated public health
DOI: 10.1038/sj.bdj.2010.1179



Problems

Issues

- Inappropriate prescribing ->AMR
- Inappropriate care
- Prevention of preventable diseases

'Interventions' so far

Funded Antimicrobial Audit made available for dentists in Wales (still available)	April 2012
Individualised prescription forms for dentists introduced in Wales	May 2012
Removal of payment for prescription only dental visits from dental contract	October 2012
Specific question on antibiotic audit on annual General Dental Practice Quality Self Assessment	Ongoing
Communication (posters, newsletters, promotion of the SDCEP guidance, communications via various dental forums in health boards etc)	Ongoing

'Interventions' so far

Antimicrobial Audit

- Joint working between dental public health, dental policy branch Welsh Government and Dental Section of the Deanery
- Aim – self assessment, educational (not mandatory), CPD
- SDCEP Guidance

The screenshot shows the SDCEP website page for 'Drug Prescribing for Dentistry'. The page is titled 'Drug Prescribing for Dentistry' and is published in January 2016 (3rd Edition). It includes a 'Downloads' section with links to the 'SDCEP Drug Prescribing for Dentistry 3rd edition' and a 'Bacterial Infections Management Guide poster'. There is also a section for 'About this guidance' which states that dental prescribing within the NHS is restricted to drugs included in the Dental Practitioner's Formulary, which is incorporated within the British National Formulary (BNF) and BNF for Children (BNFC). The page also features a 'In This Section' sidebar with links to various dental topics such as Acute Dental Problems, Anticoagulants and Antiplatelets, Bisphosphonates, Caries in Children, Conscious Sedation, Decontamination, Drug Prescribing, Dental Prescribing App, Emergency Dental Care, Oral Health Assessment, Periodontal Care, and Practice Management. The SDCEP logo and 'Scottish Dental Clinical Effectiveness Programme' are visible at the top of the page.

'Interventions' so far

1. Individualised prescription forms for dentists

- Main recommendation from our report in 2009
- Introduced in 2012
- Has taken time to develop the practitioner level prescribing database as old prescriptions forms can still be used
- In 2016/17, only 1.7% dental prescriptions were 'unidentifiable'



'Interventions' so far

Analysis of the audit data



- Between April 2012 and March 2015, 279 GPs completed the audit
- Some areas of inappropriate prescribing evident: only 37.1% had signs of spreading infection or systemic involvement recorded, 31.2% received no dental treatment i.e. surgical interventions
- Indicated there was inappropriate antibiotic prescribing amongst dentists who participated in the audit
- How about those who have not participated in the audit?

Antimicrobial Audit

Areas	No of practitioners who have completed the audit	No of practitioners in the LHB	%
ABMUHB	119	317	37.5
ABUHB	96	265	36.2
BCUHB	85	372	22.8
C&VUHB	87	309	28.2
CTUHB	64	161	39.8
HDUHB	46	175	26.3
PTHB	13	91	14.3
Wales	510	1690	30.2

Based on annual self-assessment, 2017; Deanery record (Feb 2018) shows 420 have completed audit

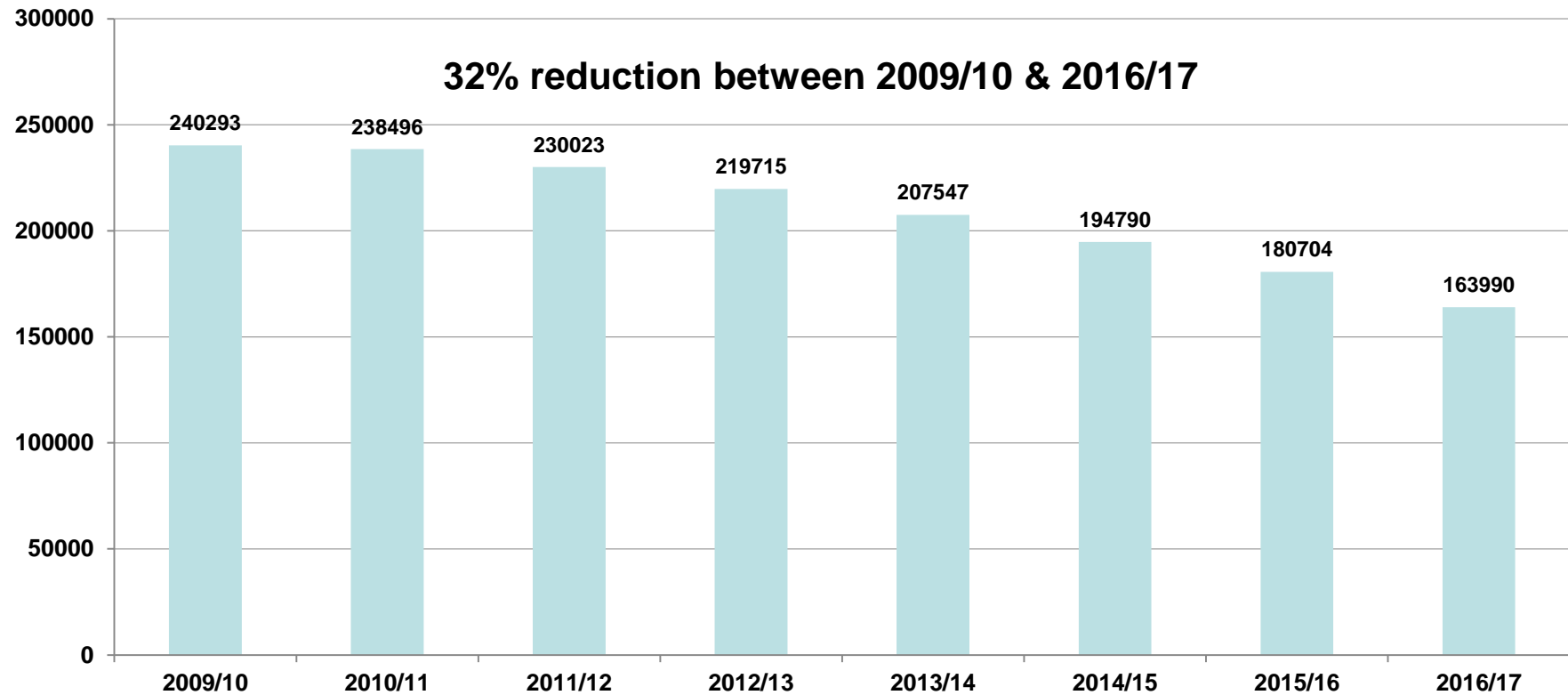
50 are currently undertaking the audit

Impact

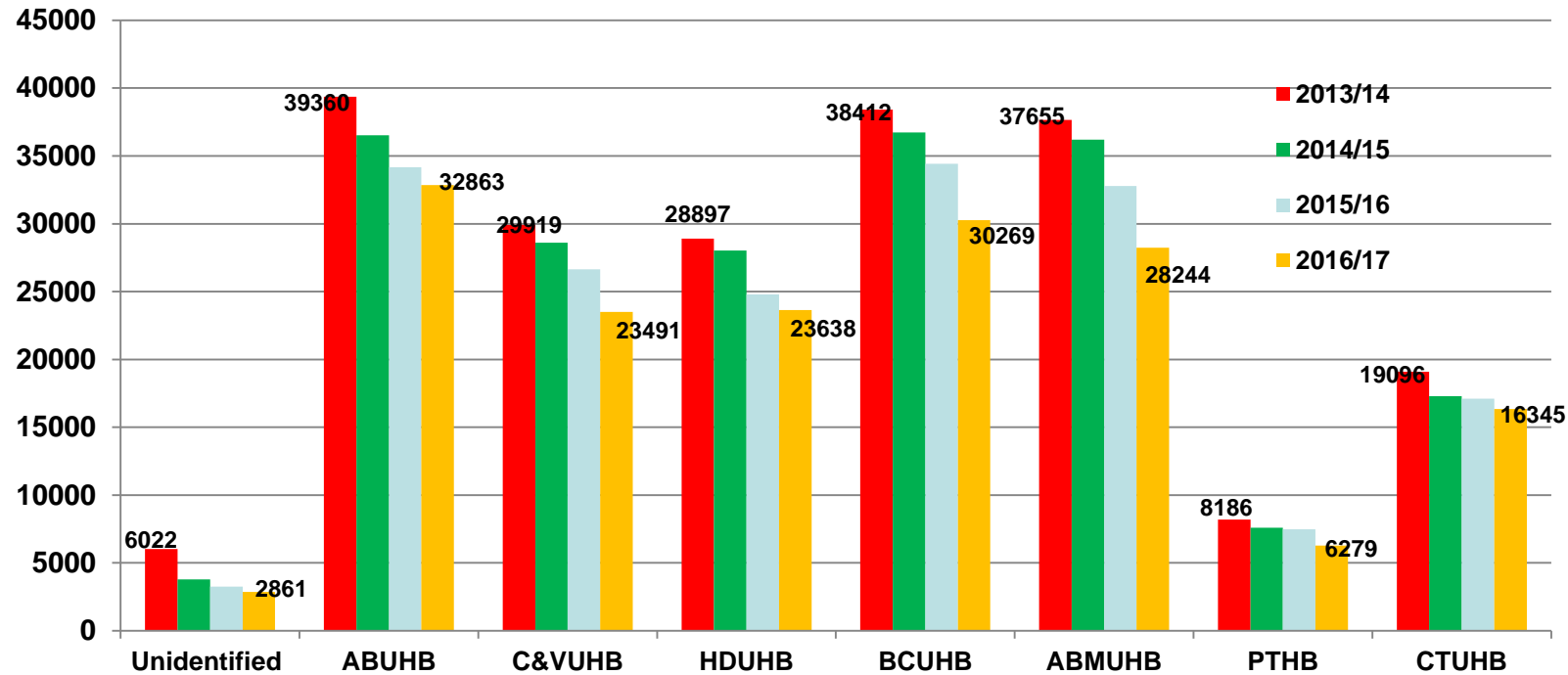
Decrease in antibiotic prescribing in dentistry in Wales



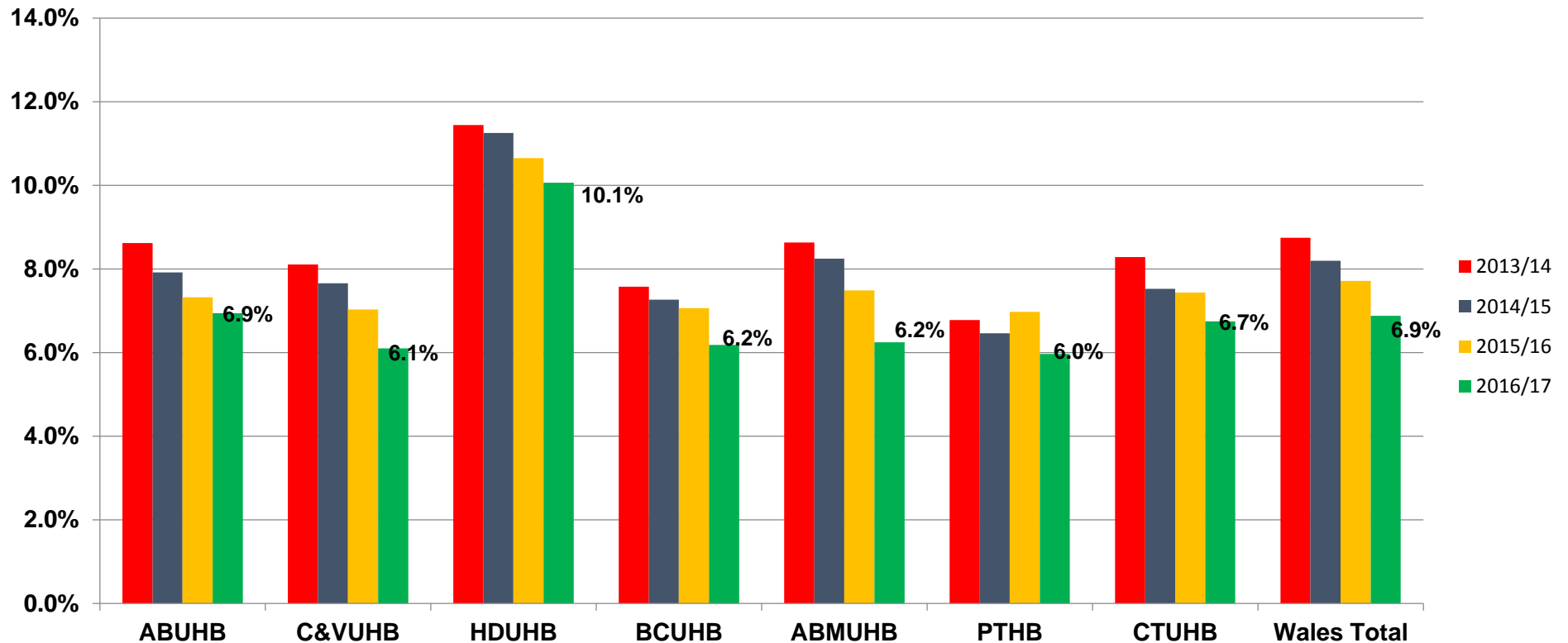
Items of Antibiotics Prescribed in Primary Care Dentistry



Antibiotic Items by Health Boards 2013/14-2016/17



Antibiotic Items/Course of Treatment (FP17Ws)



Please note: For course of treatment, currently only General Dental Services (GDS) data available, while prescribing data is total for the primary dental care (CDS+ GDS);
 In 2016/17, 1.7% of Wales Total could not be allocated to Health boards because some dentists are still using 'old' prescription forms

PHW R&D Project

Objectives

1. To investigate opportunities for data linkage between the antibiotic prescribing database and NHS General Dental Services (GDS) and Personal Dental Service (PDS) contract activity.
2. To identify potential measures which could be used to provide dentists with feedback on their prescribing.

2014/15 data

PHW R&D Project

Results

- After data cleaning, the dataset contained 178,301 antibiotic items associated with 1,079 practitioners.
- In total there were 2,218,872 courses of NHS dental treatment linked to these performer numbers.
- Median number of antibiotic items per 100 courses of NHS dental treatment was 7.0. The range was 0.1 -145.8.

PHW R&D Project

Results

- Amoxicillin and metronidazole accounted for the majority (91.6%) of antibiotics.
- In total, 86% of second line agents (*azithromycin, clindamycin, co-amoxiclav, and clarithromycin*) were prescribed by 5% of practitioners.

PHW R&D Project

Results

- Dental services data showed that almost a third (32.4%) of dentists undertook dental activity at more than one practice during 2014/15. However, dental prescribing data indicated that each dentist is provided a prescription pad with one practice address only.
- Therefore, whilst it is possible to undertake practitioner-level analysis, it is not currently possible to analyse prescribing at dental practice.

PHW R&D Project

- Anwen Cope, Speciality Trainee in Dental Public Health, presented a poster based on the findings from this project at the UK British Association for Study of Community Dentistry (BASCD) Spring Conference 2017
- Won Roger Anderson Poster Prize

Next steps

- Antibiotic prescribing in dentistry is now included in the Health Boards' Primary Care Measures
- Develop a system for regular feedback to dentists and practices – Ongoing talks with NWSSP and WG to make further changes



Any questions?
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