

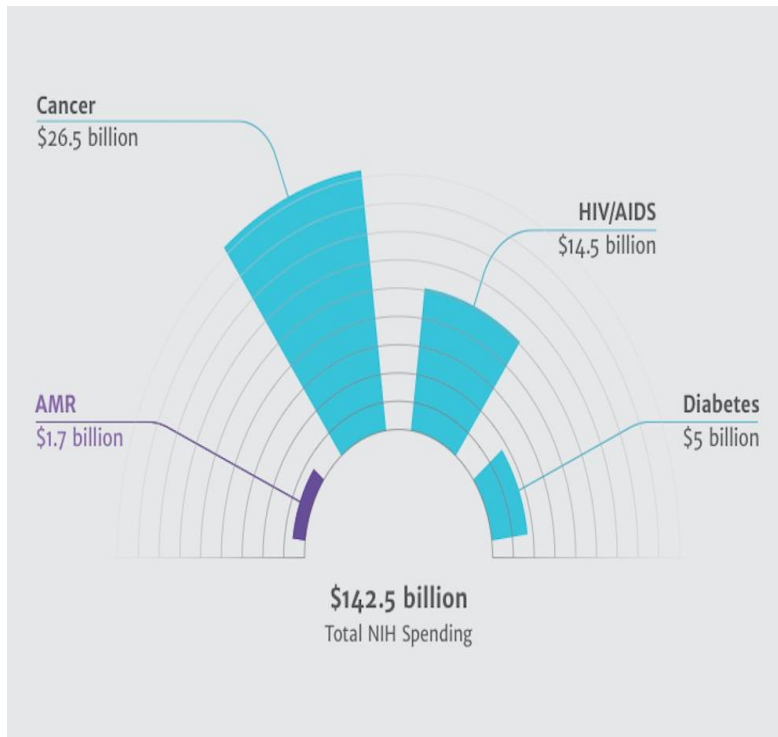
# Taking a Cluster Approach to Tackling High Rates of Antibiotic Prescribing in Primary Care



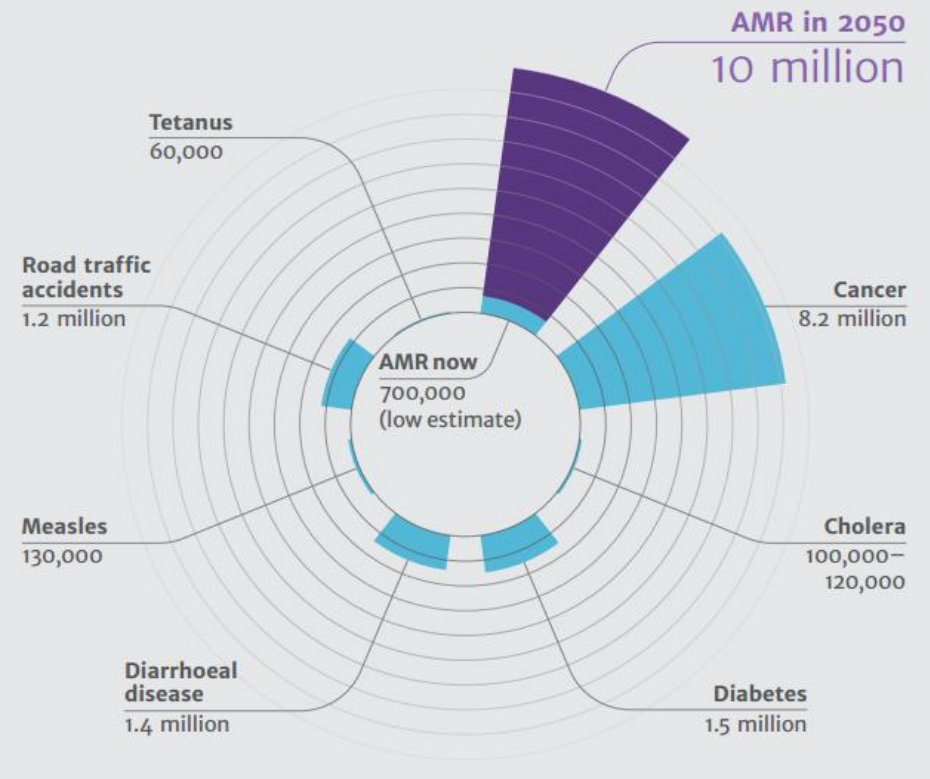
Abertawe Bro Morgannwg University  
Health Board

Avril Tucker

# The Problem in Context



Deaths attributable to AMR every year compared to other major causes of death



# Together for Health

## Tackling antimicrobial resistance and improving antibiotic prescribing

A Delivery Plan for NHS Wales and its partners



# Ministerial Priorities

Welsh Government vision is to limit the risk of AMR and minimise its impact for health now and in the future.

Key measure of Welsh AMR delivery plan = **reduce the number of inappropriate antibacterial prescriptions by 50% by 2020.**



“The Delivery Plan developed by the Welsh Government is an important piece of work describing how health organisations and professionals in Wales can contribute to the international strategy to reduce AMR.”

**Dr Marion Lyons, Director of Health Protection**

This pacesetter also sits well with the ABMU Big Fight campaign



## Achieving service sustainability & improving access

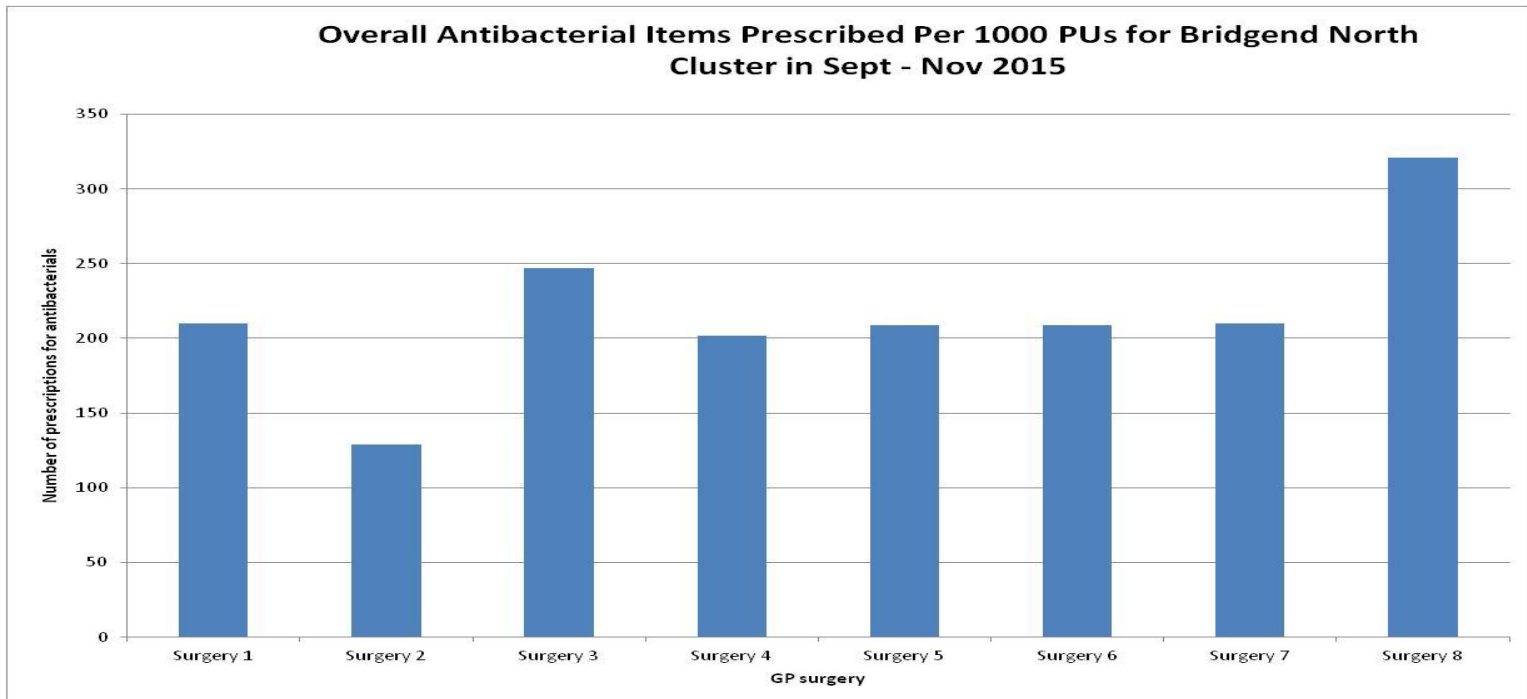
- Reduce appointment pressures on GPs by improved public knowledge and advice on Self Care / Healthy Living
- Expand Antimicrobial Cluster Pharmacist role to triage minor infective illness
- Reduce healthcare costs associated with resistant organisms, the number of persistent infections and the associated deaths

# Summary of the Project

- Audit antimicrobial prescribing & identify practice/cluster areas for improvement.
- Improve the quality of antibiotic prescribing and minimise the risks of antibiotic resistance.
- Identify key drivers for variation between practices.
- Develop a range of innovative approaches to change current behaviour relating to prescribing & patient experience.

# Why was it chosen

Bridgend North Cluster shows significant variation in antibiotic usage between the lowest and highest prescribing practices, providing an opportunity to understand the drivers for the variation and to address it appropriately.



# What would **Success** look like?

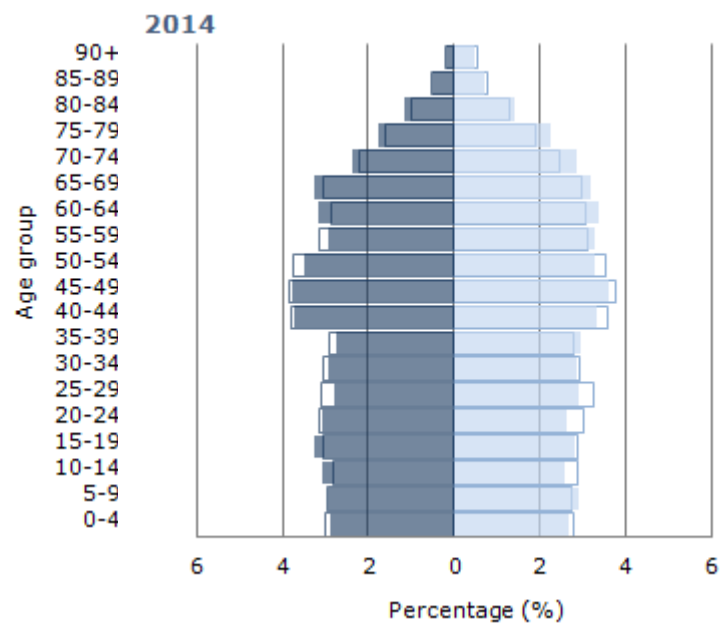
- Reduction in inappropriate antimicrobial usage
- Correct drug, dose, frequency and duration
- Reduction in the incidence of *C.diff*
- Increased awareness of the risks associated with antibiotic use
- Increased awareness of infection control and self-care
- A network of antibiotic prescribing champions

# DEMOGRAPHICS



# W95009

■ W95009 Males   ■ W95009 Females   □ Bridgend North Network Males   □ Bridgend North Network Females



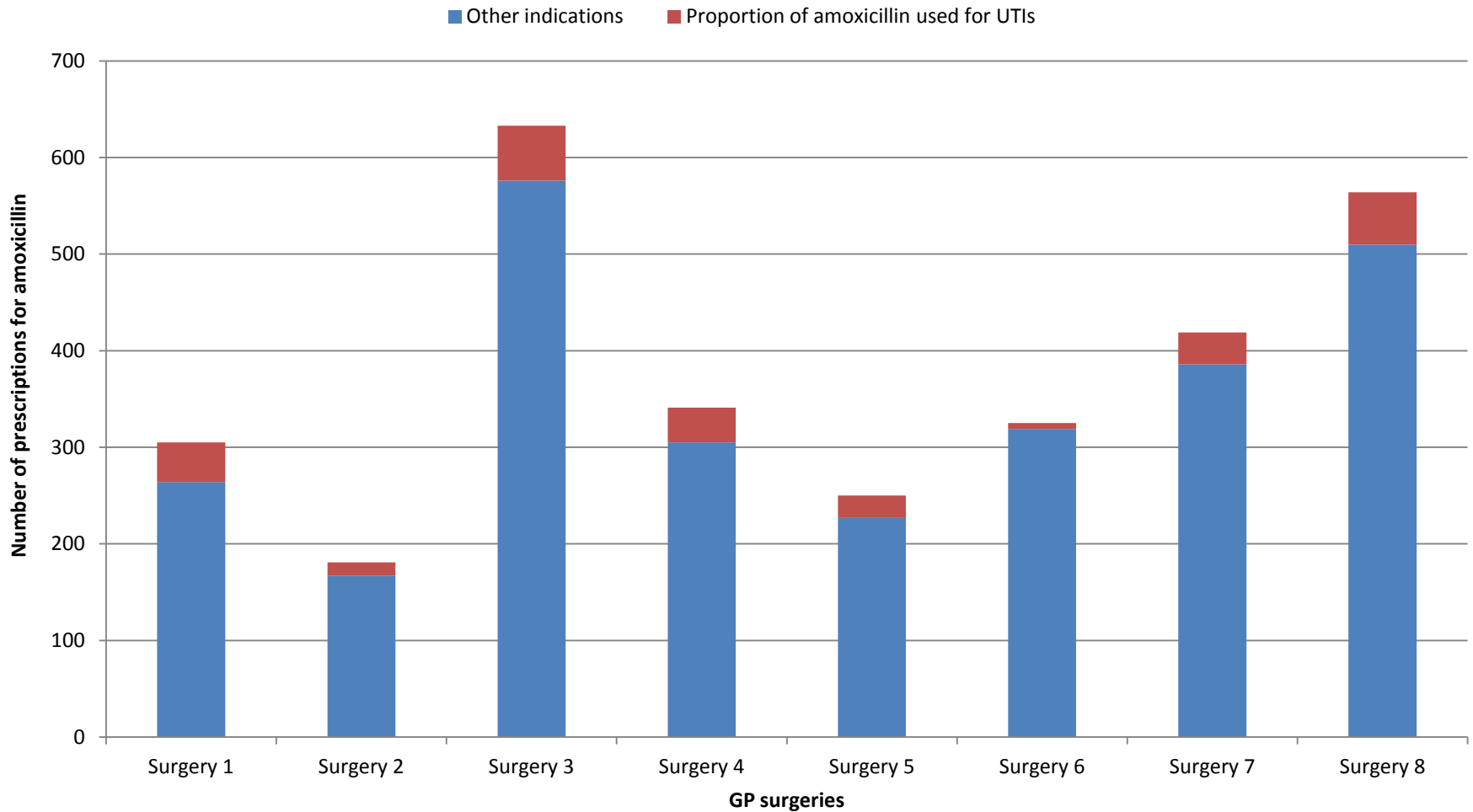
GIG  
CYMRU  
NHS  
WALES

Arsyllfa Iechyd  
Cyhoeddus Cymru  
Public Health  
Wales Observatory

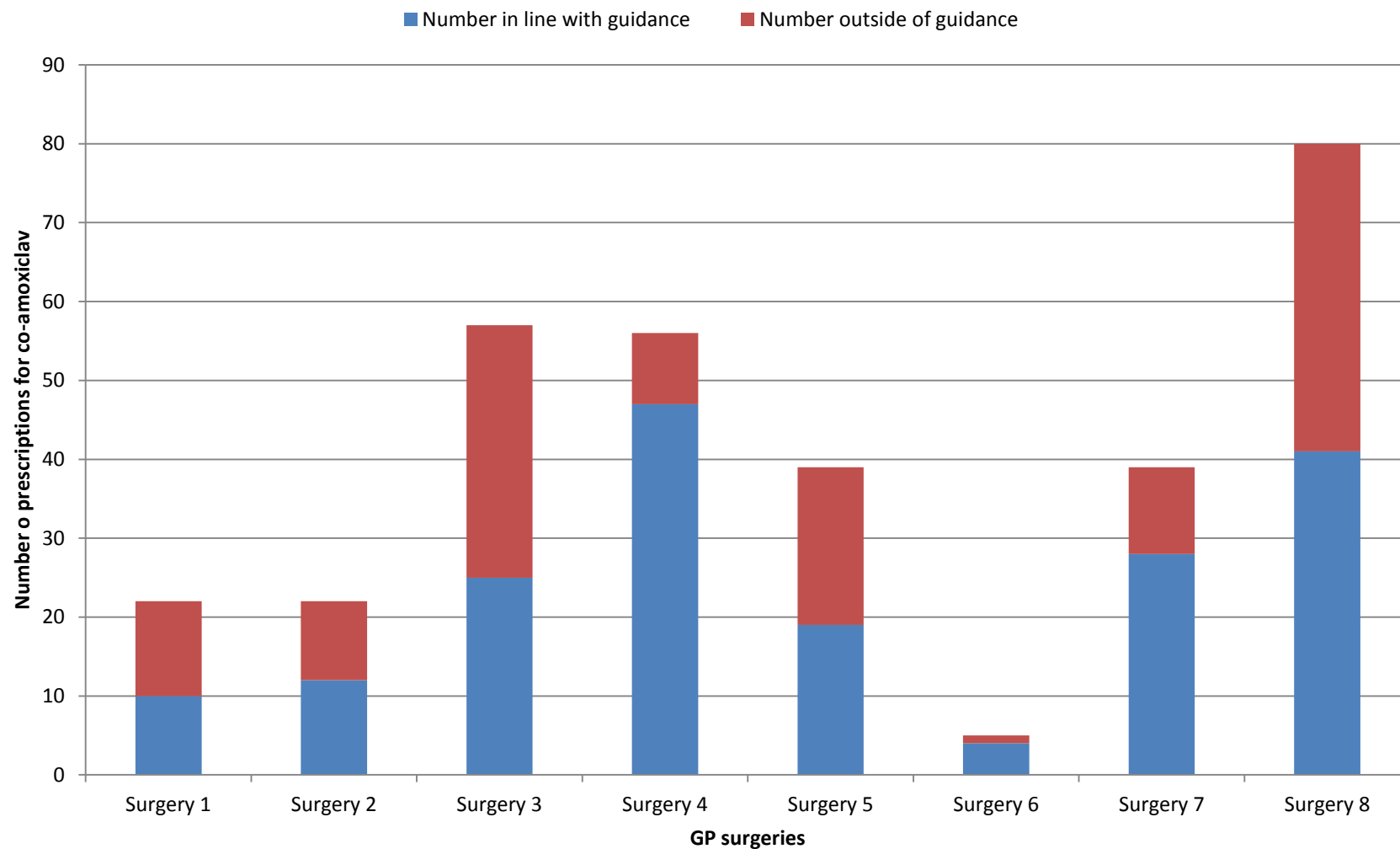
**What are the **Process** Measures?**

# Reduction in inappropriate antimicrobial usage

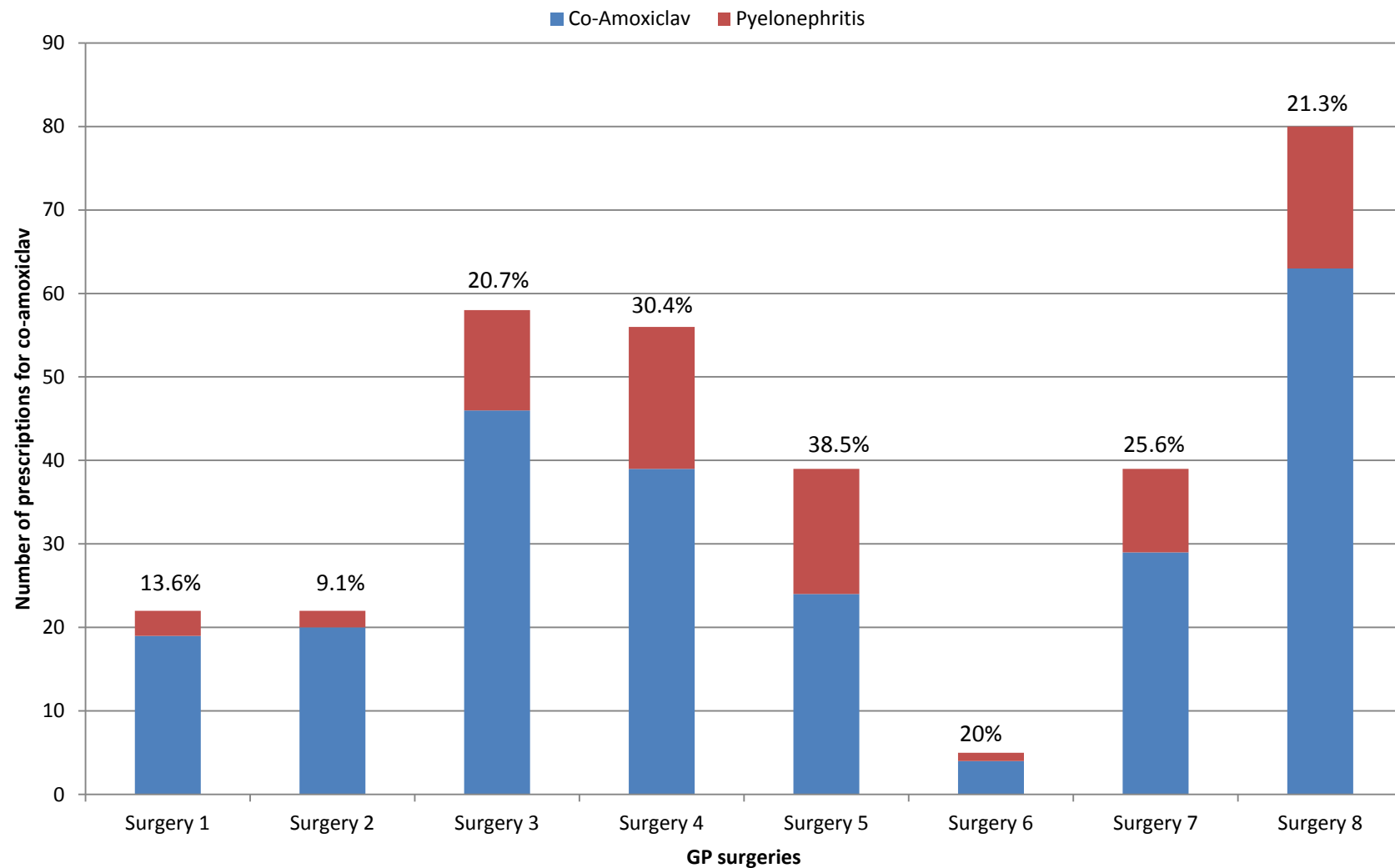
## Proportion of amoxicillin use for UTIs Sept 15 - Nov 15 Bridgend North Cluster



## Total co-amoxiclav prescribed from Sept - Nov 2015 in Bridgend North Cluster

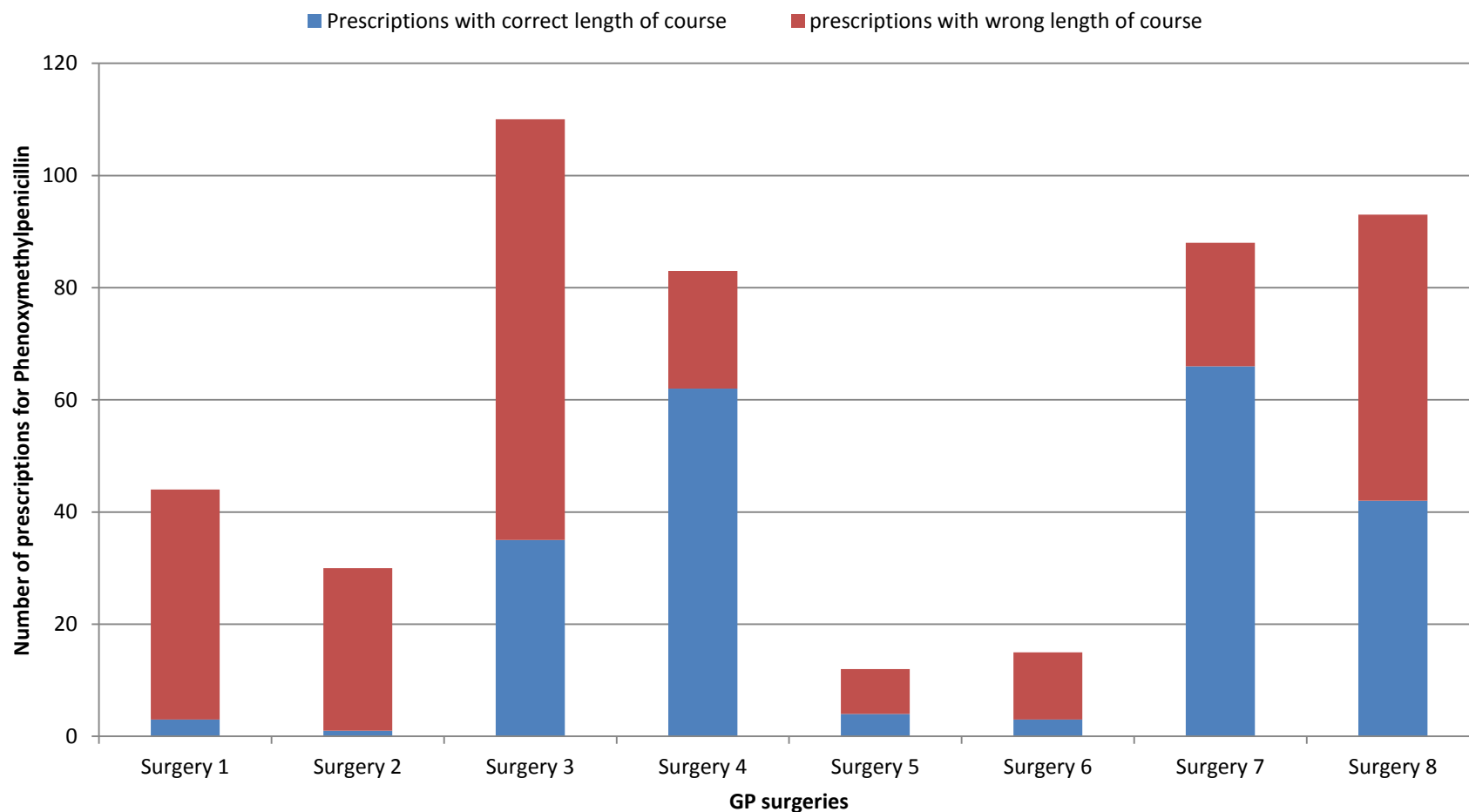


## Pyelonephritis as a proportion of Co-amoxiclav Items Sept - Nov 2015 North Bridgend Cluster comparison



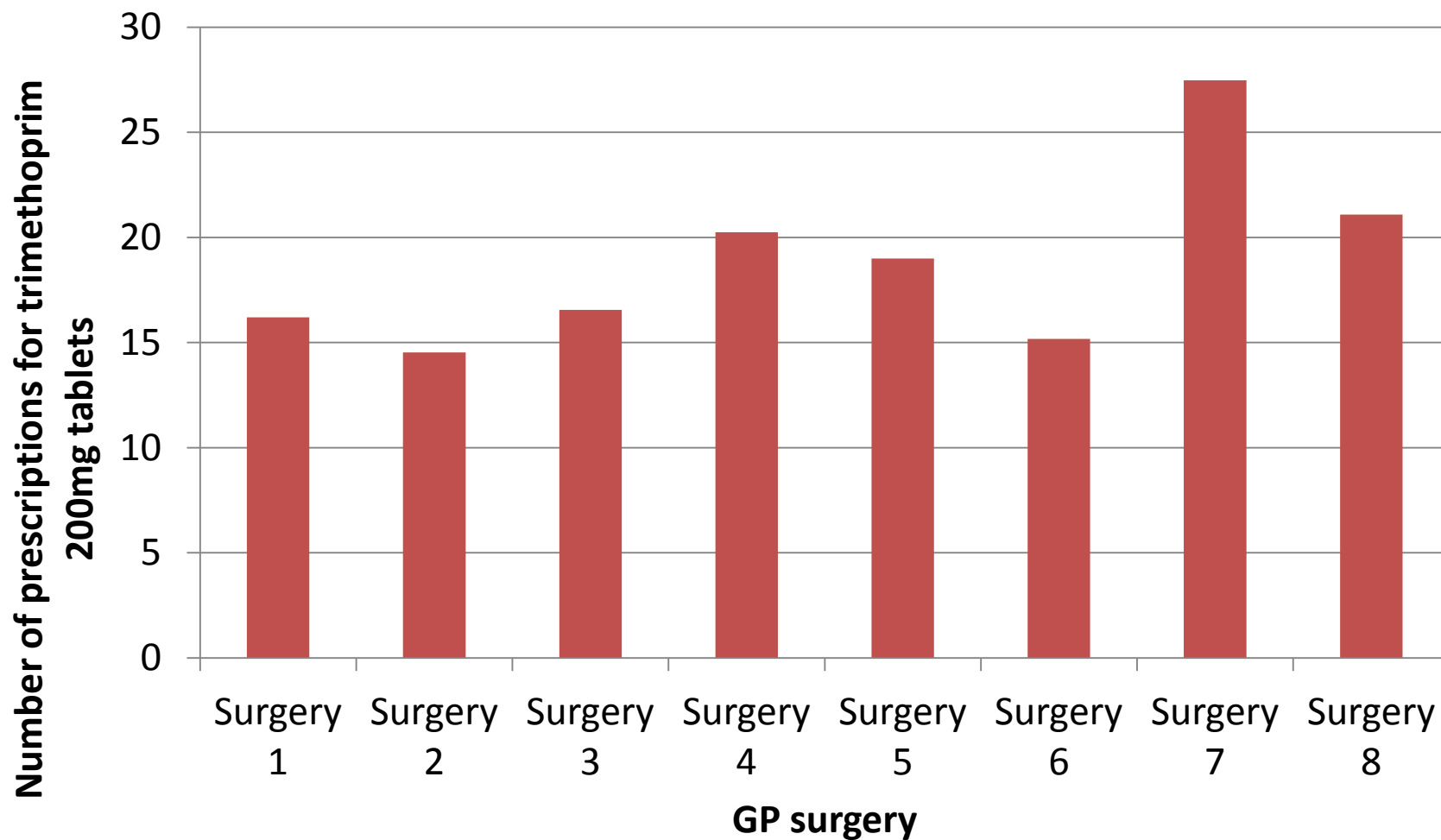
Correct drug, dose, frequency and  
duration

# Proportion of Phenoxymethylpenicillin with correct length of course as specified by ABMU antimicrobial guidelines Sept 15 - Nov 15 Bridgend North Cluster





## Trimethoprim 200mg tablets prescribed for acute UTI per 1000 PUs Sept 15 - Nov 15 North Bridgend Cluster



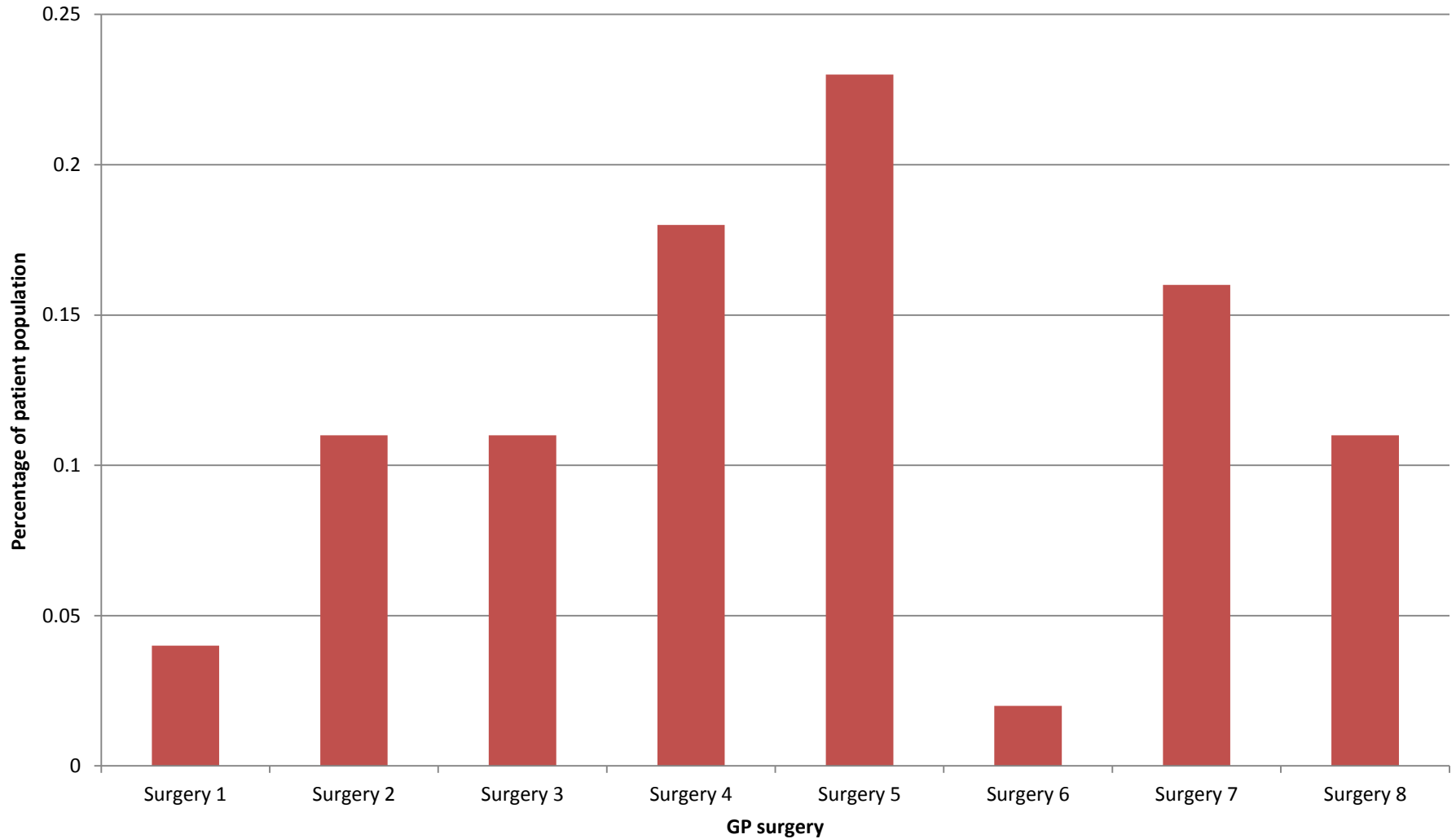
# What will be your **Outcome** Measures?

The results of the baseline audit were fed back to all 8 GP surgeries and an action plan was left to help guide GPs in addressing the findings. The audit will be repeated over the same time period this year (Sept – Nov) to measure improvement.

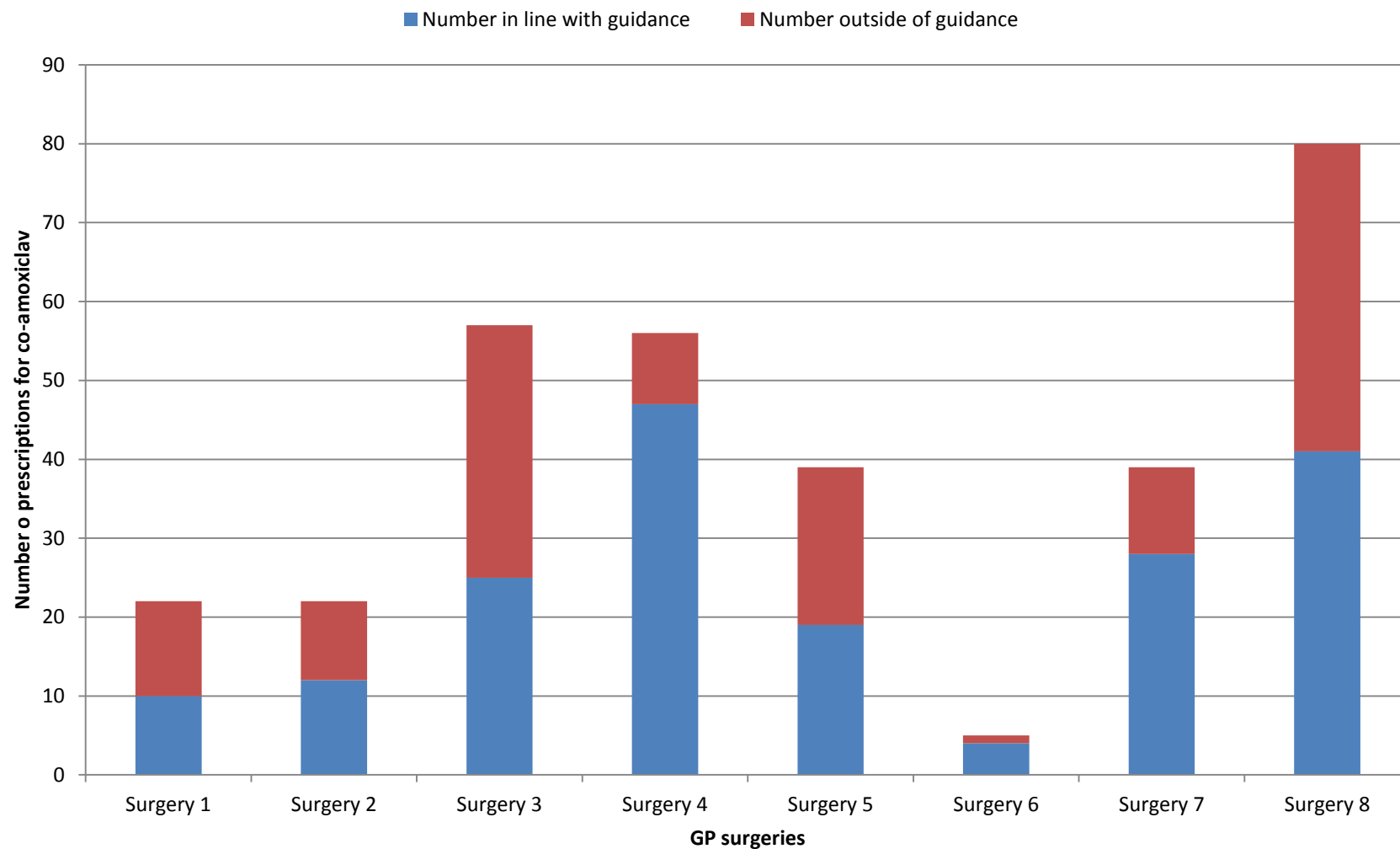
Increased GP awareness as demonstrated by the re-audit of pyelonephritis in surgery 4.

# Reduction in the incidence of *Clostridium difficile*

## Percentage of patient population who have developed a *Clostridium difficile* infection since 2013



## Total co-amoxiclav prescribed from Sept - Nov 2015 in Bridgend North Cluster



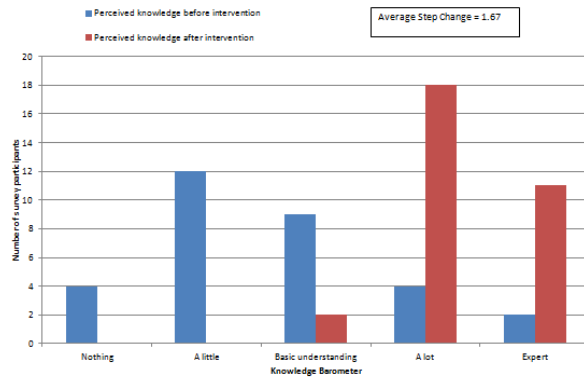
Increased awareness of the risks  
associated with antibiotic use

Increased awareness of infection  
control and self-care

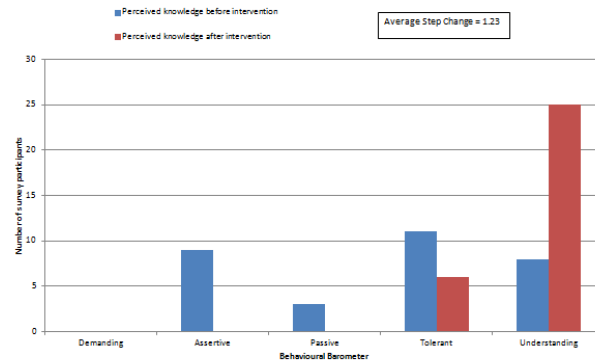
A network of antibiotic prescribing  
champions

# Before & After Questionnaires

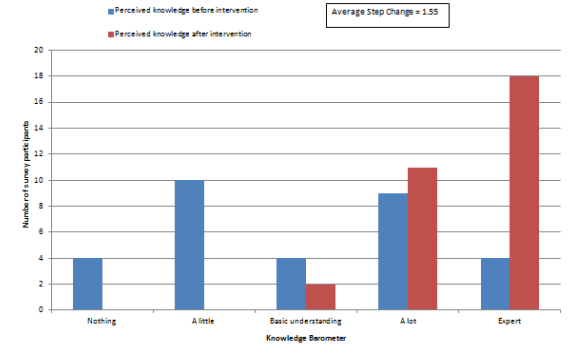
**The role of antibiotics- When they should be used**



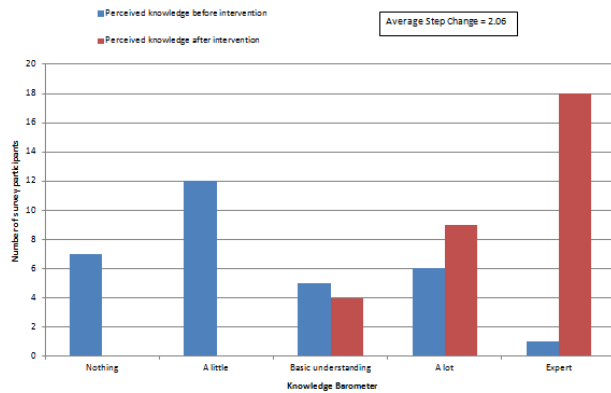
**Personal experience- My expectations & practices**



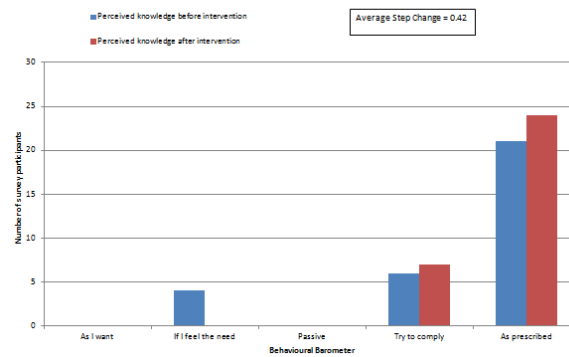
**Expected duration- How long do specific infections last**



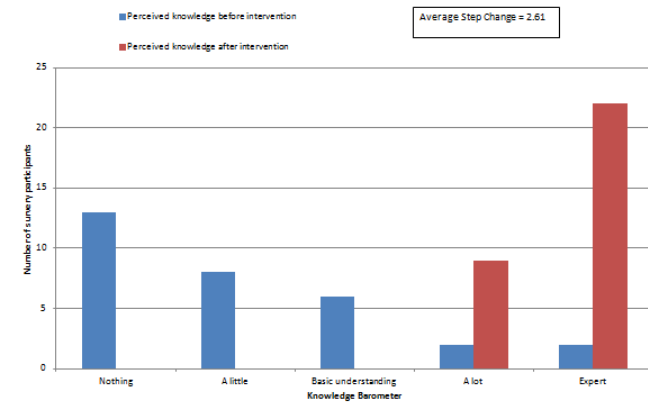
**Adverse effects- The downside of antibiotic use**



**Administration of Antibiotics- How to use antibiotics properly**

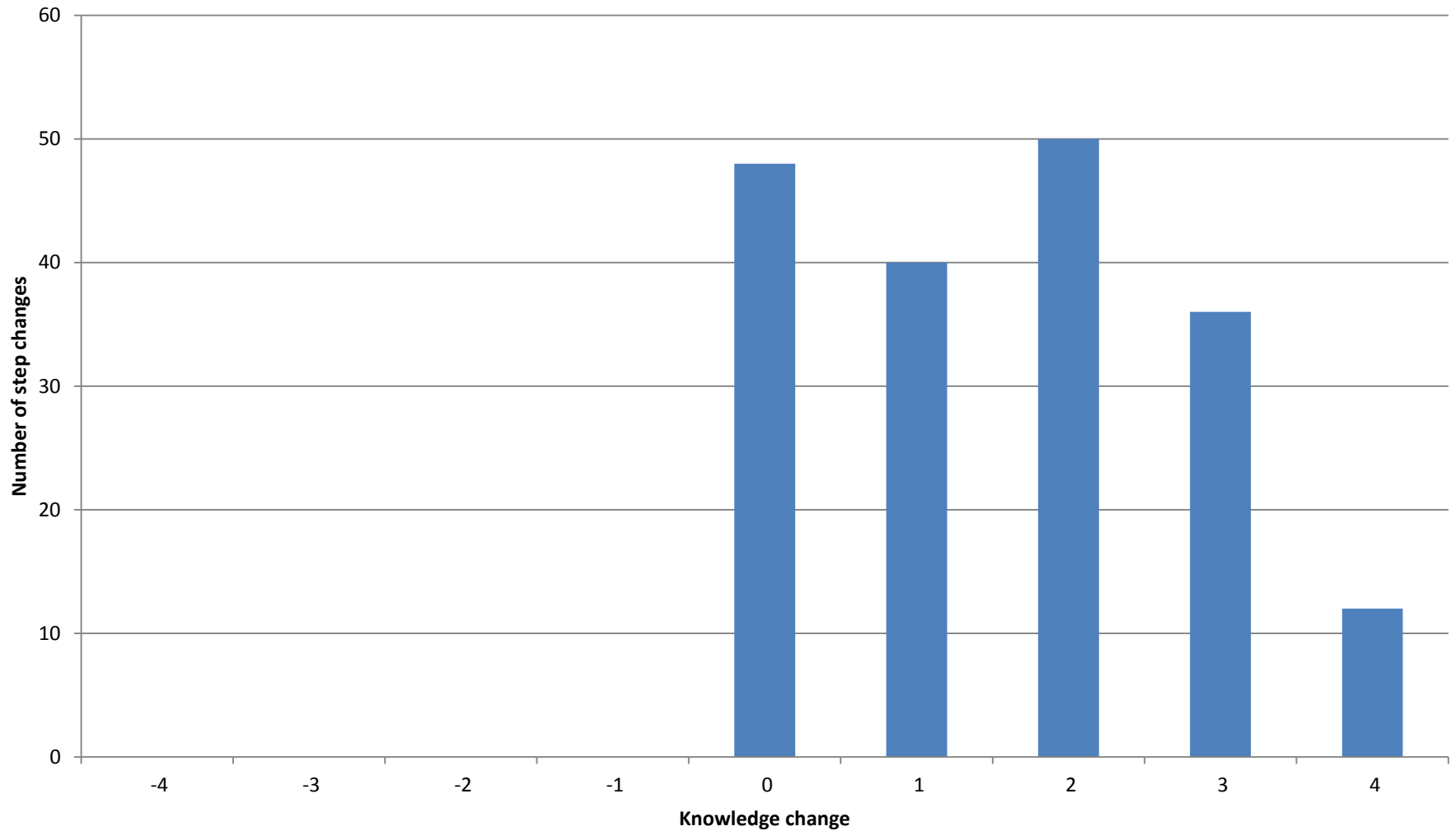


**Antibiotic resistance- The big problem**



## Overall step change in knowledge from attending presentation

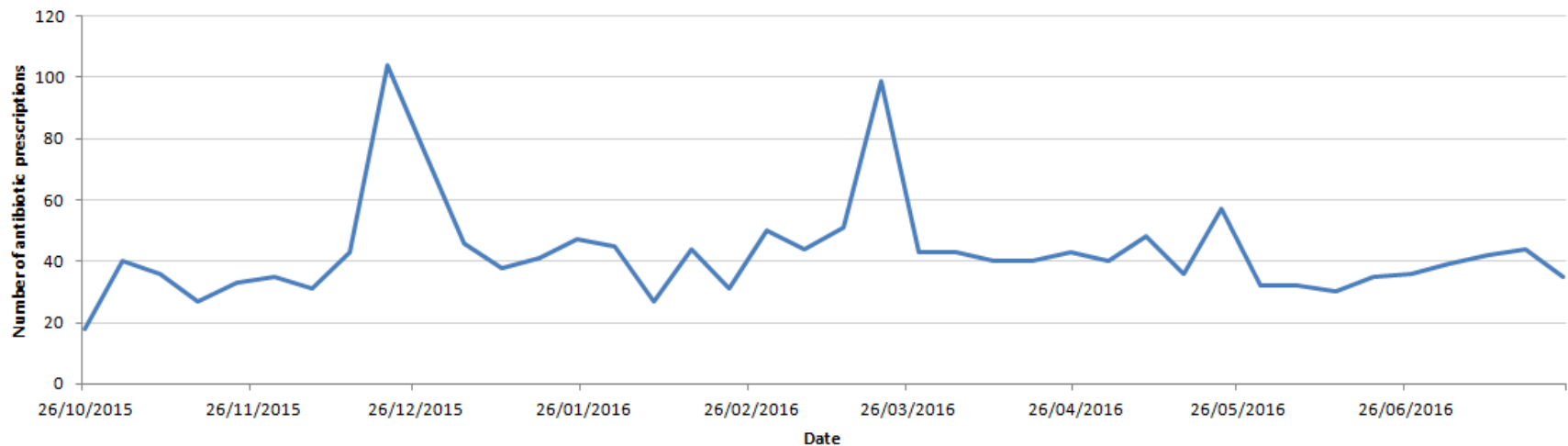
### A summary of all 6 questions





# Will you have any **Balancing** measures?

GP OOH contacts that resulted in an antibiotic prescription for North Cluster patients  
from November 2015 to July 2016



GP OOH contacts that resulted in an antibiotic prescription for North Cluster patients from November 2015 to July 2016 in Surgery 1



GP OOH contacts that resulted in an antibiotic prescription for North Cluster patients from November 2015 to July 2016 in Surgery 5



GP OOH contacts that resulted in an antibiotic prescription for North Cluster patients from November 2015 to July 2016 in Surgery 2



GP OOH contacts that resulted in an antibiotic prescription for North Cluster patients from November 2015 to July 2016 in Surgery 6



GP OOH contacts that resulted in an antibiotic prescription for North Cluster patients from November 2015 to July 2016 in Surgery 3



GP OOH contacts that resulted in an antibiotic prescription for North Cluster patients from November 2015 to July 2016 in Surgery 7



GP OOH contacts that resulted in an antibiotic prescription for North Cluster patients from November 2015 to July 2016 in Surgery 4



GP OOH contacts that resulted in an antibiotic prescription for North Cluster patients from November 2015 to July 2016 in Surgery 8



# What did you **Learn** ?

## **Working with GPs...**

- GPs valued data on culture and behaviour around diagnosis and antibiotic prescribing
- Less impact from personalised prescribing data
- Working closely with GPs builds engagement & relationships and fosters MDT working
- Collaborative approach drives progress much more effectively than top-down direction

## **Working with the Public...**

- Working with communities on the ground is an effective approach
- Mothers do not want personal responsibility for recognising infection in their child
- Significant knowledge gap in general population re antimicrobial resistance

## **In general...**

- There is no one-size-fits-all model for prescribing and antibiotic-seeking behaviour
- Working at cluster level allows for effective practice comparisons & benchmarking
- A national tool-kit could improve the quality of antibiotic prescribing across Wales, sharing the lessons learnt
- The primary care antimicrobial pharmacist role enhances MDT working and can free up GP time

## **The future...**

A dedicated primary care antimicrobial pharmacist per cluster could:

- Identify areas for improvement
- Work-up surgery specific action plans
- Provide drive and motivation for the team
- Promote Self Care, Healthy Living and Choose Well across the cluster

# Next Steps

## ***What do you plan to do now in relation to your project?***

- E-bug: deliver 3 x 1 hour lessons to 11 schools in North Bridgend cluster
- IP course to expand pharmacist role into minor illness clinics
- Re-audit process measures
- Create educational videos for the public and GPs

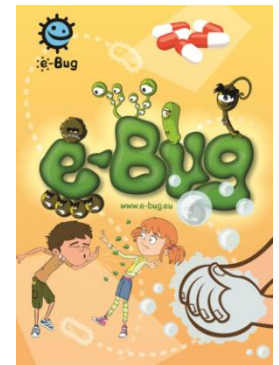
## ***Any major barriers to these plans?***

- Procurement
- Data analysis



## ***What are the benefits of continued funding?***

- Design of an All Wales tool-kit
- Pilot of E-bug programme before national roll out
- Reduction of inappropriate antibiotic prescribing within the cluster



# *Discussion – 21<sup>st</sup> Sept 2016*

- Significant risks of AMR deaths - resistance will overtake cancer unless we behave differently
- Pharmacist employed to tackle the issues across the cluster
- Significant variation in prescribing practices within the cluster
- Evidence of inappropriate prescribing and variation - and how the role of a cross cluster pharmacists has impacted beneficially
- GPs value data on culture and behaviour more than just prescribing and cost data
- Working closely with GPs encourages collaborative behaviour – needs a supportive approach
- Working with communities on ground is an effective approach – evidence of changing understanding and behaviour of the public; little is known about ABR
- Working at a cluster level allows for effective practice comparisons and benchmarking
- Procurement and data analysis is an issue
- Evidence for the value of better data – benefits of going beyond existing prescribing data
- Effective model for engaging GPs: audit – data – impact; linking diagnosis with treatment
- Computer-aided system lends itself to systematised approach to inappropriate prescribing and education; avoids guidance becoming out-dated as can be easily updated
- Cluster pharmacist approach is a really useful model for other prescribing ways